

Optical Disc Archive Utility

Help

ODS-D55U

ODS-D77U

ODS-D280U

ODS-D380U

About the Optical Disc Archive Software

Overview

This software can perform the following functions to ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U on the computer connected to ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U.

- **Information display function**
 - Drive information
 - Media information
- **Setup function**
 - Operation mode settings
 - Write-protect settings for media using Cartridge Memory
- **Media manipulation function**
 - Rollback
 - Format
 - Finalize
 - Recover file
 - Duplicate volume
- **Maintenance function**
 - Update firmware
 - Log display and export
 - System Check

Related Manual

OPERATION MANUAL

This manual is supplied with the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U.

It describes how to use the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U and the supplied software.

System Requirements

This software requires a computer system that meets the following requirements.

Item	Requirement
Processor	ODS-D55U/D77U/D77UA: Intel Core 2 Duo 2.66 GHz or higher, or Intel Xeon 2.0 GHz or higher ODS-D280U: 3rd Generation Intel Core i5 2.5 GHz or higher, or Intel Xeon 2.27 GHz or higher ODS-D380U: 6th Generation Intel Core i5 2.3 GHz, or Intel Xeon 2.0 GHz or higher
Memory	ODS-D55U/D77U/D77UA: 2 GB × (number of the connected units + 1) or more ODS-D280U/D380U: 4 GB × (number of the connected units + 1) or more
Free space on the destination location for installation	ODS-D55U/D77U/D77UA: 32 GB + 16 GB × (number of the connected units + 1) or more ODS-D280U: 32 GB + 32 GB × (number of the connected units + 1) or more ODS-D380U: 64 GB + 64 GB × (number of the connected units + 1) or more
Operating system	See the Sony professional products site ^{a)} .
Other	ODS-D55U/D77U/D77UA: Hi-Speed USB (USB 2.0) (Hi-Speed USB (USB 2.0) host controller required) SuperSpeed USB (USB 3.2) (SuperSpeed USB host controller required) ODS-D280U: SuperSpeed USB (USB 3.2) (SuperSpeed USB host controller required) ODS-D380U: SuperSpeed USB 10 Gbps (USB 3.2) (SuperSpeed USB 10 Gbps (USB 3.2) host controller required) SuperSpeed USB (USB 3.2) ^{b)} (SuperSpeed USB host controller required)

a) Sony professional products site

Japan <https://www.sony.jp/professional/>

Countries/regions other than Japan

<https://pro.sony/product-resources/product-resources-search/>

(You can select your region and language under [Change Country, Region or Language] at the bottom of the page. In addition, you can

obtain this software and documentation by searching for the target model name, such as "ODS-380U".)

b) The SuperSpeed USB (USB 3.2) connection may not achieve the desired transfer speed.

About the Optical Disc Archive Utility

Starting and Quitting the Software


Starting

To start this software, perform one of the following.

- Open the folder (/usr/bin/odautility) in which this software is installed.
- Select [Optical Disc Archive Utility] from the system tools in the application menu.

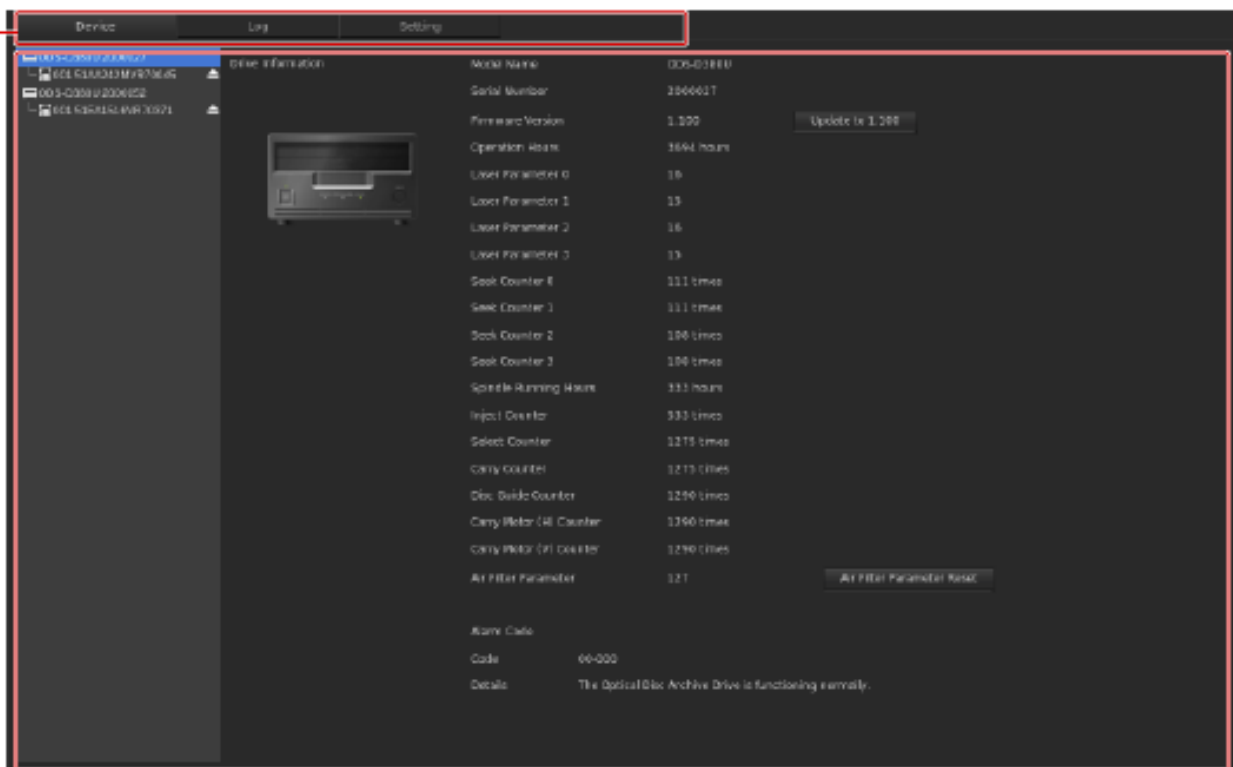
Quitting

Perform one of the following.

- Right-click the title bar of this software to select [Close].
- Click the  (close) button on the title bar.
- While this software is active, press Alt + F4 (press the F4 key while holding down the Alt key).

Screen Organization

Tab



Information Display Section/Operating Section

Menu Bar

Click a menu name to display the commands for that menu.

Tab

The Device screen, Log screen and Setting screen are switched.

Information Display Section/Operating Section

The screen selected in the Tab is displayed.

Menu Bar Items

The menu bar contains the following menus and commands.

View Menu

Minimize

Move

Always on Top

Always on Visible Workspace

Only on This Workspace

Move to Workspace Right *When locating on the left workspace
or

Move to Workspace Left *When locating on the right workspace

Close

Tools Menu

System Check

Determines whether Optical Disc Archive Software functions correctly.

This uses CoreMark-Pro, an EEMBC benchmark software, to measure the performance of the CPU.



<http://www.eembc.org/>

Note

This does not mean that the performance is guaranteed.

Change File Cache Destination

Changes the destination that the File Cache is saved to.

Related Topics

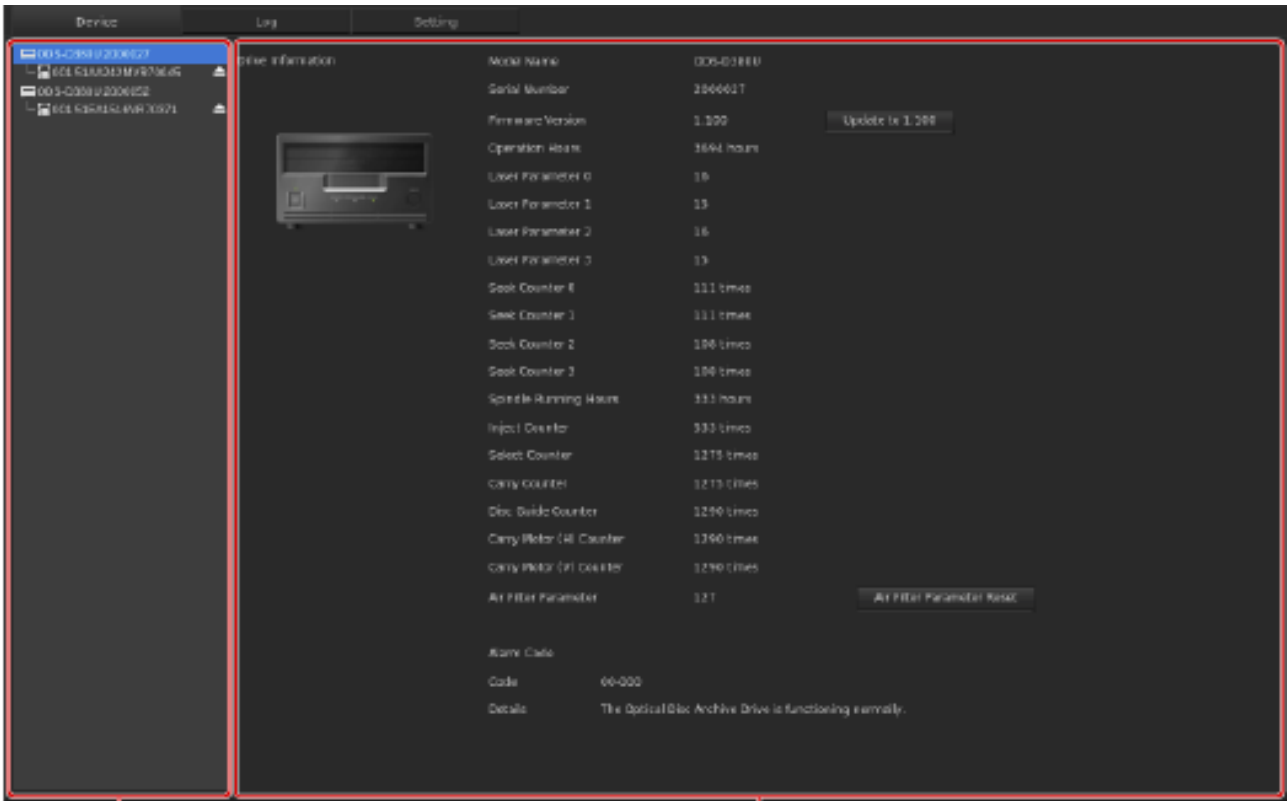
Starting and Quitting the Software

Functions of Operating Screens

Device screen

Device screen-Screen Organization

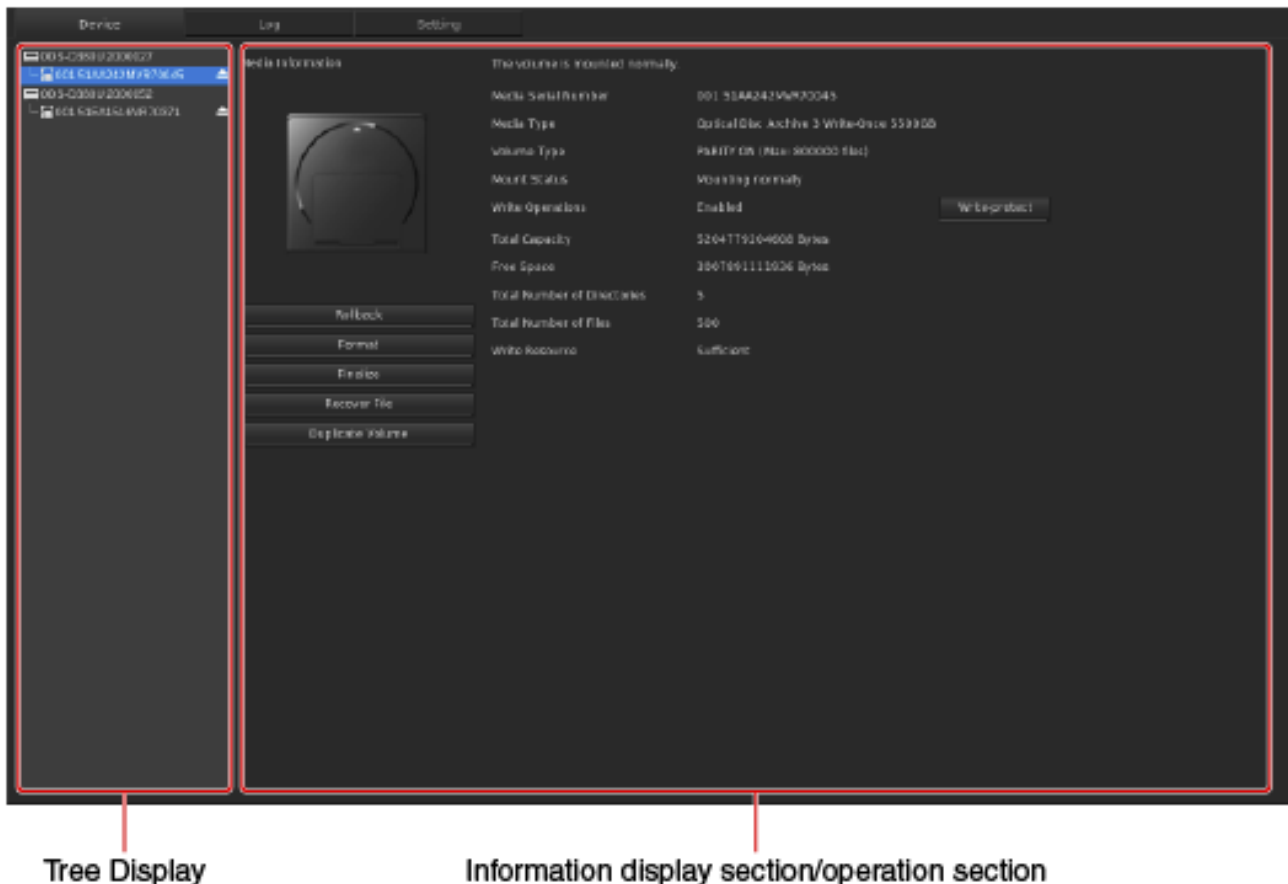
Tree Display-Drive Information



Tree Display

Information display section/operation section

Tree Display-Media Information



The connected drive (model name and serial number) and media are displayed in the Tree Display. The eject icon is displayed on the rightmost side of the list. Information about the selected drive or media will be displayed in the Information Display Section/Operating Section on the right of the list.

Note

- One computer can connect to four drives.
- If the media cannot be ejected, make sure that no other application is using the cartridge.

Information display section/operation section

Displays the information or operates the drive or media selected in the Tree Display.

Drive Information

Item	Information displayed
Model Name	Name of the selected drive (ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U)
Serial Number	The serial number of the selected ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U
Firmware Version	The firmware version of the selected ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U
Operation Hours ^{a)}	Total number of hours the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U has been powered on (unit:hour)
Laser Parameter 0 to 3 ^{a)}	The cumulative light output time of the optical head
Seek Counter 0 to 3 ^{a)}	The cumulative number of seek operations of the optical head

Item	Information displayed
Spindle Running Hours ^{a)}	The cumulative spindle rotating time (unit:hour)
Inject Counter ^{a)}	The cumulative counts of cartridge inserting
Select Counter ^{a)}	The select count of the internal disc
Carry Counter ^{a)}	The carry count of the internal disc
Disc Guide Counter	The cumulative number of disc carries using disc carrier rollers
Carry Motor (H) Counter	The cumulative number of disc carries using Carry Motor (H)
Carry Motor (V) Counter	The cumulative number of disc carries using Carry Motor (V)
Air Filter Parameter	Accumulated running time of the air filter (reset is possible) ^{b)}
Alarm Code	Displays information about any alarms that may have occurred on the selected drive.

a) This screen displays information about the operational history of the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U. Use the information as a guide in scheduling periodic maintenance. For details on periodic maintenance, consult your Sony service representative.

b) For details on how to reset the Air Filter Parameter, refer to the installation manual included in the air filter (RP).

Note

Some items are not displayed depending on models.

Drive operation

Item	Information
Update to 1.090 ^{c)}	The firmware version of the selected drive

c) Update when the firmware version in this package is 1.090.

Media Information

Item	Information displayed
Media Serial Number	The serial number of the selected media
Media Type	The type and capacity of the selected media <ul style="list-style-type: none"> • Optical Disc Archive 1 Rewritable 300GB • Optical Disc Archive 1 Rewritable 600GB • Optical Disc Archive 1 Rewritable 1200GB • Optical Disc Archive 1 Write-Once 300GB • Optical Disc Archive 1 Write-Once 600GB • Optical Disc Archive 1 Write-Once 1500GB • Optical Disc Archive 2 Write-Once 3300GB • Optical Disc Archive 3 Write-Once 5500GB
Volume Type	The volume type of the selected media
Mount Status	The mount status of the selected media
Write Operations	The selected media can be written or not.
Total Capacity	The total capacity of the selected media
Free Space	The write availability of the selected media
Total Number of Directories	The total number of directories of the selected media
Total Number of Files	The total number of files of the selected media
Rewrite Count	The cumulative rewrite count of the selected media (Only rewritable media displayed)
Format Count	The cumulative format count of the selected media (Only rewritable media displayed)

Item	Information displayed
Write Resource	[Empty], [Few] or [Full] is displayed. (Displayed only WO media)

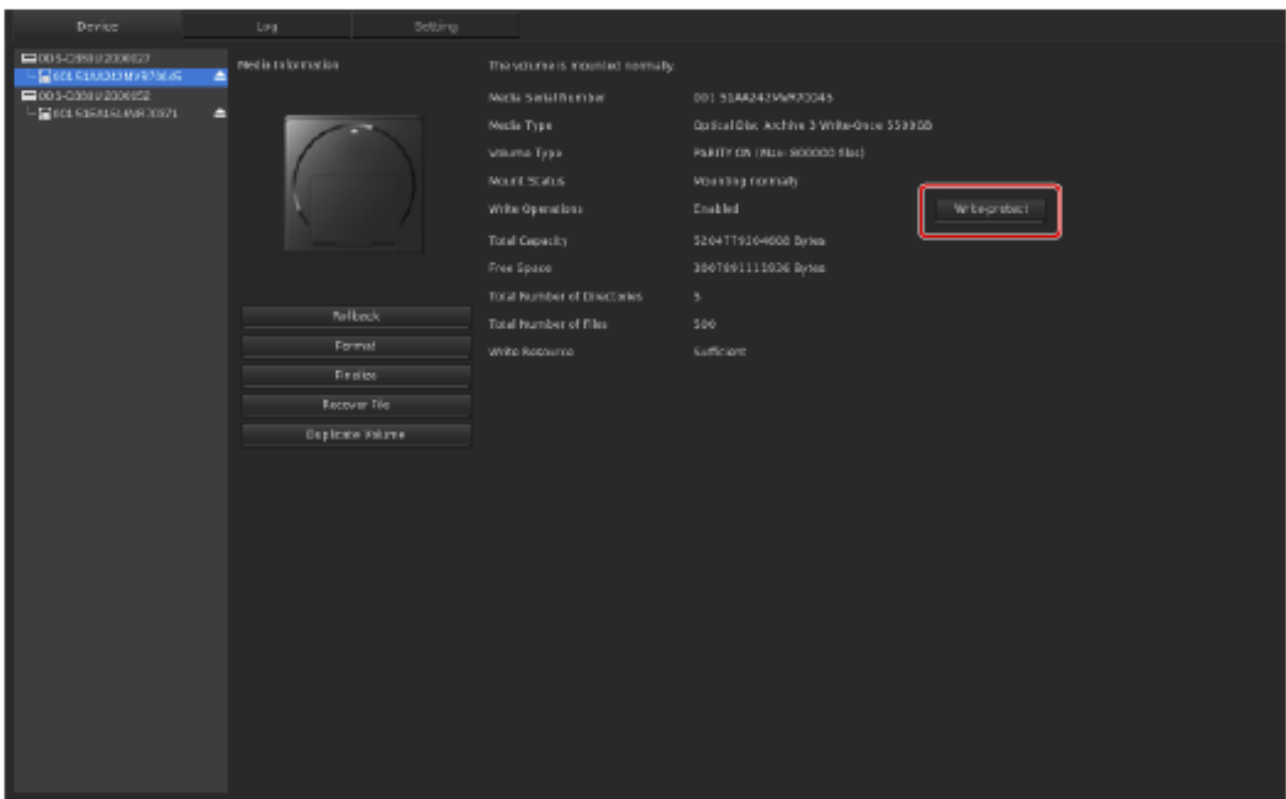
Media operation

Item	Information
[Rollback] button	Starts to seek the rollback points.
[Format] button	Starts to format.
[Finalize] button	Starts to finalize.
[Recover File] button	Displays the screen of the recover file list.
[Write-protect (or Write-protect release)] button	Starts to set or release the write-protection.
[Duplicate Volume] button	Starts to duplicate volume.

Related Topics

Alarm Code

Device screen-Write-protect settings for media



Write-protect settings for media using Cartridge Memory

1. Click the [Write-protect] button.
"Do you want to change the write-protect setting? If so, the cartridge is automatically ejected." appears.
2. Click the [Apply] button.
The media is write-protected and the cartridge is ejected.

To release the write-protection for media using Cartridge Memory

1. Click the [Write-protect release] button.

"Do you want to change the write-protect setting? If so, the cartridge is automatically ejected."
appears.

2. Click the [Apply] button.

Write-protection for media is released and the cartridge is ejected.

Alarm Code

This screen displays information about any alarms that may have occurred on the selected ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U. This information is preserved until the error is eliminated.

Code

This displays the code number of the alarm that occurred on the selected ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U.

Details

This displays information about the alarm that occurred on the selected ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U and information about how to deal with it.

