

Orbiter®

Steuerung für Orbiter

BEDIENUNGSANLEITUNG

L5.0036375 11 / 2020



Revision History

Datum	Revision	Änderungen	Revisor
20-11-10		First release	mfg

© 2020 Arnold & Richter Cine Technik GmbH & Co. Betriebs KG. Alle Rechte vorbehalten.

Alle Rechte vorbehalten. Die gegebenen Informationen können ohne vorherige Ankündigung geändert werden. ARRI und alle verbundenen Firmen können nicht für Verletzungen aller Art, direkte oder indirekte Verluste, Vermögensoder andere Schäden, die durch den Gebrauch oder Nichtgebrauch des Gerätes oder aufgrund der in dieser Anleitung enthaltenen Informationen entstehen, haftbar gemacht werden.

Kein Teil dieser Anleitung darf ohne schriftliche Genehmigung von ARRI verbreitet, vervielfältigt, übermittelt, abgeschrieben, gespeichert oder in beliebige Sprachen auf beliebige Weise übersetzt werden. Wenn Sie Dokumente zum persönlichen Gebrauch von unserer Webseite herunterladen, vergewissern Sie sich bitte, die neueste Version des Dokumentes heruntergeladen zu haben. ARRI übernimmt auf keinen Fall die Verantwortung für die Richtigkeit der herunter geladenen Daten, da technische Daten ohne vorherige Ankündigung jederzeit geändert werden können.

Die von ARRI angebotenen Produkte sind für den Einsatz in einer Reihe von Ländern zugelassen, darunter Kanada, die Europäische Union, Japan und die USA. Produktspezifische Informationen zur Zulassung finden Sie in den jeweiligen Bedienungsanleitungen. Der Import und die Verwendung in anderen als den in den jeweiligen Bedienungsanleitungen genannten Ländern kann gesetzlichen, behördlichen oder amtlichen Anforderungen und Vorschriften unterliegen. Bevor die Produkte in diese Länder importiert oder in diesen Ländern verwendet werden, muss die Einhaltung der bestehenden gesetzlichen, behördlichen und administrativen Anforderungen und Vorschriften sichergestellt werden.

Es liegt in der Verantwortung des Importeurs oder des Benutzers, sich vor dem Import oder der Verwendung über die geltenden gesetzlichen, behördlichen und administrativen Anforderungen und Vorschriften zu informieren und die Einhaltung dieser Anforderungen und Vorschriften sicherzustellen, einschließlich der Beantragung und Erlangung notwendiger Genehmigungen oder Registrierungen.

Soweit angemessen und rechtlich möglich, wird ARRI Anträge im Zusammenhang mit solchen Anträgen durch die Bereitstellung technischer Dokumente oder Erklärungen unterstützen.

Als Importeur oder Benutzer bestätigen Sie, dass Sie mit den gesetzlichen, behördlichen und administrativen Anforderungen und Vorschriften, die in den Ländern gelten, in die Sie die Produkte liefern oder verwenden, vertraut sind und diese einhalten. Sie bestätigen ferner, dass Sie für alle notwendigen Registrierungen, Anmeldungen oder Genehmigungen sorgen werden, die in diesen Ländern erforderlich sind.

Sie entbinden ARRI von allen Verpflichtungen, die sich aus gesetzlichen, regulatorischen oder administrativen Anforderungen bezüglich des Imports oder der Verwendung der Produkte ergeben, außer in Ländern, in denen ARRI eine Registrierung oder Zertifizierung erhalten hat. Sie erklären sich damit einverstanden, ARRI zu entschädigen, zu verteidigen und schadlos zu halten von allen Ansprüchen, Schäden, Verlusten, Haftungen, Kosten und Ausgaben (einschließlich angemessener Honorare von Anwälten und anderen Fachleuten), die sich aus einer Forderung an ARRI im Zusammenhang mit Ihren oben genannten Verpflichtungen ergeben könnten.

Art-NetTM Designed by and Copyright Artistic Licence Holdings Ltd.