For details on alarms, see Alarm Code List.

Refreshing the Display

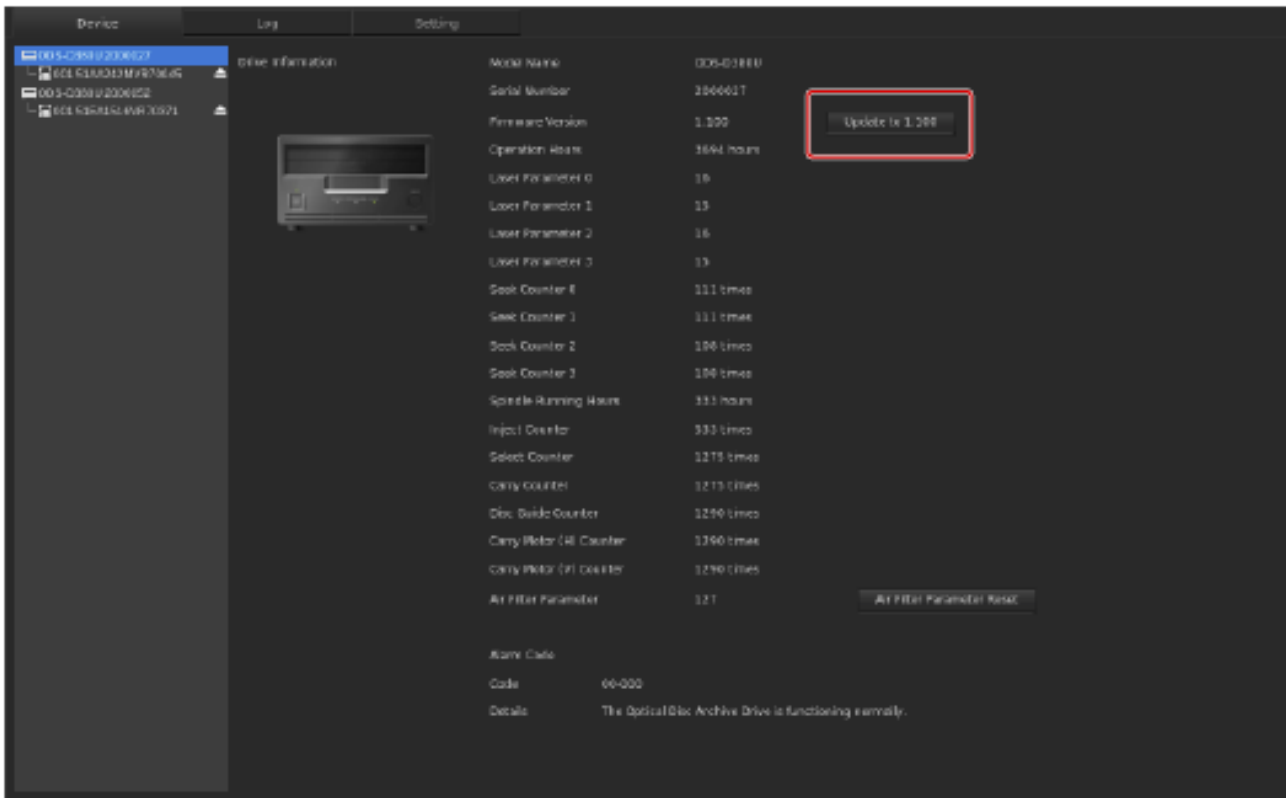
Select [Update] from the View menu.

Related Topics

Device screen-Screen Organization

Update Firmware

Updates the firmware of ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U.



How to update the firmware

1. Click the [Update to 1.630] button ^{a)}.

"Do you want to update the firmware?" appears.

2. Click the [Yes] button.

"Updating the firmware. Do not turn off the PC and the drive; do not disconnect cables during the update." appears and the update starts.

After a certain period of time, the drive will restart and the update will be complete.

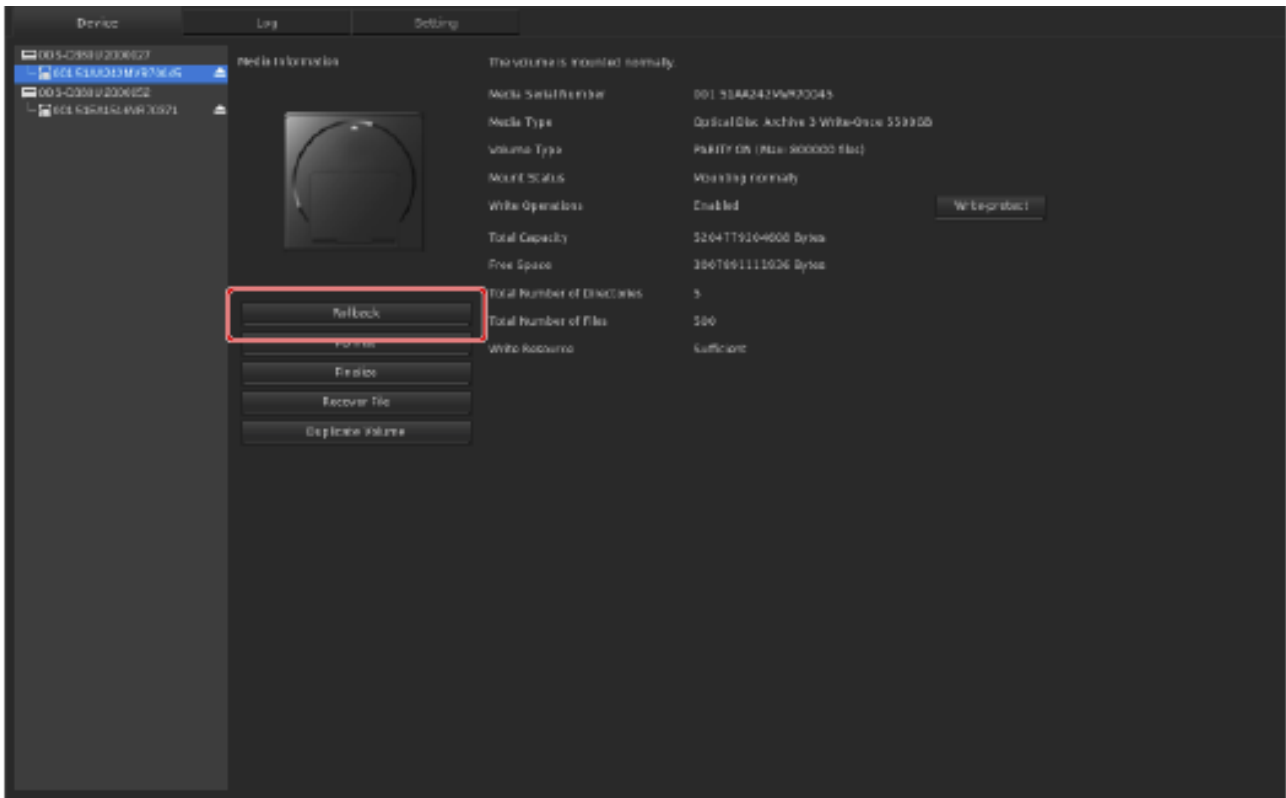
a) Update when the firmware version in this package is 1.630.

Related Topics

Device screen-Screen Organization

Rollback

If you delete the file system control information or media file accidentally, you can restore the file by searching for the roll-back points.



How to perform the rollback

1. Click the [Rollback] button.

The [Search roll-back points] screen appears and seeking for the roll-back points starts.

2. Select the roll-back point in the list and then click the [Mount] button.

The message appears, then read-only mount starts.

When read-only mount succeed, "Read-only mount to the roll-back point completed. You can copy the whole volume to another volume by Optical Disc Archive Filer, or copy files or directories in the volume. Or, please select one below." appears.

3. Select [Apply writable to this roll-back point.] and then click the [OK] button.

The message appears, writable mount to the roll-back point starts.

"Writable mount applied. Roll-back successfully completed." appears, roll-back is completed.

How to perform the rollback (capacity recovery)

When using rewritable media, media capacity can be recovered by performing rollback processing, deleting the rollback point of time newer than selected roll-back point.

1. In step 3 in "How to perform the rollback", select both [Apply writable to this roll-back point.] and [Restore the capacity of the media.], click the [OK] button.

Note

- You cannot recover the deleted roll-back point.
- Make sure that no other application is using the cartridge, and then perform rollback processing.

How to perform the rollback (file recovery)

The files in the volume can be recovered under read-only mount.

1. In step 2 in "How to perform the rollback", select [Recover files in the volume.], and then click the [OK] button.

How to perform rollback (volume duplication)

1. In step 3 of "How to perform the rollback", select [Duplicate the volume to another media], then click the [OK] button.

"Are you sure you want to duplicate the volume? Please do not change files during the volume duplication" appears.

2. Click the [Yes] button.

"Please select a duplication destination." appears.

3. Select [Select another volume.], then click the [OK] button.

Select an empty folder from another volume in the displayed screen or click the [New Folder] button to create a new folder, then click the [OK] button.

Volume duplication starts. The duplication status is displayed on the progress bar.

Tip

When you select the Optical Disc Archive volume as a duplication destination and select [Restrict disc spanning.], you can restrict a single file from being recorded spanning multiple discs.

Related Topics

Device screen-Screen Organization

Format

All files and directories in the media are deleted.

Tip

After formatting, you can return to the state before format processing by a rollback function.

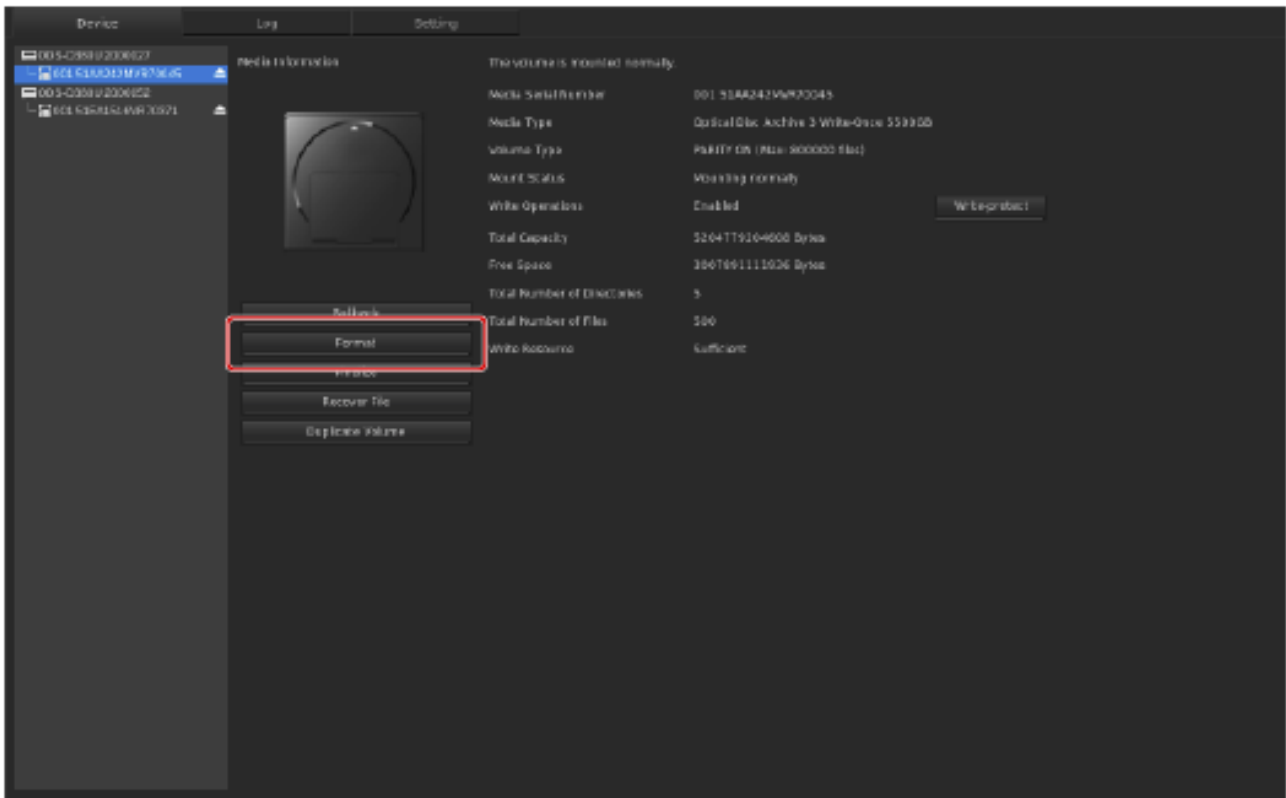
Note

- The media capacity cannot be recovered after being formatted.
- When you select [Restore the capacity of the media.], media capacity can be recovered. Otherwise, the rollback function cannot be used.
- When unable to format

The media is write-protected. Check the following, then format again.

- that the cartridge is possible to write with the Optical Disc Archive Drive. (For details, refer to the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U OPERATION MANUAL.)
- that the write-protect tab of the cartridge is not set to [Writing disabled]. (For details, refer to the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U OPERATION MANUAL.)
- that the [Make the drives rec-Inhibit] checkbox is not set to ON in the Setting screen. (Set the checkbox to OFF, then perform "How to change the Operational Mode".)

- that the [Write-protect release] is not displayed on the [Write-protect] button in the Device screen/Media Information.



How to format

1. Click the [Format] button.
"Are you sure you want to format the media? If you format it, all files saved on it are deleted." appears.
2. Click the [Yes] button.
When formatting is completed, "Format completed." appears.
3. Click the [Close] button.
Formatting is completed.

How to format (capacity recovery)

When you use rewritable media, you can format the whole media in order to free up the recorded space. In addition, you can select the volume type from PARITY ON (Max: 60000 files) or PARITY OFF (Max: 240000 files) when the Optical Disc Archive 1 cartridge is injecting.

1. Select [Restore the capacity of the media.] in step 2 above, and click the [Yes] button.

Related Topics

Device screen-Screen Organization

Finalize (Write-Once media only)

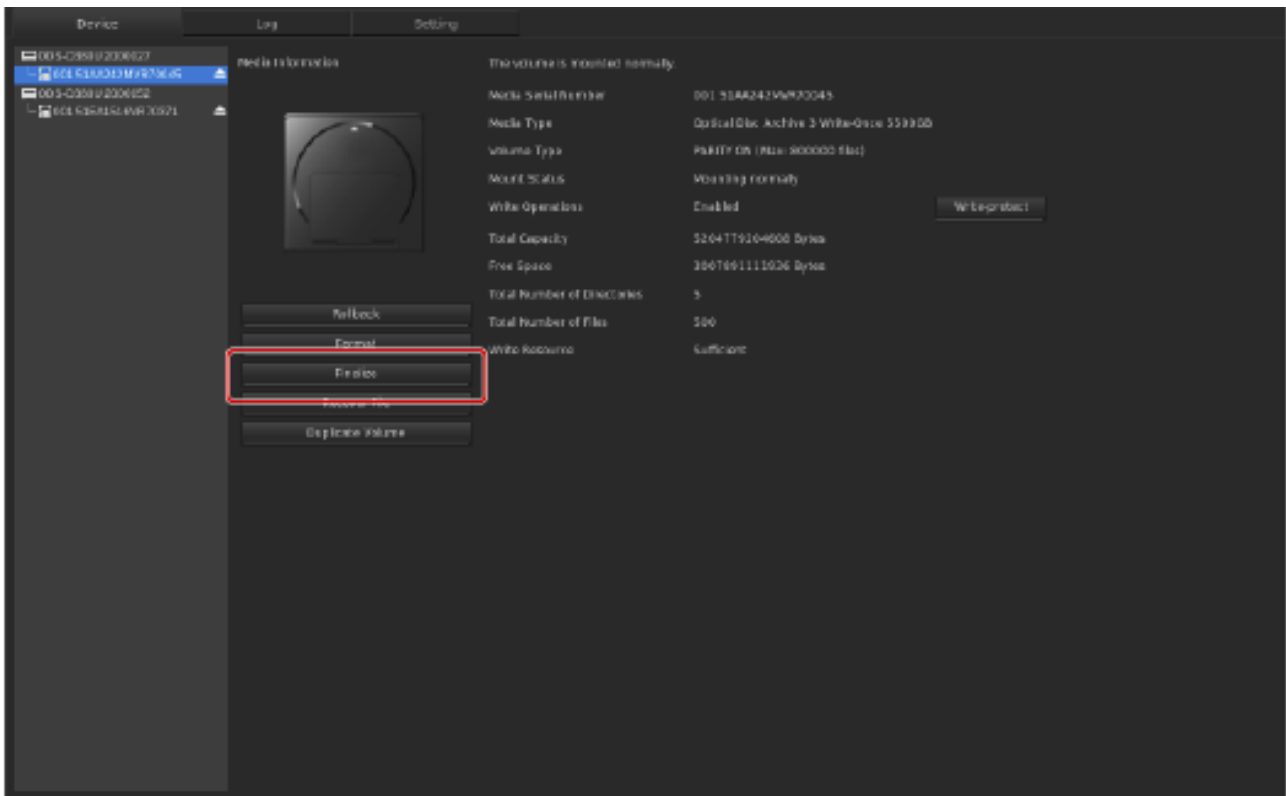
When you finalize a media, the media will be read-only and cannot be written. The tolerance of the data is improved.

Note

- When unable to finalize

The media is write-protected. Check the following, then finalize again.

- that the cartridge is compatible with the Optical Disc Archive Drive. (For details, refer to the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U OPERATION MANUAL.)
- that the write-protect tab of the cartridge is not set to [Writing disabled]. (For details, refer to the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U OPERATION MANUAL.)
- that the [Make the drives rec-Inhibit] checkbox is not set to ON in the Setting screen. (Set the checkbox to OFF, then perform "How to change the Operational Mode".)
- that the [Write-protect release] is not displayed on the [Write-protect] button in the Device screen/Media Information.



How to finalize

- Click the [Finalize] button.

"Are you sure you want to finalize the media? If you finalize it, it is altered to be read-only. Once started finalizing, it is irreversible. " appears.

- Click the [Yes] button.

After finalizing is completed, "Finalization completed." appears.

- Click the [Close] button.

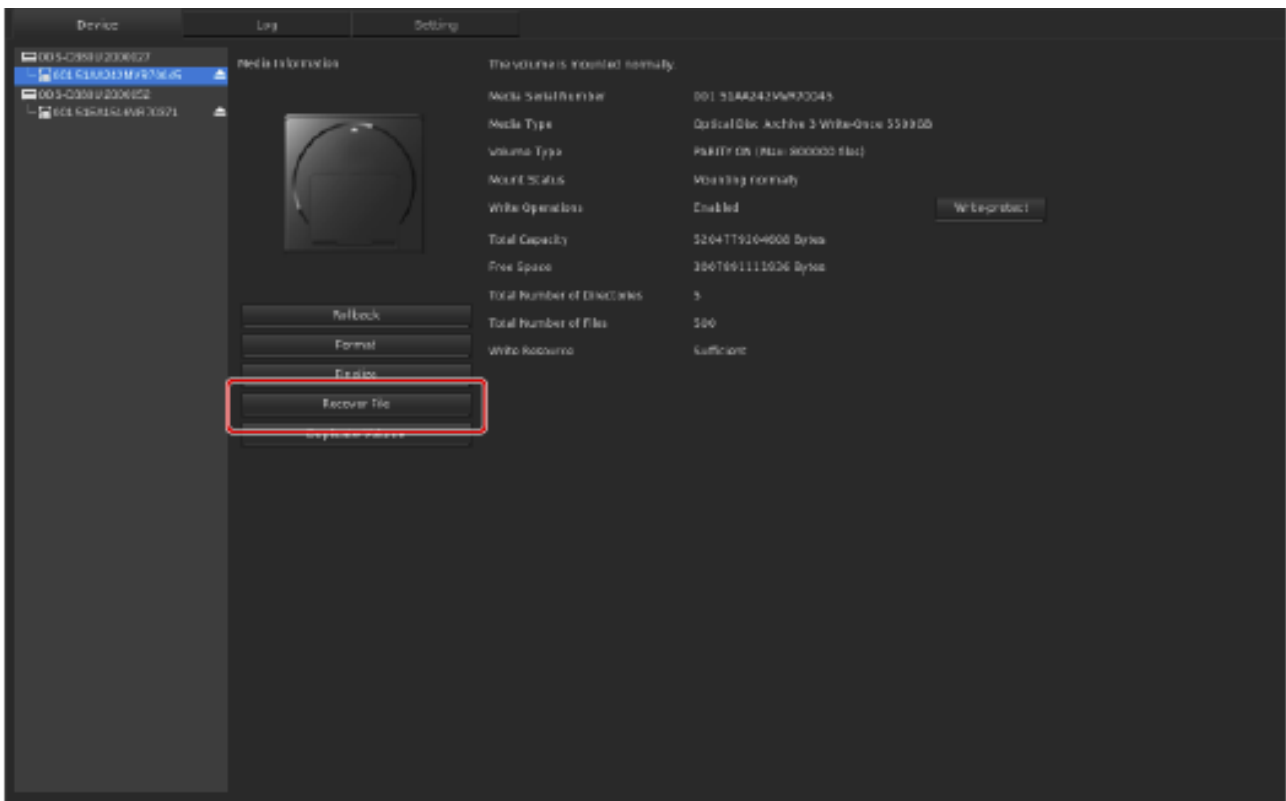
Finalizing is completed.

Related Topics

Device screen-Screen Organization

Recover File

You can recover and restore broken files.



How to recover a file

Register a file

1. Click the [Recover File] button.
The list screen is displayed.
2. Click the [Add files] button.
3. Select the file you want to recover in the displayed screen, then click the [Open] button.
The file you want to recover is added in the list screen.

Tip

You can also drag and drop a file to add to the screen in step 3 by drag and drop.

Recovering a file

1. Click the [Recover File] button.
The list screen is displayed.
2. Select a file you want to recover and click the [Perform recovery] button.
3. Select the destination to save on the displayed screen after recovery, and then click the [OK] button.
Returning to the list screen, file recovery starts. When file recovery is completed, "Status" is changed to "Recovery completed."

Note

When you perform [Recover File], the file is recalled from the cartridge and recovered, and then stored in other storage devices such as HDD.

How to perform the volume check

You can check and recover the file system.

Performing the volume check

1. Click the [Recover File] button.
The list screen is displayed.
2. Click the [Volume Check] button.
"Are you sure you want to perform the volume check?" appears.
3. Click the [Yes] button.
The volume check screen is displayed, and the volume check starts.
4. When the volume check is completed successfully, "No problem is found." appears.

If any problems are found, recover the volume according to the on-screen instructions.

Note

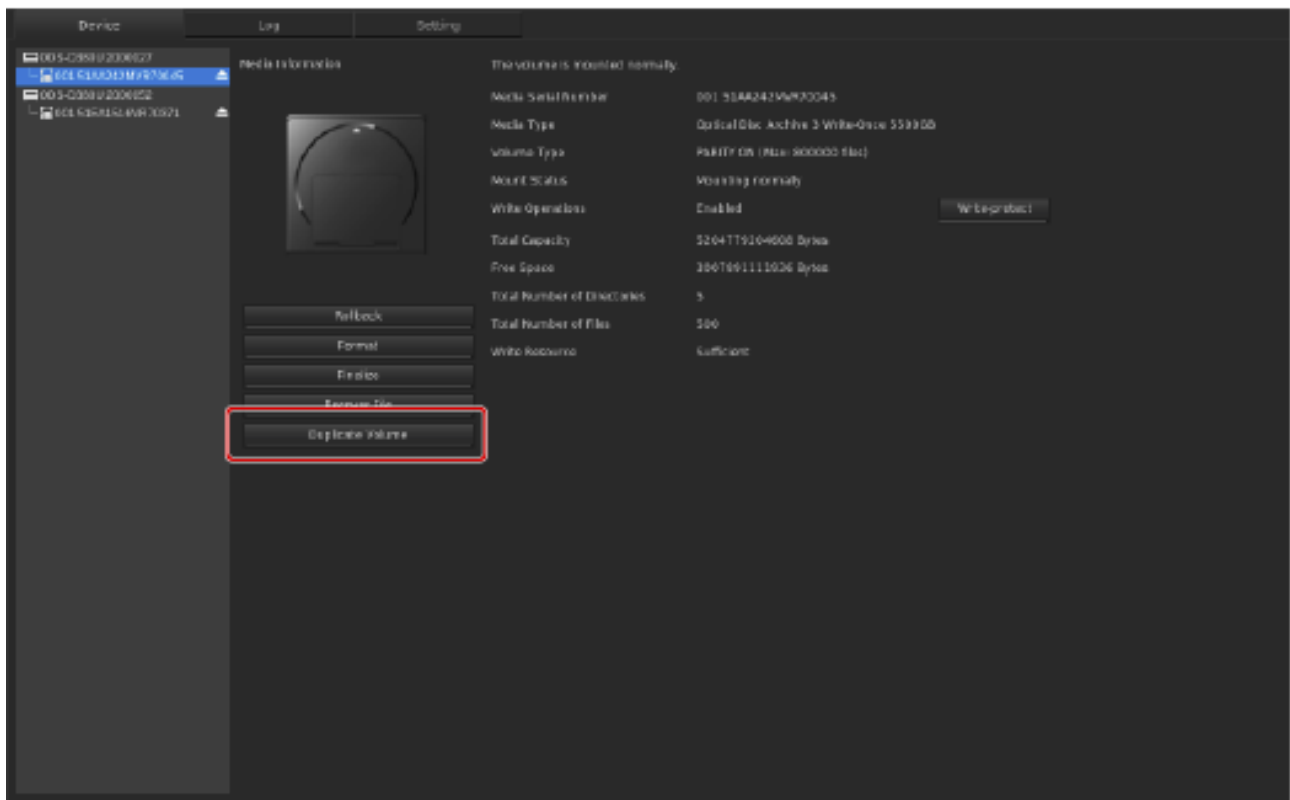
To recover the broken files, see "How to recover a file."

Related Topics

Device screen-Screen Organization

Volume Duplication

You can promptly duplicate the selected media data on a volume or folder unit to another media. Also, you can duplicate to the hard disk drive (HDD) other than the Optical Disc Archive cartridge.



To duplicate from Optical Disc Archive volume to other file system volume such as local disk

1. Click the [Duplicate Volume] button.
"Are you sure you want to duplicate the volume? Please do not change files during the volume duplication." appears.
2. Click the [Yes] button.
Select [Duplicate on a volume unit.] or [Duplicate on a folder unit.], and then click the [OK] button.
When you select [Duplicate on a folder unit.], click the [Reference] button to select the folder you want to duplicate in the displayed screen.
3. Select [Select another volume.], and then click the [OK] button.
Select the folder you want to duplicate in the displayed screen or create the new folder, and then click the [OK] button.
4. Select [Terminate the volume duplication.] or [Rewrite it.], and then click the [OK] button.
Volume duplication starts. The duplication status is displayed on the progress bar.

To duplicate from Optical Disc Archive volume to another Optical Disc Archive volume

1. Click the [Duplicate Volume] button.
"Are you sure you want to duplicate the volume? Please do not change files during the volume duplication." appears.
2. Click the [Yes] button.
Select [Duplicate on a volume unit.] or [Duplicate on a folder unit.], and then click the [OK] button.

When you select [Duplicate on a folder unit.], click the [Reference] button to select the folder you want to duplicate in the displayed screen.

3. Select [Select the volume of Optical Disc Archive Drive.] and another Optical Disc Archive volume from the pull-down menu, and then click the [OK] button.

Note that empty folder should be selected or new folder should be created.

4. Select [Terminate the volume duplication.] or [Rewrite it.], and then click the [OK] button.

Volume duplication starts. The duplication status is displayed on the progress bar.

Tip

When you select a duplication destination and select [Restrict disc spanning.], you can restrict a single file from being recorded spanning multiple discs.

To duplicate to the same Optical Disc Archive volume

1. Click the [Duplicate Volume] button.

"Are you sure you want to duplicate the volume? Please do not change files during the volume duplication." appears.

2. Click the [Yes] button.

Select [Duplicate on a volume unit.] in the displayed screen and the same Optical Disc Archive volume from the pull-down menu, and then click the [OK] button.

3. Select the backup destination from another volume, and then click the [OK] button.
4. Select [Terminate the volume duplication.] or [Rewrite it.], and then click the [OK] button.

Volume duplication starts from the duplication source to the backup destination. The duplication status is displayed on the progress bar.

When the volume duplication terminates from the duplication source to the backup destination, the cartridge is automatically ejected and [Inject another cartridge as a duplication destination.] appears.

5. Inject the cartridge, and then click the [OK] button.

[When injecting another cartridge] => Step 6

[When injecting the same cartridge] => Step 7

6. Select [Format the media, and duplicate to it.] or [Duplicate to the folder which you select.], and then click the [OK] button.

Volume duplication starts from the backup destination to duplication destination. The duplication status is displayed on the progress bar.

7. [The same cartridge as a duplication source has injected. You are recommended to duplicate the media to another cartridge.] appears.

Click [Reselect] or [Confirm].

When you select [Reselect], the cartridge is automatically ejected and "Inject another cartridge as a duplication destination." appears.

When you select [Confirm], go to Step 6.

Tip

When you select a duplication destination and select [Restrict disc spanning.], you can restrict a single file from being recorded spanning multiple discs.

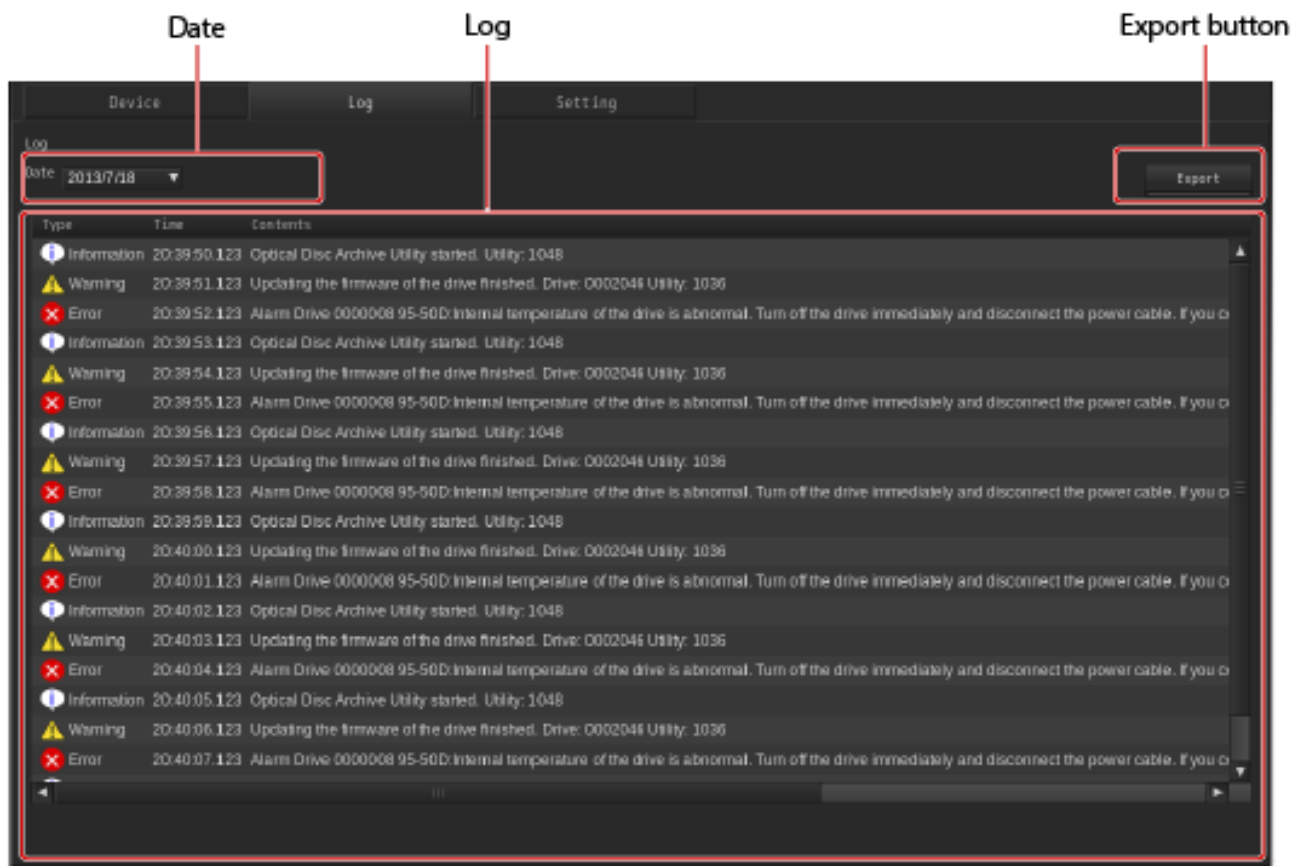
Related Topics

Device screen-Screen Organization

Log screen

Log screen-screen Organization

The log that occurred on the driver.



Date

Selects the date of log you want to display.

Click ▼ to display the dates of log in the list form.

Log

Displays the log list of selected date.

You can filter log types by [Information], [Warning], or [Error].

Double-click or right-click the list to display the log's detailed dialog.

Item	Information displayed
Type	Displays the type of log (information/warning/error)
Time	The time when log occurred.
Contents	Contents of log

Export button

Exports the log to any desired location.

Note

You cannot select the capacity for the Optical Disc Archive Drive.

How to export the log

1. Click the [Export] button.
The [Save as] screen is displayed.
2. Designate the file name and the destination to save, then click the [Save] button.
"Export completed." appears.
3. Click the [Close] button.
The log is exported to the designated place.

Refreshing the Display

Select [Update] from the View menu.

Note

- A drive log may not be available with the old version of the Optical Disc Drive firmware.
- A drive log is not available from the drive with a cartridge injected.

Setting screen

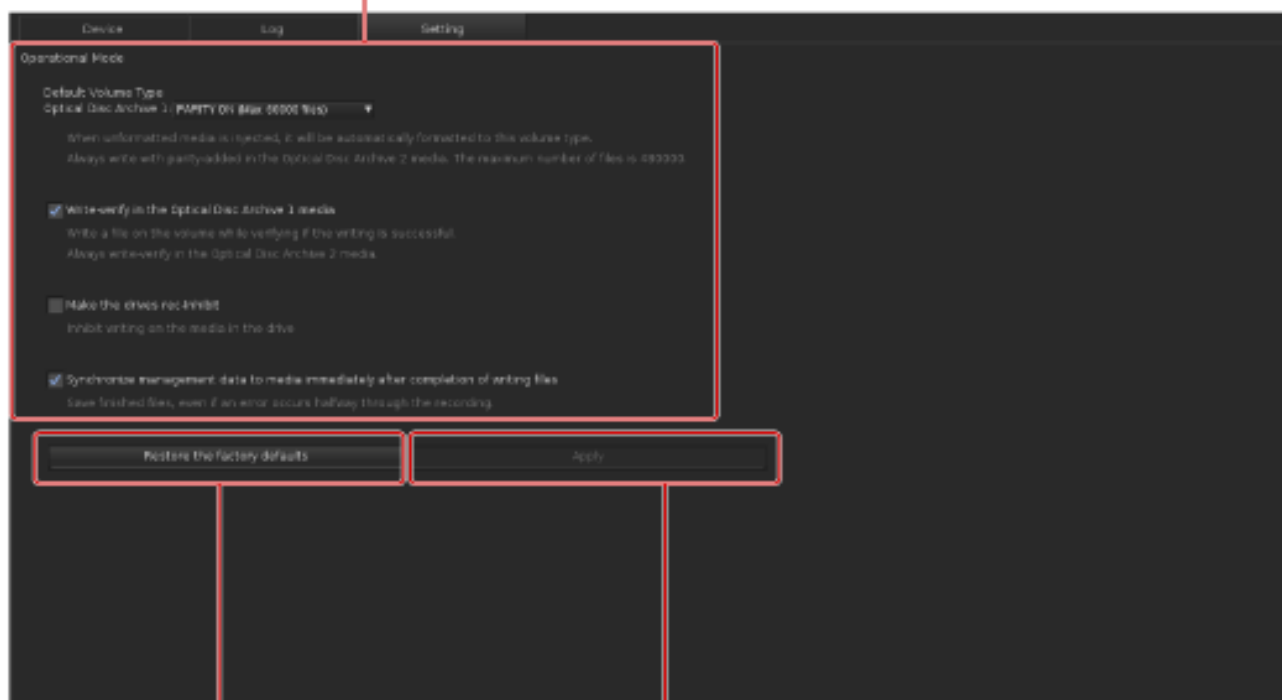
Setting screen-Screen Organization

Sets the Operational mode for ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U and the Optical Disc Archive Software.

Note

To validate change of a setup, it is necessary to re-inject the cartridge.

Operational Mode



[Restore the factory defaults] button

[Apply] button

Operational Mode

Operational Mode	Information
Write-verify	<p>Write-verify in the Optical Disc Archive 1 media</p> <p>Write a file on the volume while verifying if the writing is successful.</p> <p>Always write-verify in the Optical Disc Archive 2/3 media.</p> <p>Note</p> <p>Transfer speed will be changed. For details, refer to the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U OPERATION MANUAL.</p>
Make the drives rec-Inhibit	Prevents from writing to the drive.

Operational Mode	Information
Synchronizes management data to media, immediately after completion of writing files	<p>Saves finished files, even if an error occurs halfway through the recording.</p> <p>Note</p> <p>“File System” operation mode: ON – Default setting Even in the event of a drive power interruption or a failure in recording a file, previously finished files are safely stored. Next time the volume is mounted, only the damaged file during recording due to such interruptions is deleted, while the other completed files are recovered automatically. This is because system information is updated and written every time a new file is recorded. It is recommended to set to [ON], when safety comes on top of your priorities.</p> <p>“File System” operation mode: OFF The [OFF] mode provides improved performance in recording a series of small files. In addition, it enhances the efficiency rate of cartridge usage. On the other hand, many files could possibly be deleted due to troubles such as a power interruption during successive recordings. This is because system information is updated and written once, right after consecutive files are recorded. In the case of a recording trouble, a rollback occurs and it returns to the previous state before you start recording a series of files. Next time the volume is mounted, the last complete file system update written to the cartridge is valid. All previous small files unaccompanied by complete file system records will be deleted and irrecoverable. For this reason, it is recommended to set to [ON] under unstable power supply environments.</p>
Default Volume Type	<p>Optical Disc Archive 1 :</p> <p>When unformatted media is injected, it will be automatically formatted to this volume type.</p> <p>Always write with parity-added in the Optical Disc Archive 2/3 media. The maximum number of files is 480000/800000 respectively.</p> <p>Note</p> <p>When parity-added write is performed, broken files will be recovered/restored since performing “Recover File” corrects the error with parity information.</p>

[Restore the factory defaults] button

Restores the operational mode to the factory default settings.

[Apply] button

Determines the operational mode.

How to change the Operational Mode

1. Select a check box of the Operational Mode. Select [Default Volume Type] from the pull-down menu.
2. Click the [Apply] button.

“Operational mode setting has been changed. Reinject the cartridge to activate the mode newly set.” appears.
3. Click the [Close] button.
4. Re-inject the cartridge.

The operational mode is changed.

How to return the operational mode to the factory default setting

1. Click the [Restore the factory defaults] button.

“Do you want to restore the factory defaults of operational mode settings?” appears.
2. Click the [Yes] button.

“Operational mode setting has been changed. Reinject the cartridge to activate the mode newly set.” appears.
3. Click the [Close] button.
4. Re-inject the cartridge.

The operational mode returns to the factory default setting.

Appendix

Alarm Code List

The contents of the alarm displayed on the drive information in the device screen are listed according to each state of ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U.

When the error is eliminated, the indicator goes off.

- Alarms when a Cartridge is injected
- Alarms during Operation
- Alarms Relating to Sensors and Drives

Alarms when a Cartridge is injected

LED ^{a)}	Alarm code	Description	Possible solution
Flashes four times per second	50-010 50-011 51-020 51-021 54-008	The management area of the disc is unreadable.	Unusable media; inject another cartridge.
	51-500	Unsupported disc. The latest firmware is required to use the media.	Get the latest Optical Disc Archive Software, install it, and update the firmware.
Flashes every second	21-001 6D-000	This cartridge is nearing the end of its use cycle.	You are recommended to duplicate the data to another cartridge.
	21-100	Unusable media;	Consult your Sony Service representative.
	21-101	There may be a problem with the media.	You are recommended to duplicate the data to another cartridge. See the latest release notes for details.
	21-102	The cartridge is mounted read-only.	You are recommended to duplicate the data to another cartridge. See the latest release notes for details.
	54-009	The cartridge and the disc do not correspond.	Unusable media; inject another cartridge.
	54-000 54-001 54-002 54-003	Unsupported format of the disc.	Unusable media; inject another cartridge.
	54-006	Unsupported format of the cartridge memory.	Unusable media; inject another cartridge.
	54-004 54-005 54-007 95-517 95-518	Inaccessible to the cartridge memory.	Reinject the cartridge.

a) ALARM indicator on the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U.

Related Topics

Alarms during Operation

Alarms Relating to Sensors and Drives

Alarms during Operation

LED ^{a)}	Alarm code	Description	Possible solution
Flashes every second	6D-001	Unusable media;	Consult your Sony Service representative.
	6D-002	There may be a problem with the media.	You are recommended to duplicate the data to another cartridge. See the latest release notes for details.
	54-200 54-201 53-502	Detected an error in the management area of the disc.	Reinject the cartridge.
	54-004 54-005 54-007 95-517 95-518	Inaccessible to the cartridge memory.	Reinject the cartridge.
	54-006	Unsupported format of the cartridge memory.	Unusable media; inject another cartridge.
	54-300	Physical format of the disc for recording is being restored.	Do not turn off the power while an error occurs. The cartridge is being repaired. As this process may take a few minutes, wait until the process is complete without turning off the power.

LED ^{a)}	Alarm code	Description	Possible solution
Non-lighting	22-001	Multiple, simultaneous access were frequently made to the cartridge.	Do not conduct the following operation; performance may decline. <ul style="list-style-type: none"> • Reading multiple files at the same time • Reading (writing) a file while it is being written (read) • Producing a duplicate copy of a file in the same volume For details, see "Inadvisable Operations."
	91-552	Mounting failed.	Eject the cartridge and insert the same cartridge again.
	91-553	A read error occurred.	
	91-554	A write error occurred.	
	91-556	Some of the parity recorded on the media may be corrupted.	You are recommended to duplicate the data to another cartridge. See the latest release notes for details.
	91-558	The maximum data transfer size for the fiber channel host bus adaptor is not set correctly.	For details, refer to ODS-D380F Technical Note.
	91-559	Unable to access the path to store the file system cache.	Consult your Sony Service representative.

a) ALARM indicator on the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U.

Related Topics

Alarms when a Cartridge is injected

Alarms Relating to Sensors and Drives

Alarms Relating to Sensors and Drives

LED ^{a)}	Alarm code	Description	Possible solution
Flashes four times per second	95-50D	Internal temperature of the drive is abnormal.	Turn off the drive immediately and disconnect the power cable. If you continue to use the drive, the internal temperature may rise higher and cause damages or fire.
	95-51D		
	37-901		
	37-A01		
	37-B01		
	37-C01		
	47-901		
	47-A01		
	47-B01		
	47-C01		
Flashes every second	95-50E	Internal temperature of the drive has risen.	Be sure not to block up ventilation holes on the front and back of the drive, and release heat.
	95-51E		
	37-900		
	37-A00		
	37-B00		
	37-C00		
	95-50F	Internal temperature of the drive has risen.	Be sure not to block up ventilation holes on the front and back of the drive, and release heat. If the problem persists, consult your Sony Service representative.
	95-51F		
	95-52F		
	3E-500	The drive is not set horizontally.	Please set the drive horizontally.
	95-52A	Mismatch of the serial number of the drive unit was detected.	Perform the drive adjustment.

LED ^{a)}	Alarm code	Description	Possible solution
Flashes four times per second	3E-501	The drive is not set horizontally.	Turn off and turn on the drive after setting the drive horizontally.
	20-xxx	Detected an abnormality in the mechanical control of the drive.	Please push the EJECT button and eject the cartridge when the cartridge is not ejected. Turn off and turn on the drive if the cartridge cannot be ejected.
	20-117	Detected an abnormality in the mechanical control of the drive.	There is a possibility that the cartridge unable to handle was injected.
	52-00B 52-08B 52-10B 52-18B 72-00B 72-08B 72-10B 72-18B	Inaccessible to the disc.	Reinject the cartridge.
Flashes every second	6F-E00 6F-E80 6F-F00 6F-F80 8F-E00 8F-E80 8F-F00 8F-F80	Unable to write to the disc.	Reinject the cartridge.
Flashes four times per second	6F-E03 6F-E83 6F-F03 6F-F83 8F-E03 8F-E83 8F-F03 8F-F83	Inaccessible to the disc.	Reinject the cartridge.

LED ^{a)}	Alarm code	Description	Possible solution
Flashes every second	3F-511	It is time for replacement of the air filter.	Replace the air filter. ^{b)}
	02-605	The amount of light in the optical block has been reduced due to dirt and other factors.	Consult your Sony Service representative.
	02-685		
	02-705		
	02-785		
	12-605		
	12-685		
	12-705		
	12-785		

a) ALARM indicator on the ODS-D55U/ODS-D77U/ODS-D280U/ODS-D380U.

b) For details, refer to the operation manual.

Related Topics

Alarms when a Cartridge is injected

Alarms during Operation

About Optical Disc Archive Utility Command Line Interface

Overview

Optical Disc Archive Utility Command Line Interface is included with Optical Disc Archive Software. Some of the Optical Disc Archive Utility functions are supplied as the available commands in the CUI environment.

Limitations

- The Optical Disc Archive Utility Command Line Interface command cannot be executed via multi processes at the same time.
- The Optical Disc Archive Utility Command Line Interface command and GUI application of Optical Disc Archive Utility cannot be used at the same time.
- Administrator privileges are required to execute the Optical Disc Archive Utility Command Line Interface.

About commands

Optical Disc Archive Utility Command Line Interface supplies a command system that has a hierarchic structure.

The oda-util command, which is the base command, has management commands such as the oda-util drive command. Management commands have commands that supply concrete functions such as the oda-util drive info command.

Display of the help

To use each command, perform the command with the "--help" option, then refer to the help.

Outputs the help of the base command

```
# oda-util --help
```

Outputs the help of the management command

```
# oda-util drive --help
```

Outputs the help of the command

```
# oda-util drive info --help
```

Display of the manual

For details, refer to the manual by using the man command as follows.

Displays the manual of the base command

```
# man oda-util
```

Displays the manual of the management command

```
# man oda-util-drive
```

Displays the manual of the command

```
# man oda-util-drive-info
```

Command list

oda-util config

Management command to control the operation mode settings of the Optical Disc Archive Utility.

The main function of this command is supplied via the following commands.

Available commands

- oda-util config inhibit
Enables or disables the write-protect function of the drive.
- oda-util config parity
Selects the volume type from PARITY ON or PARITY OFF when unformatted Optical Disc Archive 1 media is injected.
- oda-util config sync
Sets whether to synchronize management data to media immediately after writing files to media is completed.
- oda-util config verify
Enables or disables the write-verify of the Optical Disc Archive 1 media.

oda-util drive

Management command to control the drive.

The main function of this command is supplied via the following commands.

Available commands

- oda-util drive afpreset
Resets the Air Filter Parameter of the drive.
- oda-util drive info
Outputs the drive information.
- oda-util drive update
Updates the drive firmware.

- oda-util drive version

Displays the drive firmware version and whether it can be updated or not.

oda-util log

Management command to control the log.

The main function of this command is supplied via the following commands.

Available command

- oda-util log export

Exports the log.

oda-util media

Management command to control media.

The main function of this command is supplied via the following commands.

Available commands

- oda-util media finalize
Finalizes the media. (Write-Once media only)
- oda-util media format
Formats the media.
- oda-util media info
Outputs the media information.
- oda-util media label
Sets the volume label of the media.
- oda-util media protect
Enables or disables the write-protect settings to the media.

About the file system

Overview

This section explains the overview of the file system.

- Mount operations
- Limitations
- Inadvisable Operations

Mount operations

[Volume] means the file system of the media that is formatted.

[Mount] means the status where access to the volume is possible.

On your desktop, the volume is mounted automatically by system. On the current supported RHEL6 system, it is mounted under the /media/ directory. On the RHEL7 system, it is mounted under the /run/media/user_name/ directory.

When the device administering tool is not operated, mount the volume manually as in the following example.

```
mount -t odaudf /dev/sdx/*mount-point
```

*Specify the mounting directory to the mount-point.

When the mount command is executed, the root authority is required.

When the file system type is not specified to odaudf, be careful as the operation may not be done correctly.

Note

When specifying a directory to mount to, you may not be able to specify a non-empty directory as an entry point depending on the operating system. If this is the case, do not create a new file or directory under the directory being specified.

For the blank media

When the media is inserted to the drive, it is formatted automatically, then it is mounted as the empty volume that does not contain files and directories.

Optical Disc Archive 1 media

You can select one of the following volume types depending on the volume type for the setting screen/ rule for Utility in advance.

- PARITY ON (Max 60000 files)

This is the format that can create up to 60,000 files (including directories).

When recording the file, the redundant parity data is created automatically. This parity data is used when file restoration is needed.

- PARITY OFF (Max 240000 files)

This is the format that can create up to 240,000 files (including directories).

When recording the file, the parity data is not created.

Optical Disc Archive 2 media

- PARITY ON (Max 480000 files)

This is the format that can create up to 480,000 files (including directories).

When recording the file, the redundant parity data is created automatically.

This parity data is used when file restoration is needed.

Optical Disc Archive 3 media

- PARITY ON (Max 800000 files)

This is the format that can create up to 800,000 files (including directories).

When recording the file, the redundant parity data is created automatically.

This parity data is used when file restoration is needed.

For the rewritable media

You can change the volume type of the media that is formatted to one of the volume types above to another volume type by selecting [Restore the capacity of the media.] when using the format function of Utility.

(Refer to How to format (capacity recovery).)

For the write-once media

You cannot change the volume type of the media that is formatted to one of the volume types above.

For media that is already formatted

You can access files and directories created on volume.

When the volume is recordable, you can create a new file and directory.

You can also perform reading, viewing, deleting, changing of the name, moving, changing of the attributes, and changing of the volume label, of the file and directory that are already created.

When the recording operation of the volume is disabled or restricted, you can perform reading and viewing of the file and directory, but you cannot perform creating, changing of the name, moving, changing of the attributes, and changing of the volume label.

You can check whether the volume is recordable or not on the device screen/media information/recording operation of Utility.

When the media cannot be mounted due to an abnormality

You cannot access the file or directory that is created on volume.

Check the mount state of the volume on the device screen/media information/mount state of Utility.

Related Topics

Device screen- Format

Limitations

The number of the maximum files + directories

You can create the following files + directories depending on the type of the volume.

Optical Disc Archive 1 media

- PARITY ON (Max 60000 files): Up to 60,000
- PARITY OFF (Max 240000 files): Up to 240,000

Optical Disc Archive 2 media

- PARITY ON (Max 480000 files): Up to 480,000

Optical Disc Archive 3 media

- PARITY ON (Max 800000 files): Up to 800,000

The root directory is counted as one. There is one directory (root directory) even with an empty volume.

File and directory hierarchy

You can create up to 64 hierarchies for files and directories.

The root directory is counted as one hierarchy.

The file that is created on the root directory is counted as the second hierarchy.

File name

The usable characters for the file and directory name are from 1 to 127 characters in Unicode 2.0.

Characters in surrogate pair are counted as two characters.

You cannot use the following characters for names.

Code	Character
U+0000	(null)
U+002F	/ (slash)

You cannot compose a name using only "." (dot) or ".." (consecutive dots).

You cannot use double file names in (IGNORE CASE) on the same directory.

You cannot compose a name using only "\$" (dollar) or "\$\$" (consecutive dollar) under the root directory.

Volume label

The usable characters for the volume label are from 1 to 63 characters in Unicode 2.0.

Characters in surrogate pair are counted as two characters.

You cannot use the following characters for names.

Code	Character
U+0000 - U+001F	
U+0022	" (double quotation)
U+002A	* (asterisk)
U+002F	/ (slash)
U+003A	: (colon)
U+003C	< (less than)
U+003E	> (greater than)
U+003F	? (question mark)
U+005C	\ (back slash, or Yen mark)
U+007C	(vertical bar)
U+007F	(DEL)

You cannot use a character string beginning with "." (dot).

File recording

You can only open one file in recording mode. Only sequential recording is possible.

Normally, you cannot open the recorded file in recording mode.

The following recording file can be opened in recording mode and recorded additionally through sequential recording.

- Last recorded file
- Size zero (0) files.

Additionally, a sparse file may not be recorded when using the standard copy command. See the latest release notes for details.

Inadvisable Operations

Files of the source and destination may be lost if an impairment occurs during the file moving process.

Do not move the file if an impairment occurs.

When any of the following inadvisable operations ([1] to [4]) is performed to the cartridge, cartridge accessing becomes slow. If this situation continues for a long time, access to the cartridge will be temporarily prohibited.

This error will be resolved when the cartridge is re-inserted.

Perform the operations on Possible solution instead of the inadvisable operations.

Inadvisable operations	Possible solution
<p>[1] Reading files simultaneously Example: In Nautilus, while copying the recorded file on the ODA media to your local folder with drag-and-drop, at the same time you drag-and-drop another file on the ODA media to your local folder.</p> <p>Such simultaneous operations should not cause an error. However, if the two files are located on different discs, the transfer rate will become extremely slow because the discs will swap for every 64 KB to 1 MB of data copied, and the media's durability will deteriorate.</p>	<p>Finish copying the first file to your local folder (the computer's hard disk or another medium), then start copying the next file.</p>

Inadvisable operations	Possible solution
<p>[2]</p> <p>Reading a file while recording, or recording a file while reading</p> <p>Example:</p> <p>In Nautilus, while copying a file in your local folder to the ODA media with drag-and-drop, at the same time you copy another file on the ODA media to your local folder with drag-and-drop.</p> <p>These two operations will continue but if the files are on different discs, the transfer rate will become extremely slow because the discs will swap for every 64 KB to 32 MB of data copied, and the media's durability will deteriorate.</p>	<p>Finish copying the file to the ODA media, then copy the file on the media to your local folder (the computer's hard disk or another medium).</p>
<p>[3]</p> <p>Producing a duplicate copy of a file in the same volume</p> <p>Example:</p> <p>In Nautilus, right-click and drag the file recorded on the ODA media to the folder, then select [Copy here].</p> <p>This copy operation does not cause an error, but if the files are on different discs, the transfer rate will become extremely slow because the discs will swap for every 64 KB to 32 MB of data copied, and the media's durability will deteriorate.</p>	<p>Finish copying the file to the computer's hard disk (or some other medium), then copy that file again from the hard disk to the ODA media.</p>
<p>[4]</p> <p>Reading a file which is spread over more than one disc</p> <p>Example:</p> <p>When playing a clip file via XDCAM Viewer, if the file is recorded over more than one disc in the ODA media, then you move the slider on the position bar repeatedly from side to side.</p> <p>The transfer rate will become extremely slow because the discs will swap frequently, and the media's durability will deteriorate.</p>	<p>Copy the file to the computer's hard disk (or some other medium), then play (or scrub, etc.) the copied file from that medium.</p> <p>When Content Manager (recommended software for ODA) is used while recording to the ODA media, recording over multiple discs can be prevented. (If the recording file size is larger than the available disc space, the recording over multiple discs cannot always be prevented.)</p>

Trademarks

- Optical Disc Archive Drive logo are trademarks of Sony Corporation.
- Intel Core 2 Duo, Intel Core i5 and Intel Xeon are trademarks of Intel Corporation or its subsidiaries in the United States and/or other countries or regions.
- Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries or regions.
- Mac, macOS and Finder are registered trademarks of Apple, Inc. in the United States and/or other countries or regions.
- EEMBC and CoreMark-Pro are registered trademarks of the Embedded Microprocessor Benchmark Consortium.

About Open-Source Software

Optical Disc Archive Software uses the following open-source software.

LIST OF OPEN SOURCE SOFTWARE AND APPLICABLE LICENSE

1. Apache License 2.0

- Xerces
- log4cxx

2. Boost Software License Version 1.0

- Boost

3. The MIT License (MIT)

- ZipArchive: <http://code.google.com/p/ziparchive/>

4. The GNU Lesser General Public License, version 3.29 (LGPL-3.29)

- Qt 6.2

The source code for Qt 6.2 is available on the Web.

To download, please access the following URL:

<http://www.sony.net/Products/Linux>

(Please search "Optical Disc Archive Software" to obtain the source code.)

Please note that Sony cannot answer or respond to any inquiries regarding the content of this source code.

5. Other Licenses Used in Qt

LICENSES

1. Apache License Version 2.0

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract

or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

- a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
- b. You must cause any modified files to carry prominent notices stating that You changed the files; and
- c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
- d. If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work

stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets “[]” replaced with your own identifying information. (Don’t include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same “printed page” as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner] Licensed under the Apache License, Version 2.0 (the “License”); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0> Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

2. Boost Software License Version 1.0

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the “Software”) to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED “AS IS”, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

3. The MIT License (MIT)

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

<http://opensource.org/licenses/mit-license.php>

4. The GNU Lesser General Public License, version 3.29 (LGPL-3.29)

GNU LESSER GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

Copyright © 2007 Free Software Foundation, Inc. <<http://fsf.org/>>

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

This version of the GNU Lesser General Public License incorporates the terms and conditions of version 3 of the GNU General Public License, supplemented by the additional permissions listed below.

0. Additional Definitions.

As used herein, "this License" refers to version 3 of the GNU Lesser General Public License, and the "GNU GPL" refers to version 3 of the GNU General Public License.

"The Library" refers to a covered work governed by this License, other than an Application or a Combined Work as defined below.

An "Application" is any work that makes use of an interface provided by the Library, but which is not otherwise based on the Library. Defining a subclass of a class defined by the Library is deemed a mode

of using an interface provided by the Library.

A “Combined Work” is a work produced by combining or linking an Application with the Library. The particular version of the Library with which the Combined Work was made is also called the “Linked Version”.

The “Minimal Corresponding Source” for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The “Corresponding Application Code” for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

1. Exception to Section 3 of the GNU GPL.

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL.

2. Conveying Modified Versions.

If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

- a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or

- b) under the GNU GPL, with none of the additional permissions of this License applicable to that copy.

3. Object Code Incorporating Material from Library Header Files.

The object code form of an Application may incorporate material from a header file that is part of the Library. You may convey such object

code under terms of your choice, provided that, if the incorporated material is not limited to numerical parameters, data structure layouts and accessors, or small macros, inline functions and templates (ten or fewer lines in length), you do both of the following:

- a) Give prominent notice with each copy of the object code that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the object code with a copy of the GNU GPL and this license document.

4. Combined Works.

You may convey a Combined Work under terms of your choice that, taken together, effectively do not restrict modification of the portions of the Library contained in the Combined Work and reverse engineering for debugging such modifications, if you also do each of the following:

- a) Give prominent notice with each copy of the Combined Work that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the Combined Work with a copy of the GNU GPL and this license document.
- c) For a Combined Work that displays copyright notices during execution, include the copyright notice for the Library among these notices, as well as a reference directing the user to the copies of the GNU GPL and this license document.
- d) Do one of the following:
 - 0) Convey the Minimal Corresponding Source under the terms of this License, and the Corresponding Application Code in a form suitable for, and under terms that permit, the user to recombine or relink the Application with a modified version of the Linked Version to produce a modified Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.
 - 1) Use a suitable shared library mechanism for linking with

the Library. A suitable mechanism is one that (a) uses at run time a copy of the Library already present on the user's computer system, and (b) will operate properly with a modified version of the Library that is interface-compatible with the Linked Version.

e) Provide Installation Information, but only if you would otherwise be required to provide such information under section 6 of the GNU GPL, and only to the extent that such information is necessary to install and execute a modified version of the Combined Work produced by recombining or relinking the Application with a modified version of the Linked Version. (If you use option 4d0, the Installation Information must accompany the Minimal Corresponding Source and Corresponding Application Code. If you use option 4d1, you must provide the Installation Information in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.)

5. Combined Libraries.

You may place library facilities that are a work based on the Library side by side in a single library together with other library facilities that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of the following:

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License.
- b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

6. Revised Versions of the GNU Lesser General Public License.

The Free Software Foundation may publish revised and/or new versions of the GNU Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library

as you received it specifies that a certain numbered version of the GNU Lesser General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that published version or of any later version published by the Free Software Foundation. If the Library as you received it does not specify a version number of the GNU Lesser General Public License, you may choose any version of the GNU Lesser General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide whether future versions of the GNU Lesser General Public License shall apply, that proxy's public statement of acceptance of any version is permanent authorization for you to choose that version for the Library.

5. Other Licenses Used in Qt

=====
Module: Text Codec: EUC-JP

License: BSD 2-clause "Simplified" License.

Copyright (C) 1999 Serika Kurusugawa.
=====

Copyright (C) 1999 Serika Kurusugawa, All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY

OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: Text Codec: EUC-KR

License: BSD 2-clause "Simplified" License.

Copyright (C) 1999-2000 Mizi Research Inc.
=====

Copyright (C) 1999-2000 Mizi Research Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: Text Codec: GBK

License: BSD 2-clause "Simplified" License

Copyright (C) 2000 TurboLinux, Inc. Written by Justin Yu and Sean Chen.

Copyright (C) 2001, 2002 Turbolinux, Inc. Written by James Su.

Copyright (C) 2001, 2002 ThizLinux Laboratory Ltd. Written by Anthony Fok.
=====

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: Text Codec: ISO 2022-JP (JIS)
License: BSD 2-clause "Simplified" License
Copyright (C) 1999 Serika Kurusugawa.
=====

Copyright (C) 1999 Serika Kurusugawa, All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)

HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: Text Codec: Shift-JIS

License: BSD 2-clause "Simplified" License

Copyright (C) 1999 Serika Kurusugawa.
=====

Copyright (C) 1999 Serika Kurusugawa, All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: Text Codec: TSCII

License: BSD 2-clause "Simplified" License

Copyright (C) 2000 Hans Petter Bieker.
=====

Copyright (C) 2000 Hans Petter Bieker. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

```
=====
Module: Text Codecs: Big5, Big5-HKSCS
License: BSD 2-clause "Simplified" License
Copyright (C) 2000 Ming-Che Chuang
Copyright (C) 2001, 2002 James Su, Turbolinux Inc.
Copyright (C) 2002 WU Yi, HancornLinux Inc.
Copyright (C) 2001, 2002 Anthony Fok, ThizLinux Laboratory Ltd.
=====
```

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE

ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: BLAKE2 (reference implementation), version 54f4faa4c16ea34bcd59d16e8da46a64b259fc07
License: Creative Commons Zero v1.0 Universal or Apache License 2.0
Copyright 2012, Samuel Neves <sneves@dei.uc.pt>
=====

CC0 1.0 Universal

Statement of Purpose

The laws of most jurisdictions throughout the world automatically confer exclusive Copyright and Related Rights (defined below) upon the creator and subsequent owner(s) (each and all, an “owner”) of an original work of authorship and/or a database (each, a “Work”).

Certain owners wish to permanently relinquish those rights to a Work for the purpose of contributing to a commons of creative, cultural and scientific works (“Commons”) that the public can reliably and without fear of later claims of infringement build upon, modify, incorporate in other works, reuse and redistribute as freely as possible in any form whatsoever and for any purposes, including without limitation commercial purposes. These owners may contribute to the Commons to promote the ideal of a free culture and the further production of creative, cultural and scientific works, or to gain reputation or greater distribution for their Work in part through the use and efforts of others.

For these and/or other purposes and motivations, and without any expectation of additional consideration or compensation, the person associating CC0 with a Work (the “Affirmer”), to the extent that he or she is an owner of Copyright and Related Rights in the Work, voluntarily elects to apply CC0 to the Work and publicly distribute the Work under its terms, with knowledge of his or her Copyright and Related Rights in the Work and the meaning and intended legal effect of CC0 on those rights.

1. Copyright and Related Rights. A Work made available under CC0 may be

protected by copyright and related or neighboring rights ("Copyright and Related Rights"). Copyright and Related Rights include, but are not limited to, the following:

- i. the right to reproduce, adapt, distribute, perform, display, communicate, and translate a Work;
- ii. moral rights retained by the original author(s) and/or performer(s);
- iii. publicity and privacy rights pertaining to a person's image or likeness depicted in a Work;
- iv. rights protecting against unfair competition in regards to a Work, subject to the limitations in paragraph 4(a), below;
- v. rights protecting the extraction, dissemination, use and reuse of data in a Work;
- vi. database rights (such as those arising under Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, and under any national implementation thereof, including any amended or successor version of such directive); and
- vii. other similar, equivalent or corresponding rights throughout the world based on applicable law or treaty, and any national implementations thereof.

2. Waiver. To the greatest extent permitted by, but not in contravention of, applicable law, Affirmer hereby overtly, fully, permanently, irrevocably and unconditionally waives, abandons, and surrenders all of Affirmer's Copyright and Related Rights and associated claims and causes of action, whether now known or unknown (including existing as well as future claims and causes of action), in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "Waiver"). Affirmer makes the Waiver for the benefit of each member of the public at large and to the detriment of Affirmer's heirs and successors, fully intending that such Waiver shall not be subject to revocation, rescission, cancellation, termination, or any other legal or equitable action to disrupt the quiet enjoyment of the Work by the public as contemplated by Affirmer's express Statement of Purpose.

3. Public License Fallback. Should any part of the Waiver for any reason be judged legally invalid or ineffective under applicable law, then the Waiver shall be preserved to the maximum extent permitted taking into account Affirmer's express Statement of Purpose. In addition, to the extent the Waiver is so judged Affirmer hereby grants to each affected person a royalty-free, non transferable, non sublicensable, non exclusive, irrevocable and unconditional license to exercise Affirmer's Copyright and Related Rights in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "License"). The License shall be deemed effective as of the date CC0 was applied by Affirmer to the Work. Should any part of the License for any reason be judged legally invalid or ineffective under applicable law, such partial invalidity or ineffectiveness shall not invalidate the remainder of the License, and in such case Affirmer hereby affirms that he or she will not (i) exercise any of his or her remaining Copyright and Related Rights in the Work or (ii) assert any associated claims and causes of action with respect to the Work, in either case contrary to Affirmer's express Statement of Purpose.

4. Limitations and Disclaimers.

a. No trademark or patent rights held by Affirmer are waived, abandoned, surrendered, licensed or otherwise affected by this document.

b. Affirmer offers the Work as-is and makes no representations or warranties of any kind concerning the Work, express, implied, statutory or otherwise, including without limitation warranties of title, merchantability, fitness for a particular purpose, non infringement, or the absence of latent or other defects, accuracy, or the present or absence of errors, whether or not discoverable, all to the greatest extent permissible under applicable law.

c. Affirmer disclaims responsibility for clearing rights of other persons that may apply to the Work or any use thereof, including without limitation any person's Copyright and Related Rights in the Work. Further, Affirmer disclaims responsibility for obtaining any necessary consents, permissions or other rights required for any use of the Work.

d. Affirmer understands and acknowledges that Creative Commons is not a party to this document and has no duty or obligation with respect to this CC0 or use of the Work.

For more information, please see

<<http://creativecommons.org/publicdomain/zero/1.0/>>

Apache License

Version 2.0, January 2004

<http://www.apache.org/licenses/>

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work

(an example is provided in the Appendix below).

“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their

Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

- (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
- (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
- (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
- (d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, such in accepting obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets “[]” replaced with your own identifying information. (Don’t include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same “printed page” as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the “License”);
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an “AS IS” BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and limitations under the License.

=====

Module: Data Compression Library (zlib), version 1.2.13

License: zlib License

(C) 1995-2022 Jean-loup Gailly and Mark Adler

=====

This software is provided ‘as-is’, without any express or implied
warranty. In no event will the authors be held liable for any damages
arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly Mark Adler
jloup@gzip.org madler@alumni.caltech.edu

If you use the zlib library in a product, we would appreciate *not* receiving lengthy legal documents to sign. The sources are provided for free but without warranty of any kind. The library has been entirely written by Jean-loup Gailly and Mark Adler; it does not include third-party code.

If you redistribute modified sources, we would appreciate that you include in the file ChangeLog history information documenting your changes. Please read the FAQ for more information on the distribution of modified source versions.

```
=====
Module: Easing Equations by Robert Penner
License: BSD 3-clause "New" or "Revised" License
Copyright (c) 2001 Robert Penner
=====
Copyright (c) 2001 Robert Penner
All rights reserved.
```

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of the author nor the names of contributors may be used to endorse or promote products derived from this software without specific

prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: Efficient Binary-Decimal and Decimal-Binary Conversion Routines for IEEE Doubles, version 3.1.5-30-gbf46072

License: BSD 3-clause "New" or "Revised" License.

Copyright 2006-2012, the V8 project authors

=====
Copyright 2006-2011, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY

THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: FreeBSD strtoll and strtoull, version 18b29f3fb8abee5d57ed8f4a44f806bec7e0eeff
License: BSD 3-clause "New" or "Revised" License
Copyright (c) 1992, 1993 The Regents of the University of California.
Copyright (c) 2011 The FreeBSD Foundation
=====

Copyright (c) 1992, 1993
The Regents of the University of California. All rights reserved.
Copyright (c) 2011 The FreeBSD Foundation
All rights reserved.
Portions of this software were developed by David Chisnall
under sponsorship from the FreeBSD Foundation.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
3. Neither the name of the University nor the names of its contributors
may be used to endorse or promote products derived from this software
without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.

Module: KWin, version 5.13.4

License: BSD-3-Clause.

Copyright 2014 Alex Merry <alex.merry@kde.org>

Copyright 2014 Martin Gräßlin <mgraesslin@kde.org>,

Copyright (c) 2006,2007 Laurent Montel, <montel@kde.org>

=====
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright
notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
3. The name of the author may not be used to endorse or promote products
derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS OR
IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: MD4

License: Public Domain

Written by Alexander Peslyak - better known as Solar Designer <solar@openwall.com> - in 2001, and
placed in the public domain. There's absolutely no warranty.

=====
Module: MD5

License: Public Domain

Written by Colin Plumb in 1993, no copyright is claimed. Ian Jackson <ian@chiark.greenend.org.uk>.

Module: PCRE2 - Stack-less Just-In-Time Compiler, version 10.40

License: BSD 2-clause "Simplified" License

Copyright (c) 2009-2022 Zoltan Herczeg

=====

Copyright 2013-2013 Tiera Corporation(jiawang@tiera.com). All rights reserved.

Copyright Zoltan Herczeg (hzmester@freemail.hu). All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDER(S) AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER(S) OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====

Module: PCRE2, version 10.40

License: BSD 3-clause "New" or "Revised" License

Copyright (c) 1997-2022 University of Cambridge

Copyright (c) 2010-2020 Zoltan Herczeg

=====

PCRE2 LICENCE

PCRE2 is a library of functions to support regular expressions whose syntax and semantics are as close as possible to those of the Perl 5 language.

Releases 10.00 and above of PCRE2 are distributed under the terms of the "BSD" licence, as specified below, with one exemption for certain binary redistributions. The documentation for PCRE2, supplied in the "doc" directory,

is distributed under the same terms as the software itself. The data in the testdata directory is not copyrighted and is in the public domain.

The basic library functions are written in C and are freestanding. Also included in the distribution is a just-in-time compiler that can be used to optimize pattern matching. This is an optional feature that can be omitted when the library is built.

THE BASIC LIBRARY FUNCTIONS

Written by: Philip Hazel
Email local part: Philip.Hazel
Email domain: gmail.com

Retired from University of Cambridge Computing Service,
Cambridge, England.

Copyright (c) 1997-2022 University of Cambridge
All rights reserved.

PCRE2 JUST-IN-TIME COMPILATION SUPPORT

Written by: Zoltan Herczeg
Email local part: hzmester
Email domain: freemail.hu

Copyright(c) 2010-2022 Zoltan Herczeg
All rights reserved.

STACK-LESS JUST-IN-TIME COMPILER

Written by: Zoltan Herczeg
Email local part: hzmester
Email domain: freemail.hu

Copyright(c) 2009-2022 Zoltan Herczeg
All rights reserved.

THE "BSD" LICENCE

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notices, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notices, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of the University of Cambridge nor the names of any contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

EXEMPTION FOR BINARY LIBRARY-LIKE PACKAGES

The second condition in the BSD licence (covering binary redistributions) does not apply all the way down a chain of software. If binary package A includes PCRE2, it must respect the condition, but if package B is software that includes package A, the condition is not imposed on package B unless it uses PCRE2 independently.

End

=====
Module: QEventDispatcher on macOS
License: BSD 3-clause "New" or "Revised" License

Copyright (c) 2007-2008, Apple, Inc.

=====
Copyright (c) 2007-2008, Apple, Inc.

All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice,
this list of conditions and the following disclaimer in the documentation
and/or other materials provided with the distribution.
- * Neither the name of Apple, Inc. nor the names of its contributors
may be used to endorse or promote products derived from this software
without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR
CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR
PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: Secure Hash Algorithm SHA-1

License: Public Domain

Copyright (C) Dominik Reichl <dominik.reichl@t-online.de>

Copyright (C) 2016 The Qt Company Ltd
=====

=====
Module: Secure Hash Algorithm SHA-3 - Keccak, version 3.2

License: Creative Commons Zero v1.0 Universal

Guido Bertoni, Joan Daemen, Michaël Peeters and Gilles Van Assche.

To the extent possible under law, the implementers have waived all copyright and related or neighboring rights to the source code in this file.

=====

CREATIVE COMMONS CORPORATION IS NOT A LAW FIRM AND DOES NOT PROVIDE LEGAL SERVICES. DISTRIBUTION OF THIS DOCUMENT DOES NOT CREATE AN ATTORNEY-CLIENT RELATIONSHIP. CREATIVE COMMONS PROVIDES THIS INFORMATION ON AN "AS-IS" BASIS. CREATIVE COMMONS MAKES NO WARRANTIES REGARDING THE USE OF THIS DOCUMENT OR THE INFORMATION OR WORKS PROVIDED HEREUNDER, AND DISCLAIMS LIABILITY FOR DAMAGES RESULTING FROM THE USE OF THIS DOCUMENT OR THE INFORMATION OR WORKS PROVIDED HEREUNDER.

Statement of Purpose

The laws of most jurisdictions throughout the world automatically confer exclusive Copyright and Related Rights (defined below) upon the creator and subsequent owner(s) (each and all, an "owner") of an original work of authorship and/or a database (each, a "Work").

Certain owners wish to permanently relinquish those rights to a Work for the purpose of contributing to a commons of creative, cultural and scientific works ("Commons") that the public can reliably and without fear of later claims of infringement build upon, modify, incorporate in other works, reuse and redistribute as freely as possible in any form whatsoever and for any purposes, including without limitation commercial purposes. These owners may contribute to the Commons to promote the ideal of a free culture and the further production of creative, cultural and scientific works, or to gain reputation or greater distribution for their Work in part through the use and efforts of others.

For these and/or other purposes and motivations, and without any expectation of additional consideration or compensation, the person associating CC0 with a Work (the "Affirmer"), to the extent that he or she is an owner of Copyright and Related Rights in the Work, voluntarily elects to apply CC0 to the Work and publicly distribute the Work under its terms, with knowledge of his or her Copyright and Related Rights in the Work and the meaning and intended legal effect of CC0 on those rights.

1. Copyright and Related Rights. A Work made available under CC0 may be protected by copyright and related or neighboring rights ("Copyright and Related Rights"). Copyright and Related Rights include, but are not limited to, the following:

- i. the right to reproduce, adapt, distribute, perform, display, communicate, and translate a Work;
- ii. moral rights retained by the original author(s) and/or performer(s);
- iii. publicity and privacy rights pertaining to a person's image or likeness depicted in a Work;

- iv. rights protecting against unfair competition in regards to a Work, subject to the limitations in paragraph 4(a), below;
 - v. rights protecting the extraction, dissemination, use and reuse of data in a Work;
 - vi. database rights (such as those arising under Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, and under any national implementation thereof, including any amended or successor version of such directive); and
 - vii. other similar, equivalent or corresponding rights throughout the world based on applicable law or treaty, and any national implementations thereof.
2. Waiver. To the greatest extent permitted by, but not in contravention of, applicable law, Affirmer hereby overtly, fully, permanently, irrevocably and unconditionally waives, abandons, and surrenders all of Affirmer's Copyright and Related Rights and associated claims and causes of action, whether now known or unknown (including existing as well as future claims and causes of action), in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "Waiver"). Affirmer makes the Waiver for the benefit of each member of the public at large and to the detriment of Affirmer's heirs and successors, fully intending that such Waiver shall not be subject to revocation, rescission, cancellation, termination, or any other legal or equitable action to disrupt the quiet enjoyment of the Work by the public as contemplated by Affirmer's express Statement of Purpose.
3. Public License Fallback. Should any part of the Waiver for any reason be judged legally invalid or ineffective under applicable law, then the Waiver shall be preserved to the maximum extent permitted taking into account Affirmer's express Statement of Purpose. In addition, to the extent the Waiver is so judged Affirmer hereby grants to each affected person a royalty-free, non transferable, non sublicensable, non exclusive, irrevocable and unconditional license to exercise Affirmer's Copyright and Related Rights in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "License"). The License shall be deemed effective as of the date CC0 was applied by Affirmer to the Work. Should any part of the License for any reason be judged legally invalid or ineffective under applicable law, such partial invalidity or ineffectiveness shall not invalidate the remainder of the License, and in such case Affirmer hereby affirms that he or she will not (i) exercise any of his or her remaining Copyright and Related Rights in the Work or (ii) assert any associated claims and causes of action with respect to the Work, in either case contrary to Affirmer's express Statement of Purpose.

4. Limitations and Disclaimers.

- a. No trademark or patent rights held by Affirmer are waived, abandoned, surrendered, licensed or otherwise affected by this document.
- b. Affirmer offers the Work as-is and makes no representations or warranties of any kind concerning the Work, express, implied, statutory or otherwise, including without limitation warranties of title, merchantability, fitness for a particular purpose, non infringement, or the absence of latent or other defects, accuracy, or the present or absence of errors, whether or not discoverable, all to the greatest extent permissible under applicable law.
- c. Affirmer disclaims responsibility for clearing rights of other persons that may apply to the Work or any use thereof, including without limitation any person's Copyright and Related Rights in the Work. Further, Affirmer disclaims responsibility for obtaining any necessary consents, permissions or other rights required for any use of the Work.
- d. Affirmer understands and acknowledges that Creative Commons is not a party to this document and has no duty or obligation with respect to this CC0 or use of the Work.

=====

Module: Secure Hash Algorithm SHA-3 - brg_endian, version <https://github.com/BrianGladman/sha/commit/4b9e13ead2c5b5e41ca27c65de4dd69ae0bac228>

License: BSD 2-clause "Simplified" License

Copyright (c) 1998-2013, Brian Gladman, Worcester, UK. All rights reserved.

=====

Copyright (c) 1998-2013, Brian Gladman, Worcester, UK. All rights reserved.

The redistribution and use of this software (with or without changes)
is allowed without the payment of fees or royalties provided that:

source code distributions include the above copyright notice, this
list of conditions and the following disclaimer;

binary distributions include the above copyright notice, this list
of conditions and the following disclaimer in their documentation.

This software is provided 'as is' with no explicit or implied warranties
in respect of its operation, including, but not limited to, correctness
and fitness for purpose.

=====

Module: Secure Hash Algorithms SHA-384 and SHA-512

License: BSD 3-clause "New" or "Revised" License

Copyright (c) 2011 IETF Trust and the persons identified as authors of the code.

=====
Copyright (c) 2011 IETF Trust and the persons identified as
authors of the code. All rights reserved.

Redistribution and use in source and binary forms, with or
without modification, are permitted provided that the following
conditions are met:

- Redistributions of source code must retain the above
copyright notice, this list of conditions and
the following disclaimer.
- Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.
- Neither the name of Internet Society, IETF or IETF Trust, nor
the names of specific contributors, may be used to endorse or
promote products derived from this software without specific
prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR
CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE,
EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: SipHash Algorithm

License: Creative Commons Zero v1.0 Universal

=====

CC0 1.0 Universal

Statement of Purpose

The laws of most jurisdictions throughout the world automatically confer exclusive Copyright and Related Rights (defined below) upon the creator and subsequent owner(s) (each and all, an “owner”) of an original work of authorship and/or a database (each, a “Work”).

Certain owners wish to permanently relinquish those rights to a Work for the purpose of contributing to a commons of creative, cultural and scientific works (“Commons”) that the public can reliably and without fear of later claims of infringement build upon, modify, incorporate in other works, reuse and redistribute as freely as possible in any form whatsoever and for any purposes, including without limitation commercial purposes. These owners may contribute to the Commons to promote the ideal of a free culture and the further production of creative, cultural and scientific works, or to gain reputation or greater distribution for their Work in part through the use and efforts of others.

For these and/or other purposes and motivations, and without any expectation of additional consideration or compensation, the person associating CC0 with a Work (the “Affirmer”), to the extent that he or she is an owner of Copyright and Related Rights in the Work, voluntarily elects to apply CC0 to the Work and publicly distribute the Work under its terms, with knowledge of his or her Copyright and Related Rights in the Work and the meaning and intended legal effect of CC0 on those rights.

1. Copyright and Related Rights. A Work made available under CC0 may be protected by copyright and related or neighboring rights (“Copyright and Related Rights”). Copyright and Related Rights include, but are not limited to, the following:

- i. the right to reproduce, adapt, distribute, perform, display, communicate, and translate a Work;
- ii. moral rights retained by the original author(s) and/or performer(s);
- iii. publicity and privacy rights pertaining to a person’s image or likeness depicted in a Work;

iv. rights protecting against unfair competition in regards to a Work, subject to the limitations in paragraph 4(a), below;

v. rights protecting the extraction, dissemination, use and reuse of data in a Work;

vi. database rights (such as those arising under Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, and under any national implementation thereof, including any amended or successor version of such directive); and

vii. other similar, equivalent or corresponding rights throughout the world based on applicable law or treaty, and any national implementations thereof.

2. Waiver. To the greatest extent permitted by, but not in contravention of, applicable law, Affirmer hereby overtly, fully, permanently, irrevocably and unconditionally waives, abandons, and surrenders all of Affirmer's Copyright and Related Rights and associated claims and causes of action, whether now known or unknown (including existing as well as future claims and causes of action), in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "Waiver"). Affirmer makes the Waiver for the benefit of each member of the public at large and to the detriment of Affirmer's heirs and successors, fully intending that such Waiver shall not be subject to revocation, rescission, cancellation, termination, or any other legal or equitable action to disrupt the quiet enjoyment of the Work by the public as contemplated by Affirmer's express Statement of Purpose.

3. Public License Fallback. Should any part of the Waiver for any reason be judged legally invalid or ineffective under applicable law, then the Waiver shall be preserved to the maximum extent permitted taking into account Affirmer's express Statement of Purpose. In addition, to the extent the Waiver is so judged Affirmer hereby grants to each affected person a royalty-free, non transferable, non sublicensable, non exclusive, irrevocable and unconditional license to exercise Affirmer's Copyright and Related Rights in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or

promotional purposes (the "License"). The License shall be deemed effective as of the date CC0 was applied by Affirmer to the Work. Should any part of the License for any reason be judged legally invalid or ineffective under applicable law, such partial invalidity or ineffectiveness shall not invalidate the remainder of the License, and in such case Affirmer hereby affirms that he or she will not (i) exercise any of his or her remaining Copyright and Related Rights in the Work or (ii) assert any associated claims and causes of action with respect to the Work, in either case contrary to Affirmer's express Statement of Purpose.

4. Limitations and Disclaimers.

- a. No trademark or patent rights held by Affirmer are waived, abandoned, surrendered, licensed or otherwise affected by this document.
- b. Affirmer offers the Work as-is and makes no representations or warranties of any kind concerning the Work, express, implied, statutory or otherwise, including without limitation warranties of title, merchantability, fitness for a particular purpose, non infringement, or the absence of latent or other defects, accuracy, or the present or absence of errors, whether or not discoverable, all to the greatest extent permissible under applicable law.
- c. Affirmer disclaims responsibility for clearing rights of other persons that may apply to the Work or any use thereof, including without limitation any person's Copyright and Related Rights in the Work. Further, Affirmer disclaims responsibility for obtaining any necessary consents, permissions or other rights required for any use of the Work.
- d. Affirmer understands and acknowledges that Creative Commons is not a party to this document and has no duty or obligation with respect to this CC0 or use of the Work.

For more information, please see

<<http://creativecommons.org/publicdomain/zero/1.0/>>

=====

Module: The Public Suffix List, version d17a65633b0286833727ef21e897a22564695ef5, fetched on 2022-05-23

License: Mozilla Public License 2.0

The list was originally provided by Jo Hermans <jo.hermans@gmail.com>.

It is now maintained on github (<https://github.com/publicsuffix/list>).

=====

=====

1. Definitions

1.1. "Contributor"

means each individual or legal entity that creates, contributes to the creation of, or owns Covered Software.

1.2. "Contributor Version"

means the combination of the Contributions of others (if any) used by a Contributor and that particular Contributor's Contribution.

1.3. "Contribution"

means Covered Software of a particular Contributor.

1.4. "Covered Software"

means Source Code Form to which the initial Contributor has attached the notice in Exhibit A, the Executable Form of such Source Code Form, and Modifications of such Source Code Form, in each case including portions thereof.

1.5. "Incompatible With Secondary Licenses"

means

(a) that the initial Contributor has attached the notice described in Exhibit B to the Covered Software; or

(b) that the Covered Software was made available under the terms of version 1.1 or earlier of the License, but not also under the terms of a Secondary License.

1.6. "Executable Form"

means any form of the work other than Source Code Form.

1.7. "Larger Work"

means a work that combines Covered Software with other material, in a separate file or files, that is not Covered Software.

1.8. "License"

means this document.

1.9. "Licensable"

means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently, any and all of the rights conveyed by this License.

1.10. "Modifications"

means any of the following:

(a) any file in Source Code Form that results from an addition to, deletion from, or modification of the contents of Covered Software; or

(b) any new file in Source Code Form that contains any Covered Software.

1.11. "Patent Claims" of a Contributor

means any patent claim(s), including without limitation, method, process, and apparatus claims, in any patent Licensable by such Contributor that would be infringed, but for the grant of the License, by the making, using, selling, offering for sale, having made, import, or transfer of either its Contributions or its Contributor Version.

1.12. "Secondary License"

means either the GNU General Public License, Version 2.0, the GNU Lesser General Public License, Version 2.1, the GNU Affero General Public License, Version 3.0, or any later versions of those licenses.

1.13. "Source Code Form"

means the form of the work preferred for making modifications.

1.14. "You" (or "Your")

means an individual or a legal entity exercising rights under this License. For legal entities, "You" includes any entity that controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

2. License Grants and Conditions

2.1. Grants

Each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license:

- (a) under intellectual property rights (other than patent or trademark) Licensable by such Contributor to use, reproduce, make available, modify, display, perform, distribute, and otherwise exploit its Contributions, either on an unmodified basis, with Modifications, or as part of a Larger Work; and
- (b) under Patent Claims of such Contributor to make, use, sell, offer for sale, have made, import, and otherwise transfer either its Contributions or its Contributor Version.

2.2. Effective Date

The licenses granted in Section 2.1 with respect to any Contribution become effective for each Contribution on the date the Contributor first distributes such Contribution.

2.3. Limitations on Grant Scope

The licenses granted in this Section 2 are the only rights granted under this License. No additional rights or licenses will be implied from the distribution or licensing of Covered Software under this License. Notwithstanding Section 2.1(b) above, no patent license is granted by a Contributor:

- (a) for any code that a Contributor has removed from Covered Software; or
- (b) for infringements caused by: (i) Your and any other third party's modifications of Covered Software, or (ii) the combination of its Contributions with other software (except as part of its Contributor Version); or
- (c) under Patent Claims infringed by Covered Software in the absence of

its Contributions.

This License does not grant any rights in the trademarks, service marks, or logos of any Contributor (except as may be necessary to comply with the notice requirements in Section 3.4).

2.4. Subsequent Licenses

No Contributor makes additional grants as a result of Your choice to distribute the Covered Software under a subsequent version of this License (see Section 10.2) or under the terms of a Secondary License (if permitted under the terms of Section 3.3).

2.5. Representation

Each Contributor represents that the Contributor believes its Contributions are its original creation(s) or it has sufficient rights to grant the rights to its Contributions conveyed by this License.

2.6. Fair Use

This License is not intended to limit any rights You have under applicable copyright doctrines of fair use, fair dealing, or other equivalents.

2.7. Conditions

Sections 3.1, 3.2, 3.3, and 3.4 are conditions of the licenses granted in Section 2.1.

3. Responsibilities

3.1. Distribution of Source Form

All distribution of Covered Software in Source Code Form, including any Modifications that You create or to which You contribute, must be under the terms of this License. You must inform recipients that the Source Code Form of the Covered Software is governed by the terms of this License, and how they can obtain a copy of this License. You may not attempt to alter or restrict the recipients' rights in the Source Code Form.

3.2. Distribution of Executable Form

If You distribute Covered Software in Executable Form then:

- (a) such Covered Software must also be made available in Source Code Form, as described in Section 3.1, and You must inform recipients of the Executable Form how they can obtain a copy of such Source Code Form by reasonable means in a timely manner, at a charge no more than the cost of distribution to the recipient; and
- (b) You may distribute such Executable Form under the terms of this License, or sublicense it under different terms, provided that the license for the Executable Form does not attempt to limit or alter the recipients' rights in the Source Code Form under this License.

3.3. Distribution of a Larger Work

You may create and distribute a Larger Work under terms of Your choice, provided that You also comply with the requirements of this License for the Covered Software. If the Larger Work is a combination of Covered Software with a work governed by one or more Secondary Licenses, and the Covered Software is not Incompatible With Secondary Licenses, this License permits You to additionally distribute such Covered Software under the terms of such Secondary License(s), so that the recipient of the Larger Work may, at their option, further distribute the Covered Software under the terms of either this License or such Secondary License(s).

3.4. Notices

You may not remove or alter the substance of any license notices (including copyright notices, patent notices, disclaimers of warranty, or limitations of liability) contained within the Source Code Form of the Covered Software, except that You may alter any license notices to the extent required to remedy known factual inaccuracies.

3.5. Application of Additional Terms

You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Software. However, You may do so only on Your own behalf, and not on

behalf of any Contributor. You must make it absolutely clear that any such warranty, support, indemnity, or liability obligation is offered by You alone, and You hereby agree to indemnify every Contributor for any liability incurred by such Contributor as a result of warranty, support, indemnity or liability terms You offer. You may include additional disclaimers of warranty and limitations of liability specific to any jurisdiction.

4. Inability to Comply Due to Statute or Regulation

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Software due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be placed in a text file included with all distributions of the Covered Software under this License. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

5. Termination

5.1. The rights granted under this License will terminate automatically if You fail to comply with any of its terms. However, if You become compliant, then the rights granted under this License from a particular Contributor are reinstated (a) provisionally, unless and until such Contributor explicitly and finally terminates Your grants, and (b) on an ongoing basis, if such Contributor fails to notify You of the non-compliance by some reasonable means prior to 60 days after You have come back into compliance. Moreover, Your grants from a particular Contributor are reinstated on an ongoing basis if such Contributor notifies You of the non-compliance by some reasonable means, this is the first time You have received notice of non-compliance with this License from such Contributor, and You become compliant prior to 30 days after Your receipt of the notice.

5.2. If You initiate litigation against any entity by asserting a patent infringement claim (excluding declaratory judgment actions, counter-claims, and cross-claims) alleging that a Contributor Version directly or indirectly infringes any patent, then the rights granted to

You by any and all Contributors for the Covered Software under Section 2.1 of this License shall terminate.

5.3. In the event of termination under Sections 5.1 or 5.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or Your distributors under this License prior to termination shall survive termination.

```
*****
*                                     *
* 6. Disclaimer of Warranty          *
* -----                          *
*                                     *
* Covered Software is provided under this License on an "as is" *
* basis, without warranty of any kind, either expressed, implied, or *
* statutory, including, without limitation, warranties that the *
* Covered Software is free of defects, merchantable, fit for a *
* particular purpose or non-infringing. The entire risk as to the *
* quality and performance of the Covered Software is with You. *
* Should any Covered Software prove defective in any respect, You *
* (not any Contributor) assume the cost of any necessary servicing, *
* repair, or correction. This disclaimer of warranty constitutes an *
* essential part of this License. No use of any Covered Software is *
* authorized under this License except under this disclaimer. *
*                                     *
```

```
*****
*                                     *
* 7. Limitation of Liability        *
* -----                          *
*                                     *
* Under no circumstances and under no legal theory, whether tort *
* (including negligence), contract, or otherwise, shall any *
* Contributor, or anyone who distributes Covered Software as *
* permitted above, be liable to You for any direct, indirect, *
* special, incidental, or consequential damages of any character *
* including, without limitation, damages for lost profits, loss of *
* goodwill, work stoppage, computer failure or malfunction, or any *
* and all other commercial damages or losses, even if such party *
* shall have been informed of the possibility of such damages. This *
* limitation of liability shall not apply to liability for death or *
```

* personal injury resulting from such party's negligence to the *
* extent applicable law prohibits such limitation. Some *
* jurisdictions do not allow the exclusion or limitation of *
* incidental or consequential damages, so this exclusion and *
* limitation may not apply to You. *

*

8. Litigation

Any litigation relating to this License may be brought only in the courts of a jurisdiction where the defendant maintains its principal place of business and such litigation shall be governed by laws of that jurisdiction, without reference to its conflict-of-law provisions. Nothing in this Section shall prevent a party's ability to bring cross-claims or counter-claims.

9. Miscellaneous

This License represents the complete agreement concerning the subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not be used to construe this License against a Contributor.

10. Versions of the License

10.1. New Versions

Mozilla Foundation is the license steward. Except as provided in Section 10.3, no one other than the license steward has the right to modify or publish new versions of this License. Each version will be given a distinguishing version number.

10.2. Effect of New Versions

You may distribute the Covered Software under the terms of the version of the License under which You originally received the Covered Software,

or under the terms of any subsequent version published by the license steward.

10.3. Modified Versions

If you create software not governed by this License, and you want to create a new license for such software, you may create and use a modified version of this License if you rename the license and remove any references to the name of the license steward (except to note that such modified license differs from this License).

10.4. Distributing Source Code Form that is Incompatible With Secondary Licenses

If You choose to distribute Source Code Form that is Incompatible With Secondary Licenses under the terms of this version of the License, the notice described in Exhibit B of this License must be attached.

Exhibit A - Source Code Form License Notice

This Source Code Form is subject to the terms of the Mozilla Public License, v. 2.0. If a copy of the MPL was not distributed with this file, You can obtain one at <https://mozilla.org/MPL/2.0/>.

If it is not possible or desirable to put the notice in a particular file, then You may include the notice in a location (such as a LICENSE file in a relevant directory) where a recipient would be likely to look for such a notice.

You may add additional accurate notices of copyright ownership.

Exhibit B - "Incompatible With Secondary Licenses" Notice

This Source Code Form is "Incompatible With Secondary Licenses", as defined by the Mozilla Public License, v. 2.0.

=====

Module: TinyCBOR, version 0.6+patches

License: MIT License

Copyright (C) 2015-2019 Intel Corporation

=====

MIT License

Copyright (c) 2017 Intel Corporation

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

=====

Module: Unicode Character Database (UCD), version 26

License: Unicode License Agreement - Data Files and Software (2016)

Copyright (C) 1991-2018 Unicode, Inc.

=====

UNICODE, INC. LICENSE AGREEMENT - DATA FILES AND SOFTWARE

See Terms of Use for definitions of Unicode Inc.'s
Data Files and Software.

NOTICE TO USER: Carefully read the following legal agreement.

BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING UNICODE INC.'S
DATA FILES ("DATA FILES"), AND/OR SOFTWARE ("SOFTWARE"),
YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE
TERMS AND CONDITIONS OF THIS AGREEMENT.
IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE
THE DATA FILES OR SOFTWARE.

COPYRIGHT AND PERMISSION NOTICE

Copyright © 1991-2020 Unicode, Inc. All rights reserved.

Distributed under the Terms of Use in <https://www.unicode.org/copyright.html>.

Permission is hereby granted, free of charge, to any person obtaining a copy of the Unicode data files and any associated documentation (the "Data Files") or Unicode software and any associated documentation (the "Software") to deal in the Data Files or Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Data Files or Software, and to permit persons to whom the Data Files or Software are furnished to do so, provided that either (a) this copyright and permission notice appear with all copies of the Data Files or Software, or (b) this copyright and permission notice appear in associated Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS.

IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in these Data Files or Software without prior written authorization of the copyright holder.

=====

Module: Unicode Common Locale Data Repository (CLDR), version v40
License: Unicode License Agreement - Data Files and Software (2016)
Copyright (C) 1991-2021 Unicode, Inc.

=====

UNICODE, INC. LICENSE AGREEMENT - DATA FILES AND SOFTWARE

See Terms of Use for definitions of Unicode Inc.'s
Data Files and Software.

NOTICE TO USER: Carefully read the following legal agreement.
BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING UNICODE INC.'S
DATA FILES ("DATA FILES"), AND/OR SOFTWARE ("SOFTWARE"),
YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE
TERMS AND CONDITIONS OF THIS AGREEMENT.
IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE
THE DATA FILES OR SOFTWARE.

COPYRIGHT AND PERMISSION NOTICE

Copyright © 1991-2020 Unicode, Inc. All rights reserved.
Distributed under the Terms of Use in <https://www.unicode.org/copyright.html>.

Permission is hereby granted, free of charge, to any person obtaining
a copy of the Unicode data files and any associated documentation
(the "Data Files") or Unicode software and any associated documentation
(the "Software") to deal in the Data Files or Software
without restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, and/or sell copies of
the Data Files or Software, and to permit persons to whom the Data Files
or Software are furnished to do so, provided that either
(a) this copyright and permission notice appear with all copies
of the Data Files or Software, or
(b) this copyright and permission notice appear in associated
Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF
ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT OF THIRD PARTY RIGHTS.
IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS
NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL
DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE,
DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER
TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR
PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale,
use or other dealings in these Data Files or Software without prior
written authorization of the copyright holder.

=====
Module: extra-cmake-modules, version 5.84.0

License: BSD-3-Clause

Copyright © 2011-2018 The KDE community
=====

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the copyright
notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
3. The name of the author may not be used to endorse or promote products
derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS OR
IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: forkfd

License: MIT License

Copyright (C) 2016 Intel Corporation

Copyright (C) 2015 Klarälvdalens Datakonsult AB, a KDAB Group company, info@kdab.com
=====

Copyright (C) 2016 Intel Corporation.

Copyright (C) 2015 Klarälvdalens Datakonsult AB, a KDAB Group company, info@kdab.com

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell

copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

=====
Module: libdus-1 headers, version dbus-1.13.12

License: Academic Free License v2.1, or GNU General Public License v2.0 or later

Copyright (C) 2002, 2003 CodeFactory AB

Copyright (C) 2004, 2005 Red Hat, Inc.

=====
Copyright (C) 2002, 2003 CodeFactory AB

Copyright (C) 2004, 2005 Red Hat, Inc.

Licensed under the Academic Free License version 2.1

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

The Academic Free License

This Academic Free License (the "License") applies to any original work of authorship (the "Original Work") whose owner (the "Licensor") has placed the following notice immediately following the copyright notice for the Original Work:

Licensed under the Academic Free License version 2.1

1) Grant of Copyright License. Licensor hereby grants You a world-wide, royalty-free, non-exclusive, perpetual, sublicenseable license to do the following:

- a) to reproduce the Original Work in copies;
- b) to prepare derivative works ("Derivative Works") based upon the Original Work;
- c) to distribute copies of the Original Work and Derivative Works to the public;
- d) to perform the Original Work publicly; and
- e) to display the Original Work publicly.

2) Grant of Patent License. Licensor hereby grants You a world-wide, royalty-free, non-exclusive, perpetual, sublicenseable license, under patent claims owned or controlled by the Licensor that are embodied in the Original Work as furnished by the Licensor, to make, use, sell and offer for sale the Original Work and Derivative Works.

3) Grant of Source Code License. The term "Source Code" means the preferred form of the Original Work for making modifications to it and all available documentation describing how to modify the Original Work. Licensor hereby agrees to provide a machine-readable copy of the Source Code of the Original Work along with each copy of the Original Work that Licensor distributes. Licensor reserves the right to satisfy this obligation by placing a machine-readable copy of the Source Code in an information repository reasonably calculated to permit inexpensive and convenient access by You for as long as Licensor continues to distribute the Original Work, and by publishing the address of that information repository in a notice immediately following the copyright notice that applies to the Original Work.

4) Exclusions From License Grant. Neither the names of Licensor, nor the names of any contributors to the Original Work, nor any of their trademarks or service marks, may be used to endorse or promote products derived from this Original Work without express prior written permission of the Licensor. Nothing in this License shall be deemed to grant any rights to trademarks, copyrights, patents, trade secrets or any other intellectual property of Licensor except as expressly stated herein. No patent license is granted to make, use, sell or offer to sell embodiments of any patent claims other than the licensed claims defined in Section 2. No right is granted to the trademarks of Licensor even if such marks are included in the Original Work. Nothing in this License shall be interpreted to prohibit Licensor from licensing under different terms from this License any Original Work that Licensor otherwise would have a right to license.

5) This section intentionally omitted.

6) Attribution Rights. You must retain, in the Source Code of any Derivative Works that You create, all copyright, patent or trademark notices from the Source Code of the Original Work, as well as any notices of licensing and any descriptive text identified therein as an "Attribution Notice." You must cause the

Source Code for any Derivative Works that You create to carry a prominent Attribution Notice reasonably calculated to inform recipients that You have modified the Original Work.

7) Warranty of Provenance and Disclaimer of Warranty. Licensor warrants that the copyright in and to the Original Work and the patent rights granted herein by Licensor are owned by the Licensor or are sublicensed to You under the terms of this License with the permission of the contributor(s) of those copyrights and patent rights. Except as expressly stated in the immediately preceding sentence, the Original Work is provided under this License on an "AS IS" BASIS and WITHOUT WARRANTY, either express or implied, including, without limitation, the warranties of NON-INFRINGEMENT, MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY OF THE ORIGINAL WORK IS WITH YOU. This DISCLAIMER OF WARRANTY constitutes an essential part of this License. No license to Original Work is granted hereunder except under this disclaimer.

8) Limitation of Liability. Under no circumstances and under no legal theory, whether in tort (including negligence), contract, or otherwise, shall the Licensor be liable to any person for any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or the use of the Original Work including, without limitation, damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses. This limitation of liability shall not apply to liability for death or personal injury resulting from Licensor's negligence to the extent applicable law prohibits such limitation. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so this exclusion and limitation may not apply to You.

9) Acceptance and Termination. If You distribute copies of the Original Work or a Derivative Work, You must make a reasonable effort under the circumstances to obtain the express assent of recipients to the terms of this License. Nothing else but this License (or another written agreement between Licensor and You) grants You permission to create Derivative Works based upon the Original Work or to exercise any of the rights granted in Section 1 herein, and any attempt to do so except under the terms of this License (or another written agreement between Licensor and You) is expressly prohibited by U.S. copyright law, the equivalent laws of other countries, and by international treaty. Therefore, by exercising any of the rights granted to You in Section 1 herein, You indicate Your acceptance of this License and all of its terms and conditions.

10) Termination for Patent Action. This License shall terminate automatically and You may no longer exercise any of the rights granted to You by this License as of the date You commence an action, including a cross-claim or counterclaim, against Licensor or any licensee alleging that the Original Work infringes a patent. This termination provision shall not apply for an action alleging patent infringement by combinations of the Original Work with other software or hardware.

11) Jurisdiction, Venue and Governing Law. Any action or suit relating to this License may be brought only in the courts of a jurisdiction wherein the Licensor resides or in which Licensor conducts its primary business, and under the laws of that jurisdiction excluding its conflict-of-law provisions. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any use of the Original Work outside the scope of this License or after its termination shall be subject to the requirements and penalties of the U.S. Copyright Act, 17 U.S.C. § 101 et seq., the equivalent laws of other countries, and international treaty. This section shall survive the termination of this License.

12) Attorneys Fees. In any action to enforce the terms of this License or seeking damages relating thereto, the prevailing party shall be entitled to recover its costs and expenses, including, without

limitation, reasonable attorneys' fees and costs incurred in connection with such action, including any appeal of such action. This section shall survive the termination of this License.

13) Miscellaneous. This License represents the complete agreement concerning the subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable.

14) Definition of "You" in This License. "You" throughout this License, whether in upper or lower case, means an individual or a legal entity exercising rights under, and complying with all of the terms of, this License. For legal entities, "You" includes any entity that controls, is controlled by, or is under common control with you. For purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

15) Right to Use. You may use the Original Work in all ways not otherwise restricted or conditioned by this License or by law, and Licensor promises not to interfere with or be responsible for such uses by You.

This license is Copyright (C) 2003-2004 Lawrence E. Rosen. All rights reserved.

Permission is hereby granted to copy and distribute this license without modification. This license may not be modified without the express written permission of its copyright owner.

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for

this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to

the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those

who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS

TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and an idea of what it does.>

Copyright (C) <yyyy> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'. This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989 Ty Coon, President of Vice

```
=====
Module: Adobe Glyph List For New Fonts, version 1.7
License: BSD 3-Clause "New" or "Revised" License
Copyright 2002, 2003, 2005, 2006, 2008, 2010, 2015 Adobe Systems
=====
```

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

Neither the name of Adobe Systems Incorporated nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,

SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: Anti-aliasing rasterizer from FreeType 2

License: Freetype Project License or GNU General Public License v2.0 only

Copyright 2000-2016 by David Turner, Robert Wilhelm, and Werner Lemberg.
=====

FREETYPE LICENSES

The FreeType 2 font engine is copyrighted work and cannot be used legally without a software license. In order to make this project usable to a vast majority of developers, we distribute it under two mutually exclusive open-source licenses.

This means that **you** must choose **one** of the two licenses described below, then obey all its terms and conditions when using FreeType 2 in any of your projects or products.

- The FreeType License, found in the file ``docs/FTL.TXT``, which is similar to the original BSD license **with** an advertising clause that forces you to explicitly cite the FreeType project in your product's documentation. All details are in the license file. This license is suited to products which don't use the GNU General Public License.

Note that this license is compatible to the GNU General Public License version 3, but not version 2.

- The GNU General Public License version 2, found in ``docs/GPLv2.TXT`` (any later version can be used also), for programs which already use the GPL. Note that the FTL is incompatible with GPLv2 due to its advertisement clause.

The contributed BDF and PCF drivers come with a license similar to that of the X Window System. It is compatible to the above two licenses (see files ``src/bdf/README`` and ``src/pcf/README``). The same

holds for the source code files `src/base/fthash.c` and
`include/freetype/internal/fthash.h`; they were part of the BDF driver
in earlier FreeType versions.

The gzip module uses the zlib license (see `src/gzip/zlib.h`) which
too is compatible to the above two licenses.

The MD5 checksum support (only used for debugging in development
builds) is in the public domain.

-- FTL.TXT --

The FreeType Project LICENSE

2006-Jan-27

Copyright 1996-2002, 2006 by
David Turner, Robert Wilhelm, and Werner Lemberg

Introduction

=====

The FreeType Project is distributed in several archive packages;
some of them may contain, in addition to the FreeType font engine,
various tools and contributions which rely on, or relate to, the
FreeType Project.

This license applies to all files found in such packages, and
which do not fall under their own explicit license. The license
affects thus the FreeType font engine, the test programs,
documentation and makefiles, at the very least.

This license was inspired by the BSD, Artistic, and IJG
(Independent JPEG Group) licenses, which all encourage inclusion
and use of free software in commercial and freeware products
alike. As a consequence, its main points are that:

o We don't promise that this software works. However, we will be
interested in any kind of bug reports. (`as is' distribution)

o You can use this software for whatever you want, in parts or full form, without having to pay us. (‘royalty-free’ usage)

o You may not pretend that you wrote this software. If you use it, or only parts of it, in a program, you must acknowledge somewhere in your documentation that you have used the FreeType code. (‘credits’)

We specifically permit and encourage the inclusion of this software, with or without modifications, in commercial products. We disclaim all warranties covering The FreeType Project and assume no liability related to The FreeType Project.

Finally, many people asked us for a preferred form for a credit/disclaimer to use in compliance with this license. We thus encourage you to use the following text:

"""

Portions of this software are copyright © <year> The FreeType Project (www.freetype.org). All rights reserved.

"""

Please replace <year> with the value from the FreeType version you actually use.

Legal Terms

=====

0. Definitions

Throughout this license, the terms ‘package’, ‘FreeType Project’, and ‘FreeType archive’ refer to the set of files originally distributed by the authors (David Turner, Robert Wilhelm, and Werner Lemberg) as the ‘FreeType Project’, be they named as alpha, beta or final release.

‘You’ refers to the licensee, or person using the project, where ‘using’ is a generic term including compiling the project’s source

code as well as linking it to form a 'program' or 'executable'. This program is referred to as 'a program using the FreeType engine'.

This license applies to all files distributed in the original FreeType Project, including all source code, binaries and documentation, unless otherwise stated in the file in its original, unmodified form as distributed in the original archive. If you are unsure whether or not a particular file is covered by this license, you must contact us to verify this.

The FreeType Project is copyright (C) 1996-2000 by David Turner, Robert Wilhelm, and Werner Lemberg. All rights reserved except as specified below.

1. No Warranty

THE FREETYPE PROJECT IS PROVIDED 'AS IS' WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL ANY OF THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY DAMAGES CAUSED BY THE USE OR THE INABILITY TO USE, OF THE FREETYPE PROJECT.

2. Redistribution

This license grants a worldwide, royalty-free, perpetual and irrevocable right and license to use, execute, perform, compile, display, copy, create derivative works of, distribute and sublicense the FreeType Project (in both source and object code forms) and derivative works thereof for any purpose; and to authorize others to exercise some or all of the rights granted herein, subject to the following conditions:

- o Redistribution of source code must retain this license file ('FTL.TXT') unaltered; any additions, deletions or changes to the original files must be clearly indicated in accompanying documentation. The copyright notices of the unaltered, original files must be preserved in all copies of source files.

o Redistribution in binary form must provide a disclaimer that states that the software is based in part of the work of the FreeType Team, in the distribution documentation. We also encourage you to put an URL to the FreeType web page in your documentation, though this isn't mandatory.

These conditions apply to any software derived from or based on the FreeType Project, not just the unmodified files. If you use our work, you must acknowledge us. However, no fee need be paid to us.

3. Advertising

Neither the FreeType authors and contributors nor you shall use the name of the other for commercial, advertising, or promotional purposes without specific prior written permission.

We suggest, but do not require, that you use one or more of the following phrases to refer to this software in your documentation or advertising materials: 'FreeType Project', 'FreeType Engine', 'FreeType library', or 'FreeType Distribution'.

As you have not signed this license, you are not required to accept it. However, as the FreeType Project is copyrighted material, only this license, or another one contracted with the authors, grants you the right to use, distribute, and modify it. Therefore, by using, distributing, or modifying the FreeType Project, you indicate that you understand and accept all the terms of this license.

4. Contacts

There are two mailing lists related to FreeType:

o freetype@nongnu.org

Discusses general use and applications of FreeType, as well as future and wanted additions to the library and distribution. If you are looking for support, start in this list if you

haven't found anything to help you in the documentation.

o freetype-devel@nongnu.org

Discusses bugs, as well as engine internals, design issues, specific licenses, porting, etc.

Our home page can be found at

<https://www.freetype.org>

--- end of FTL.TXT ---

--- GPLv2.TXT ---

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another

language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but

does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such

an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to

this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and “any later version”, you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>
```

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w` and `show c` should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w` and `show c`; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

--- end of GPLv2.TXT ---

=====

Module: Bitstream Vera Font, version 1.10
License: Bitstream Vera Font License
Copyright (C) 2003 Bitstream, Inc

=====

Copyright (c) 2003 by Bitstream, Inc. All Rights Reserved. Bitstream Vera is a trademark of Bitstream, Inc.

Permission is hereby granted, free of charge, to any person obtaining a copy of the fonts accompanying this license ("Fonts") and associated documentation files (the "Font Software"), to reproduce and distribute the Font Software, including without limitation the rights to use, copy, merge, publish, distribute, and/or sell copies of the Font Software, and to permit persons to whom the Font Software is furnished to do so, subject to the following conditions:

The above copyright and trademark notices and this permission notice shall be included in all copies of one or more of the Font Software typefaces.

The Font Software may be modified, altered, or added to, and in particular the designs of glyphs or characters in the Fonts may be modified and additional glyphs or characters may be added to the Fonts, only if the fonts are renamed to names not containing either the words "Bitstream" or the word "Vera".

This License becomes null and void to the extent applicable to Fonts or Font Software that has been modified and is distributed under the "Bitstream Vera" names.

The Font Software may be sold as part of a larger software package but no copy of one or more of the Font Software typefaces may be sold by itself.

THE FONT SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF COPYRIGHT, PATENT, TRADEMARK, OR OTHER RIGHT. IN NO EVENT SHALL BITSTREAM OR THE GNOME FOUNDATION BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, INCLUDING ANY GENERAL, SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF THE USE OR INABILITY TO USE THE FONT SOFTWARE OR FROM OTHER DEALINGS IN THE FONT SOFTWARE.

Except as contained in this notice, the names of GNOME, the GNOME Foundation, and Bitstream Inc., shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Font Software without prior written authorization from the GNOME Foundation or Bitstream Inc., respectively. For further information, contact: fonts at gnome dot org.

=====

Module: Cocoa Platform Plugin

License: SD 3-clause "New" or "Revised" License

Copyright (c) 2007-2008, Apple, Inc.

=====

Copyright (c) 2007-2008, Apple, Inc.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- * Neither the name of Apple, Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR
CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR
PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====
Module: DejaVu Fonts, version 2.37
License: Bitstream Vera Font License
Copyright (c) 2003 by Bitstream, Inc
Copyright (c) 2006 by Tavamjong Bah
(c) American Mathematical Society
=====

Fonts are (c) Bitstream (see below). DejaVu changes are in public domain.
Glyphs imported from Arev fonts are (c) Tavamjong Bah (see below)

Bitstream Vera Fonts Copyright

Copyright (c) 2003 by Bitstream, Inc. All Rights Reserved. Bitstream Vera is
a trademark of Bitstream, Inc.

Permission is hereby granted, free of charge, to any person obtaining a copy
of the fonts accompanying this license ("Fonts") and associated
documentation files (the "Font Software"), to reproduce and distribute the
Font Software, including without limitation the rights to use, copy, merge,
publish, distribute, and/or sell copies of the Font Software, and to permit
persons to whom the Font Software is furnished to do so, subject to the
following conditions:

The above copyright and trademark notices and this permission notice shall
be included in all copies of one or more of the Font Software typefaces.

The Font Software may be modified, altered, or added to, and in particular the designs of glyphs or characters in the Fonts may be modified and additional glyphs or characters may be added to the Fonts, only if the fonts are renamed to names not containing either the words "Bitstream" or the word "Vera".

This License becomes null and void to the extent applicable to Fonts or Font Software that has been modified and is distributed under the "Bitstream Vera" names.

The Font Software may be sold as part of a larger software package but no copy of one or more of the Font Software typefaces may be sold by itself.

THE FONT SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF COPYRIGHT, PATENT, TRADEMARK, OR OTHER RIGHT. IN NO EVENT SHALL BITSTREAM OR THE GNOME FOUNDATION BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, INCLUDING ANY GENERAL, SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF THE USE OR INABILITY TO USE THE FONT SOFTWARE OR FROM OTHER DEALINGS IN THE FONT SOFTWARE.

Except as contained in this notice, the names of Gnome, the Gnome Foundation, and Bitstream Inc., shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Font Software without prior written authorization from the Gnome Foundation or Bitstream Inc., respectively. For further information, contact: fonts at gnome dot org.

Arev Fonts Copyright

Copyright (c) 2006 by Tavmjong Bah. All Rights Reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of the fonts accompanying this license ("Fonts") and associated documentation files (the "Font Software"), to reproduce and distribute the modifications to the Bitstream Vera Font Software, including without limitation the rights to use, copy, merge, publish, distribute, and/or sell copies of the Font Software, and to permit persons to whom the Font Software is furnished to do so, subject to

the following conditions:

The above copyright and trademark notices and this permission notice shall be included in all copies of one or more of the Font Software typefaces.

The Font Software may be modified, altered, or added to, and in particular the designs of glyphs or characters in the Fonts may be modified and additional glyphs or characters may be added to the Fonts, only if the fonts are renamed to names not containing either the words “Tavmjong Bah” or the word “Arev”.

This License becomes null and void to the extent applicable to Fonts or Font Software that has been modified and is distributed under the “Tavmjong Bah Arev” names.

The Font Software may be sold as part of a larger software package but no copy of one or more of the Font Software typefaces may be sold by itself.

THE FONT SOFTWARE IS PROVIDED “AS IS”, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF COPYRIGHT, PATENT, TRADEMARK, OR OTHER RIGHT. IN NO EVENT SHALL TAVMJONG BAH BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, INCLUDING ANY GENERAL, SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF THE USE OR INABILITY TO USE THE FONT SOFTWARE OR FROM OTHER DEALINGS IN THE FONT SOFTWARE.

Except as contained in this notice, the name of Tavmjong Bah shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Font Software without prior written authorization from Tavmjong Bah. For further information, contact: [tavmjong @ free . fr](mailto:tavmjong@free.fr).

TeX Gyre DJV Math

Fonts are (c) Bitstream (see below). DejaVu changes are in public domain.

Math extensions done by B. Jackowski, P. Strzelczyk and P. Pianowski (on behalf of TeX users groups) are in public domain.

Letters imported from Euler Fraktur from AMSfonts are (c) American Mathematical Society (see below).

Bitstream Vera Fonts Copyright

Copyright (c) 2003 by Bitstream, Inc. All Rights Reserved. Bitstream Vera is a trademark of Bitstream, Inc.

Permission is hereby granted, free of charge, to any person obtaining a copy of the fonts accompanying this license ("Fonts") and associated documentation files (the "Font Software"), to reproduce and distribute the Font Software, including without limitation the rights to use, copy, merge, publish, distribute, and/or sell copies of the Font Software, and to permit persons to whom the Font Software is furnished to do so, subject to the following conditions:

The above copyright and trademark notices and this permission notice shall be included in all copies of one or more of the Font Software typefaces.

The Font Software may be modified, altered, or added to, and in particular the designs of glyphs or characters in the Fonts may be modified and additional glyphs or characters may be added to the Fonts, only if the fonts are renamed to names not containing either the words "Bitstream" or the word "Vera".

This License becomes null and void to the extent applicable to Fonts or Font Software that has been modified and is distributed under the "Bitstream Vera" names.

The Font Software may be sold as part of a larger software package but no copy of one or more of the Font Software typefaces may be sold by itself.

THE FONT SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF COPYRIGHT, PATENT, TRADEMARK, OR OTHER RIGHT. IN NO EVENT SHALL BITSTREAM OR THE GNOME FOUNDATION BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, INCLUDING ANY GENERAL,

SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF THE USE OR INABILITY TO USE THE FONT SOFTWARE OR FROM OTHER DEALINGS IN THE FONT SOFTWARE.

Except as contained in this notice, the names of GNOME, the GNOME Foundation,

and Bitstream Inc., shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Font Software without prior written authorization from the GNOME Foundation or Bitstream Inc., respectively. For further information, contact: fonts at gnome dot org.

AMSFonTS (v. 2.2) copyright

The PostScript Type 1 implementation of the AMSFonTS produced by and previously distributed by Blue Sky Research and Y&Y, Inc. are now freely available for general use. This has been accomplished through the cooperation of a consortium of scientific publishers with Blue Sky Research and Y&Y. Members of this consortium include:

Elsevier Science IBM Corporation Society for Industrial and Applied Mathematics (SIAM) Springer-Verlag American Mathematical Society (AMS)

In order to assure the authenticity of these fonts, copyright will be held by the American Mathematical Society. This is not meant to restrict in any way the legitimate use of the fonts, such as (but not limited to) electronic distribution of documents containing these fonts, inclusion of these fonts into other public domain or commercial font collections or computer applications, use of the outline data to create derivative fonts and/or faces, etc. However, the AMS does require that the AMS copyright notice be removed from any derivative versions of the fonts which have been altered in any way. In addition, to ensure the fidelity of TeX documents using Computer Modern fonts, Professor Donald Knuth, creator of the Computer Modern faces, has requested that any alterations which yield different font metrics be given a different name.

\$Id\$

=====
Module: Freetype 2 - Bitmap Distribution Format (BDF) support

License: MIT License

Copyright (c) 2000 Computing Research Labs, New Mexico State University

Copyright (c) 2001-2014 Francesco Zappa Nardelli

=====
Copyright (C) 2001-2002 by Francesco Zappa Nardelli

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

*** Portions of the driver (that is, bdf.c and bdf.h):

Copyright 2000 Computing Research Labs, New Mexico State University
Copyright 2001-2002, 2011 Francesco Zappa Nardelli

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE COMPUTING RESEARCH LAB OR NEW MEXICO STATE UNIVERSITY BE LIABLE FOR ANY

CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

=====
Module: Freetype 2 - Portable Compiled Format (PCF) support
License: MIT License and MIT Open Group variant
Copyright (c) 2001, 2012 David Turner, Robert Wilhelm, and Werner Lemberg
Copyright (c) 2000-2014 Francesco Zappa Nardelli
Copyright (c) 1990, 1994, 1998 The Open Group
=====

Copyright (C) 2000 by Francesco Zappa Nardelli

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

--

Copyright 1990, 1994, 1998 The Open Group

Permission to use, copy, modify, distribute, and sell this software and its documentation for any purpose is hereby granted without fee, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation.

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE OPEN GROUP BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of The Open Group shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from The Open Group.

=====
Module: Freetype 2 - zlib

License: zlib License.

Copyright (C) 1995-2022 Jean-loup Gailly and Mark Adler
=====

Copyright (C) 1995-2002 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly Mark Adler
jloup@gzip.org madler@alumni.caltech.edu

=====
Module: Freetype 2, version 2.12.1

License: Freetype Project License or GNU General Public License v2.0 only
Copyright (c) 2007-2014 Adobe Systems Incorporated
Copyright (c) 2004-2022 Albert Chin-A-Young
Copyright (c) 2018-2022 Armin Hasitzka, David Turner, Robert Wilhelm, and Werner Lemberg
Copyright (c) 2000 Computing Research Labs, New Mexico State University
Copyright (c) 2018-2022 David Turner, Robert Wilhelm, Dominik Rottsches, and Werner Lemberg
Copyright (c) 2004-2022 David Turner, Robert Wilhelm, Werner Lemberg and George Williams
Copyright (c) 2022 David Turner, Robert Wilhelm, Werner Lemberg, and Moazin Khatti
Copyright (c) 2008-2022 David Turner, Robert Wilhelm, Werner Lemberg, and suzuki toshiya
Copyright (c) 2003-2022 David Turner, Robert Wilhelm, and Werner Lemberg
Copyright (c) 2005-2022 David Turner
Copyright (c) 2007-2022 Derek Clegg and Michael Toftdal
Copyright (c) 2007 Dmitry Timoshkov
Copyright (c) 2001-2015 Francesco Zappa Nardelli
Copyright (c) 2005, 2007, 2008, 2013 George Williams
Copyright (c) 2013 Google, Inc. Google Author(s) Behdad Esfahbod
Copyright (c) 2013-2022 Google, Inc.
Copyright (c) 2003 Huw D M Davies for Codeweavers
Copyright (c) 2010-2022 Joel Klinghed
Copyright (c) 1996-2022 Just van Rossum, David Turner, Robert Wilhelm, and Werner Lemberg
Copyright (c) 2003-2022 Masatake YAMATO and Redhat K.K.
Copyright (c) 2004-2022 Masatake YAMATO, Redhat K.K, David Turner, Robert Wilhelm, and Werner Lemberg
Copyright (c) 2019-2022 Nikhil Ramakrishnan, David Turner, Robert Wilhelm, and Werner Lemberg
Copyright (c) 2009-2022 Oran Agra and Mickey Gabel
Copyright (c) 2007-2022 Rahul Bhalerao <rahul.bhalerao@redhat.com>
Copyright (c) 2002-2022 Roberto Alameda
Copyright (c) 2015-2022 Werner Lemberg
Copyright (c) 2004-2022 suzuki toshiya, Masatake YAMATO, Red Hat K.K., David Turner, Robert Wilhelm, and Werner Lemberg

=====

FREETYPE LICENSES

The FreeType 2 font engine is copyrighted work and cannot be used legally without a software license. In order to make this project usable to a vast majority of developers, we distribute it under two mutually exclusive open-source licenses.

This means that *you* must choose *one* of the two licenses described below, then obey all its terms and conditions when using FreeType 2 in any of your projects or products.

- The FreeType License, found in the file ``docs/FTL.TXT``, which is similar to the original BSD license **with** an advertising clause that forces you to explicitly cite the FreeType project in your product's documentation. All details are in the license file. This license is suited to products which don't use the GNU General Public License.

Note that this license is compatible to the GNU General Public License version 3, but not version 2.

- The GNU General Public License version 2, found in ``docs/GPLv2.TXT`` (any later version can be used also), for programs which already use the GPL. Note that the FTL is incompatible with GPLv2 due to its advertisement clause.

The contributed BDF and PCF drivers come with a license similar to that of the X Window System. It is compatible to the above two licenses (see files ``src/bdf/README`` and ``src/pcf/README``). The same holds for the source code files ``src/base/fthash.c`` and ``include/freetype/internal/fthash.h``; they were part of the BDF driver in earlier FreeType versions.

The gzip module uses the zlib license (see ``src/gzip/zlib.h``) which too is compatible to the above two licenses.

The MD5 checksum support (only used for debugging in development builds) is in the public domain.

-- FTL.TXT --

The FreeType Project LICENSE

2006-Jan-27

Copyright 1996-2002, 2006 by
David Turner, Robert Wilhelm, and Werner Lemberg

Introduction

=====

The FreeType Project is distributed in several archive packages; some of them may contain, in addition to the FreeType font engine, various tools and contributions which rely on, or relate to, the FreeType Project.

This license applies to all files found in such packages, and which do not fall under their own explicit license. The license affects thus the FreeType font engine, the test programs, documentation and makefiles, at the very least.

This license was inspired by the BSD, Artistic, and IJG (Independent JPEG Group) licenses, which all encourage inclusion and use of free software in commercial and freeware products alike. As a consequence, its main points are that:

- o We don't promise that this software works. However, we will be interested in any kind of bug reports. ('as is' distribution)
- o You can use this software for whatever you want, in parts or full form, without having to pay us. ('royalty-free' usage)
- o You may not pretend that you wrote this software. If you use it, or only parts of it, in a program, you must acknowledge somewhere in your documentation that you have used the FreeType code. ('credits')

We specifically permit and encourage the inclusion of this software, with or without modifications, in commercial products. We disclaim all warranties covering The FreeType Project and assume no liability related to The FreeType Project.

Finally, many people asked us for a preferred form for a credit/disclaimer to use in compliance with this license. We thus encourage you to use the following text:

"""

Portions of this software are copyright © <year> The FreeType Project (www.freetype.org). All rights reserved.

"""

Please replace <year> with the value from the FreeType version you actually use.

Legal Terms

=====

0. Definitions

Throughout this license, the terms `package`, `FreeType Project`, and `FreeType archive` refer to the set of files originally distributed by the authors (David Turner, Robert Wilhelm, and Werner Lemberg) as the `FreeType Project`, be they named as alpha, beta or final release.

`You' refers to the licensee, or person using the project, where `using' is a generic term including compiling the project's source code as well as linking it to form a `program' or `executable'. This program is referred to as `a program using the FreeType engine'.

This license applies to all files distributed in the original FreeType Project, including all source code, binaries and documentation, unless otherwise stated in the file in its original, unmodified form as distributed in the original archive. If you are unsure whether or not a particular file is covered by this license, you must contact us to verify this.

The FreeType Project is copyright (C) 1996-2000 by David Turner, Robert Wilhelm, and Werner Lemberg. All rights reserved except as specified below.

1. No Warranty

THE FREETYPE PROJECT IS PROVIDED `AS IS' WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL ANY OF THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY DAMAGES CAUSED BY THE USE OR THE INABILITY TO

USE, OF THE FREETYPE PROJECT.

2. Redistribution

This license grants a worldwide, royalty-free, perpetual and irrevocable right and license to use, execute, perform, compile, display, copy, create derivative works of, distribute and sublicense the FreeType Project (in both source and object code forms) and derivative works thereof for any purpose; and to authorize others to exercise some or all of the rights granted herein, subject to the following conditions:

- o Redistribution of source code must retain this license file ('FTL.TXT') unaltered; any additions, deletions or changes to the original files must be clearly indicated in accompanying documentation. The copyright notices of the unaltered, original files must be preserved in all copies of source files.

- o Redistribution in binary form must provide a disclaimer that states that the software is based in part of the work of the FreeType Team, in the distribution documentation. We also encourage you to put an URL to the FreeType web page in your documentation, though this isn't mandatory.

These conditions apply to any software derived from or based on the FreeType Project, not just the unmodified files. If you use our work, you must acknowledge us. However, no fee need be paid to us.

3. Advertising

Neither the FreeType authors and contributors nor you shall use the name of the other for commercial, advertising, or promotional purposes without specific prior written permission.

We suggest, but do not require, that you use one or more of the following phrases to refer to this software in your documentation or advertising materials: 'FreeType Project', 'FreeType Engine', 'FreeType library', or 'FreeType Distribution'.

As you have not signed this license, you are not required to accept it. However, as the FreeType Project is copyrighted material, only this license, or another one contracted with the authors, grants you the right to use, distribute, and modify it. Therefore, by using, distributing, or modifying the FreeType Project, you indicate that you understand and accept all the terms of this license.

4. Contacts

There are two mailing lists related to FreeType:

o freetype@nongnu.org

Discusses general use and applications of FreeType, as well as future and wanted additions to the library and distribution.

If you are looking for support, start in this list if you haven't found anything to help you in the documentation.

o freetype-devel@nongnu.org

Discusses bugs, as well as engine internals, design issues, specific licenses, porting, etc.

Our home page can be found at

<https://www.freetype.org>

--- end of FTL.TXT ---

--- GPLv2.TXT ---

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and

distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License.

However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the

integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and “any later version”, you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>

Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful,

but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

--- end of GPLv2.TXT ---

=====

Module: HarfBuzz-NG, version 2.9.0

License: MIT License

Copyright © 2010,2011,2012,2013,2014,2015,2016,2017,2018,2019 Google, Inc.

Copyright © 2019 Facebook, Inc.

Copyright © 2012 Mozilla Foundation

Copyright © 2011 Codethink Limited

Copyright © 2008,2010 Nokia Corporation and/or its subsidiary(-ies)

Copyright © 2009 Keith Stribley

Copyright © 2009 Martin Hosken and SIL International

Copyright © 2007 Chris Wilson

Copyright © 2006 Behdad Esfahbod

Copyright © 2005 David Turner

Copyright © 2004,2007,2008,2009,2010 Red Hat, Inc.

Copyright © 1998-2004 David Turner and Werner Lemberg

=====

HarfBuzz is licensed under the so-called "Old MIT" license. Details follow.

For parts of HarfBuzz that are licensed under different licenses see individual files names COPYING in subdirectories where applicable.

Copyright © 2010,2011,2012,2013,2014,2015,2016,2017,2018,2019,2020 Google, Inc.

Copyright © 2018,2019,2020 Ebrahim Byagowi

Copyright © 2019,2020 Facebook, Inc.

Copyright © 2012 Mozilla Foundation

Copyright © 2011 Codethink Limited

Copyright © 2008,2010 Nokia Corporation and/or its subsidiary(-ies)

Copyright © 2009 Keith Stribley

Copyright © 2009 Martin Hosken and SIL International

Copyright © 2007 Chris Wilson

Copyright © 2005,2006,2020,2021 Behdad Esfahbod

Copyright © 2005 David Turner

Copyright © 2004,2007,2008,2009,2010 Red Hat, Inc.

Copyright © 1998-2004 David Turner and Werner Lemberg

For full copyright notices consult the individual files in the package.

Permission is hereby granted, without written agreement and without license or royalty fees, to use, copy, modify, and distribute this software and its documentation for any purpose, provided that the above copyright notice and the following two paragraphs appear in all copies of this software.

IN NO EVENT SHALL THE COPYRIGHT HOLDER BE LIABLE TO ANY PARTY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS SOFTWARE AND ITS DOCUMENTATION, EVEN IF THE COPYRIGHT HOLDER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

THE COPYRIGHT HOLDER SPECIFICALLY DISCLAIMS ANY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE SOFTWARE PROVIDED HEREUNDER IS ON AN "AS IS" BASIS, AND THE COPYRIGHT HOLDER HAS NO OBLIGATION TO PROVIDE MAINTENANCE, SUPPORT, UPDATES, ENHANCEMENTS, OR MODIFICATIONS.

=====
Module: IAccessible2 IDL Specification, version 1.3.0

License: BSD 3-clause "New" or "Revised" License

Copyright (c) 2000, 2006 Sun Microsystems, Inc.

Copyright (c) 2006 IBM Corporation

Copyright (c) 2007, 2010, 2012, 2013 Linux Foundation

IAccessible2 is a trademark of the Linux Foundation. The IAccessible2 mark may be used in accordance with the Linux Foundation Trademark Policy to indicate compliance with the IAccessible2 specification.

=====
Copyright (c) 2013 Linux Foundation

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the Linux Foundation nor the names of its

contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This BSD License conforms to the Open Source Initiative "Simplified BSD License" as published at:

<http://www.opensource.org/licenses/bsd-license.php>

=====
Module: ibJPEG-turbo, version 2.1.4

License: ndependent JPEG Group License and BSD 3-Clause "New" or "Revised" License and zlib License

Copyright (C) 2009-2022 D. R. Commander

Copyright (C) 2015, 2020 Google, Inc.

Copyright (C) 2019-2020 Arm Limited

Copyright (C) 2015-2016, 2018 Matthieu Darbois

Copyright (C) 2011-2016 Siarhei Siamashka

Copyright (C) 2015 Intel Corporation

Copyright (C) 2013-2014 Linaro Limited

Copyright (C) 2013-2014 MIPS Technologies, Inc.

Copyright (C) 2009, 2012 Pierre Ossman for Cendio AB

Copyright (C) 2009-2011 Nokia Corporation and/or its subsidiary(-ies)

Copyright (C) 1999-2006 MIYASAKA Masaru

Copyright (C) 1991-2020 Thomas G. Lane, Guido Vollbeding

=====
libjpeg-turbo Licenses

=====

libjpeg-turbo is covered by three compatible BSD-style open source licenses:

- The IJG (Independent JPEG Group) License, which is listed in README.ijg

This license applies to the libjpeg API library and associated programs (any code inherited from libjpeg, and any modifications to that code.)

- The Modified (3-clause) BSD License, which is listed below

This license covers the TurboJPEG API library and associated programs, as well as the build system.

- The [zlib License](https://opensource.org/licenses/Zlib)

This license is a subset of the other two, and it covers the libjpeg-turbo SIMD extensions.

Complying with the libjpeg-turbo Licenses

=====

This section provides a roll-up of the libjpeg-turbo licensing terms, to the best of our understanding.

1. If you are distributing a modified version of the libjpeg-turbo source, then:
 1. You cannot alter or remove any existing copyright or license notices from the source.

****Origin****
 - Clause 1 of the IJG License
 - Clause 1 of the Modified BSD License
 - Clauses 1 and 3 of the zlib License
 2. You must add your own copyright notice to the header of each source file you modified, so others can tell that you modified that file (if there is not an existing copyright header in that file, then you can simply add a notice stating that you modified the file.)

****Origin****

- Clause 1 of the IJG License
- Clause 2 of the zlib License

3. You must include the IJG README file, and you must not alter any of the copyright or license text in that file.

****Origin****

- Clause 1 of the IJG License

2. If you are distributing only libjpeg-turbo binaries without the source, or if you are distributing an application that statically links with libjpeg-turbo, then:

1. Your product documentation must include a message stating:

This software is based in part on the work of the Independent JPEG Group.

****Origin****

- Clause 2 of the IJG license

2. If your binary distribution includes or uses the TurboJPEG API, then your product documentation must include the text of the Modified BSD License (see below.)

****Origin****

- Clause 2 of the Modified BSD License

3. You cannot use the name of the IJG or The libjpeg-turbo Project or the contributors thereof in advertising, publicity, etc.

****Origin****

- IJG License
- Clause 3 of the Modified BSD License

4. The IJG and The libjpeg-turbo Project do not warrant libjpeg-turbo to be free of defects, nor do we accept any liability for undesirable consequences resulting from your use of the software.

****Origin****

- IJG License
- Modified BSD License

- zlib License

The Modified (3-clause) BSD License

=====

Copyright (C)2009-2022 D. R. Commander. All Rights Reserved.

Copyright (C)2015 Viktor Szathmáry. All Rights Reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the libjpeg-turbo Project nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS", AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Why Three Licenses?

=====

The zlib License could have been used instead of the Modified (3-clause) BSD License, and since the IJG License effectively subsumes the distribution conditions of the zlib License, this would have effectively placed libjpeg-turbo binary distributions under the IJG License. However, the IJG License specifically refers to the Independent JPEG Group and does not extend

attribution and endorsement protections to other entities. Thus, it was desirable to choose a license that granted us the same protections for new code that were granted to the IJG for code derived from their software.

The authors make NO WARRANTY or representation, either express or implied, with respect to this software, its quality, accuracy, merchantability, or fitness for a particular purpose. This software is provided "AS IS", and you, its user, assume the entire risk as to its quality and accuracy.

This software is copyright (C) 1991-2020, Thomas G. Lane, Guido Vollbeding. All Rights Reserved except as specified below.

Permission is hereby granted to use, copy, modify, and distribute this software (or portions thereof) for any purpose, without fee, subject to these conditions:

- (1) If any part of the source code for this software is distributed, then this README file must be included, with this copyright and no-warranty notice unaltered; and any additions, deletions, or changes to the original files must be clearly indicated in accompanying documentation.
- (2) If only executable code is distributed, then the accompanying documentation must state that "this software is based in part on the work of the Independent JPEG Group".
- (3) Permission for use of this software is granted only if the user accepts full responsibility for any undesirable consequences; the authors accept NO LIABILITY for damages of any kind.

These conditions apply to any software derived from or based on the IJG code, not just to the unmodified library. If you use our work, you ought to acknowledge us.

Permission is NOT granted for the use of any IJG author's name or company name in advertising or publicity relating to this software or products derived from it. This software may be referred to only as "the Independent JPEG Group's software".

We specifically permit and encourage the use of this software as the basis of commercial products, provided that all warranty or liability claims are assumed by the product vendor.

This software is provided 'as-is', without any express or implied

warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

=====

Module: LibPNG, version 1.6.38

License: libpng License and PNG Reference Library version 2

Copyright (c) 1995-2022 The PNG Reference Library Authors

Copyright (c) 2000-2022 Cosmin Truta

Copyright (c) 1998-2018 Glenn Randers-Pehrson

Copyright (c) 1996-1997 Andreas Dilger

Copyright (c) 1995-1996 Guy Eric Schalnat, Group 42, Inc.

Copyright (c) 2000-2017 Simon-Pierre Cadieux

Copyright (c) 2000-2017 Eric S. Raymond

Copyright (c) 2000-2017 Mans Rullgard

Copyright (c) 2000-2017 Gilles Vollant

Copyright (c) 2000-2017 James Yu

Copyright (c) 2000-2017 Mandar Sahastrabuddhe

Copyright (c) 1998-2000 Tom Lane

Copyright (c) 1998-2000 Willem van Schaik

Copyright (c) 1996-1997 John Bowler

Copyright (c) 1996-1997 Kevin Bracey

Copyright (c) 1996-1997 Sam Bushell

Copyright (c) 1996-1997 Magnus Holmgren

Copyright (c) 1996-1997 Greg Roelofs

Copyright (c) 1996-1997 Tom Tanner

Copyright (c) 1995-1996 Dave Martindale

Copyright (c) 1995-1996 Paul Schmidt

Copyright (c) 1995-1996 Tim Wegner

=====

COPYRIGHT NOTICE, DISCLAIMER, and LICENSE

=====

PNG Reference Library License version 2

- * Copyright (c) 1995-2022 The PNG Reference Library Authors.
- * Copyright (c) 2018-2022 Cosmin Truta.
- * Copyright (c) 2000-2002, 2004, 2006-2018 Glenn Randers-Pehrson.
- * Copyright (c) 1996-1997 Andreas Dilger.
- * Copyright (c) 1995-1996 Guy Eric Schalnat, Group 42, Inc.

The software is supplied "as is", without warranty of any kind, express or implied, including, without limitation, the warranties of merchantability, fitness for a particular purpose, title, and non-infringement. In no event shall the Copyright owners, or anyone distributing the software, be liable for any damages or other liability, whether in contract, tort or otherwise, arising from, out of, or in connection with the software, or the use or other dealings in the software, even if advised of the possibility of such damage.

Permission is hereby granted to use, copy, modify, and distribute this software, or portions hereof, for any purpose, without fee, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated, but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This Copyright notice may not be removed or altered from any source or altered source distribution.

PNG Reference Library License version 1 (for libpng 0.5 through 1.6.35)

libpng versions 1.0.7, July 1, 2000, through 1.6.35, July 15, 2018 are Copyright (c) 2000-2002, 2004, 2006-2018 Glenn Randers-Pehrson, are derived from libpng-1.0.6, and are distributed according to the same disclaimer and license as libpng-1.0.6 with the following individuals added to the list of Contributing Authors:

Simon-Pierre Cadieux
Eric S. Raymond
Mans Rullgard
Cosmin Truta
Gilles Vollant
James Yu
Mandar Sahastrabuddhe
Google Inc.
Vadim Barkov

and with the following additions to the disclaimer:

There is no warranty against interference with your enjoyment of the library or against infringement. There is no warranty that our efforts or the library will fulfill any of your particular purposes or needs. This library is provided with all faults, and the entire risk of satisfactory quality, performance, accuracy, and effort is with the user.

Some files in the "contrib" directory and some configure-generated files that are distributed with libpng have other copyright owners, and are released under other open source licenses.

libpng versions 0.97, January 1998, through 1.0.6, March 20, 2000, are Copyright (c) 1998-2000 Glenn Randers-Pehrson, are derived from libpng-0.96, and are distributed according to the same disclaimer and license as libpng-0.96, with the following individuals added to the list of Contributing Authors:

Tom Lane
Glenn Randers-Pehrson
Willem van Schaik

libpng versions 0.89, June 1996, through 0.96, May 1997, are Copyright (c) 1996-1997 Andreas Dilger, are derived from libpng-0.88,

and are distributed according to the same disclaimer and license as libpng-0.88, with the following individuals added to the list of Contributing Authors:

John Bowler
Kevin Bracey
Sam Bushell
Magnus Holmgren
Greg Roelofs
Tom Tanner

Some files in the "scripts" directory have other copyright owners, but are released under this license.

libpng versions 0.5, May 1995, through 0.88, January 1996, are Copyright (c) 1995-1996 Guy Eric Schalnat, Group 42, Inc.

For the purposes of this copyright and license, "Contributing Authors" is defined as the following set of individuals:

Andreas Dilger
Dave Martindale
Guy Eric Schalnat
Paul Schmidt
Tim Wegner

The PNG Reference Library is supplied "AS IS". The Contributing Authors and Group 42, Inc. disclaim all warranties, expressed or implied, including, without limitation, the warranties of merchantability and of fitness for any purpose. The Contributing Authors and Group 42, Inc. assume no liability for direct, indirect, incidental, special, exemplary, or consequential damages, which may result from the use of the PNG Reference Library, even if advised of the possibility of such damage.

Permission is hereby granted to use, copy, modify, and distribute this source code, or portions hereof, for any purpose, without fee, subject to the following restrictions:

1. The origin of this source code must not be misrepresented.
2. Altered versions must be plainly marked as such and must not

be misrepresented as being the original source.

3. This Copyright notice may not be removed or altered from any source or altered source distribution.

The Contributing Authors and Group 42, Inc. specifically permit, without fee, and encourage the use of this source code as a component to supporting the PNG file format in commercial products. If you use this source code in a product, acknowledgment is not required but would be appreciated.

=====

Module: MD4C, version 0.4.8
License: MIT License
Copyright © 2016-2020 Martin Mitáš

=====

The MIT License (MIT)

Copyright © 2016-2020 Martin Mitáš

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

=====

Module: Native Style for Android
License: Apache License 2.0
Copyright (C) 2005 The Android Open Source Project

=====

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

=====

Module: OpenGL ES 2 Headers, version Revision 27673
License: MIT License
Copyright (c) 2013-2014 The Khronos Group Inc.

=====

Copyright (c) 2013-2014 The Khronos Group Inc.

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and/or associated documentation files (the
"Materials"), to deal in the Materials without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Materials, and to
permit persons to whom the Materials are furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Materials.

THE MATERIALS ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
MATERIALS OR THE USE OR OTHER DEALINGS IN THE MATERIALS.

Module: OpenGL Headers, version Revision 27684

License: MIT License

Copyright (c) 2013-2014 The Khronos Group Inc.

=====
Copyright (c) 2013-2014 The Khronos Group Inc.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and/or associated documentation files (the "Materials"), to deal in the Materials without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Materials, and to permit persons to whom the Materials are furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Materials.

THE MATERIALS ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE MATERIALS OR THE USE OR OTHER DEALINGS IN THE MATERIALS.

=====
Module: Pixman, version 0.17.12

License: MIT License

Copyright © 2009 Nokia Corporation

=====
Copyright © 2009 Nokia Corporation

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice (including the next paragraph) shall be included in all copies or substantial portions of the

Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

=====
Module: Smooth Scaling Algorithm

License: BSD 2-clause "Simplified" License and Imlib2 License

Copyright (C) 2004, 2005 Daniel M. Duley.

(C) Carsten Haitzler and various contributors.

(C) Willem Monsuwe <willem@stack.nl>

=====
qimagertransform.cpp was contributed by Daniel M. Duley based on code from Imlib2.

Copyright (C) 2004, 2005 Daniel M. Duley

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Imlib2 License

Copyright (C) 2000 Carsten Haitzler and various contributors (see AUTHORS)

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies of the Software and its Copyright notices. In addition publicly documented acknowledgment must be given that this software has been used if no source code of this software is made available publicly. This includes acknowledgments in either Copyright notices, Manuals, Publicity and Marketing documents or any documentation provided with any product containing this software. This License does not apply to any software that links to the libraries provided by this software (statically or dynamically), but only to the software provided.

Please see the COPYING.PLAIN for a plain-english explanation of this notice and it's intent.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

```
=====
Module: Vulkan API Registry, version 1.2.166
License: Apache License 2.0 or MIT License
Copyright (c) 2015-2020 The Khronos Group Inc.
=====
```

Copyright (c) 2015-2020 The Khronos Group Inc.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Apache License

Version 2.0, January 2004

<http://www.apache.org/licenses/>

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against

any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets “[]” replaced with your own identifying information. (Don’t include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same “printed page” as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the “License”);
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an “AS IS” BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

=====

Module: Vulkan Memory Allocator, version 2.3.0

License: MIT License

Copyright (c) 2017-2019 Advanced Micro Devices, Inc. All rights reserved.

=====
Copyright (c) 2017-2019 Advanced Micro Devices, Inc. All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

=====
Module: WebGradients

License: MIT License

Copyright (c) 2017 itmeo

=====
MIT License

Copyright (c) 2017 itmeo

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

=====
Module: Wintab API

License: LCS-Telegraphics License.

Copyright 1991-1998 by LCS/Telegraphics.
=====

The text and information contained in this file may be freely used, copied, or distributed without compensation or licensing restrictions.

=====
Module: X Server helper

License: X11 License and Historical Permission Notice and Disclaimer

Copyright (c) 1987, 1988 X Consortium

Copyright 1987, 1988 by Digital Equipment Corporation, Maynard, Massachusetts.
=====

Copyright (c) 1987, 1988 X Consortium

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE X CONSORTIUM BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of the X Consortium shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from the X Consortium.

Copyright 1987, 1988 by Digital Equipment Corporation, Maynard, Massachusetts.

All Rights Reserved

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of Digital not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.

DIGITAL DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL DIGITAL BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

=====
Module: XCB-XInput

License: MIT License

Copyright (C) 2001-2006 Bart Massey, Jamey Sharp, and Josh Triplett.

Copyright (C) 2006 Peter Hutterer

Copyright (C) 2013 Daniel Martin
=====

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the names of the authors or their institutions shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from the authors.

```
=====
Module: sRGB color profile icc file
License: International Color Consortium License
Copyright International Color Consortium, 2015
=====
```

For the file sRGB2014.icc:

Copyright International Color Consortium, 2015

This profile is made available by the International Color Consortium, and may be copied, distributed, embedded, made, used, and sold without restriction. Altered versions of this profile shall have the original identification and copyright information removed and shall not be misrepresented as the original profile.

(original source location: <http://www.color.org/srgbprofiles.xalter>)

```
=====
Module: SQLite, version 3.39.2
License: Public Domain
The authors disclaim copyright to the source code. However, a license can be obtained if needed.
=====
```