Lizenzvereinbarung Open Source Software

Dieses Gerät enthält Open Source Software. Die zugehörigen Lizenztexte können über die Weboberfläche des Gerätes abgerufen werden. Um die Weboberfläche des Gerätes zu erreichen, verbinden Sie bitte den Orbiter mit Ihrem Netzwerk und rufen Sie im Webbrowser folgende Adresse auf: http://<IP-Adresse des Orbiter>/licenses/.

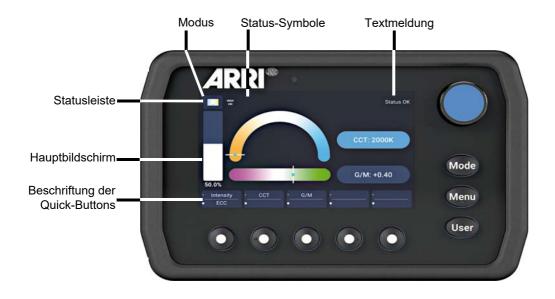
ARRI, das ARRI Logo, ARRIMAX, ARRISUN, EB, LiOS, L-Series, MAX Technology, M-Series, Orbiter, POCKETPAR, Quick Lighting Mount, True Blue, SkyPanel, SKYPANEL, T 12 und T 24 sind eingetragene Markenzeichen der Arnold & Richter Cine Technik GmbH & Co. Betriebs KG.

Inhaltsverzeichnis

Geräte-Übersicht	4
Sicherheitshinweise	5
Risiken, Warnungen und Warnsymbole	
Warnhinweise	
Allgemeine Hinweise	
Pflegehinweise	
Bestimmungsgemäße Verwendung	
Einführung	7
Lieferumfang	
Verwenden der Steuerung	8
Entnehmen und Einsetzen der Steuerung für den Orbiter	
Verbinden und Trennen der Verbindungsleitung der Steuerung	
Funktion und Verhalten der Bedienelemente	
Statusleiste	
Menüstruktur	12
Menü "Mode"	
Menübaum "Menu"	
Menübaum "User"	
Technische Daten	27
Onon Source Software Lizenzon	28

Geräte-Übersicht





Display-Darstellung bei geschlossenem Gerätemenü, CCT-Modus

Sicherheitshinweise

Folgen Sie stets den Anweisungen in diesem und allen mit dem Gerät gelieferten Dokumenten, um Personenschäden und Schäden am Gerät oder anderen Gegenständen zu vermeiden.

Risiken, Warnungen und Warnsymbole

Diese Anleitung verwendet Sicherheitshinweise, Warnsymbole und Signalwörter, um Sie auf verschieden hohe Risiken hinzuweisen:

▲ GEFAHR!

GEFAHR weist auf eine stets vorhandene, gefährliche Situation hin. Die Nichtbeachtung des Gefahrenhinweises **führt zu** Tod oder lebensgefährlicher Verletzung.

WARNUNG!

WARNUNG weist auf eine möglicherweise vorhandene, gefährliche Situation hin. Die Nichtbeachtung der Warnung **kann zu** Tod oder lebensgefährlicher Verletzung führen.

ACHTUNG!

ACHTUNG weist auf eine möglicherweise vorhandene, gefährliche Situation hin. Die Nichtbeachtung des Hinweises **kann zu** leichter oder mittlerer Verletzung führen.

HINWEIS

HINWEIS erläutert Situationen, die nicht gefährdend sind.

Der Hinweis ist nicht mit einem Warnung verknüpft. Er weist auf zusätzliche Informationen hin.

Warnhinweise

▲ WARNUNG!



Nässe und Kondensation! Gefahr des elektrischen Schlags. Feuergefahr.

Verwenden Sie das Gerät nur, wie in dieser Anleitung beschrieben.

Öffnen oder verändern Sie das Gerät nicht.

Verwenden Sie das Gerät wegen möglicher Kondensationsfeuchte erst nach 2 Stunden Wartezeit, wenn es starken Temperaturschwankungen ausgesetzt war.

Knicken Sie die Verbindungsleitung nicht. Durch starkes Biegen unmittelbar nach einem Verbinder kann Wasser in den Verbinder eindringen und einen Kurzschluss verursachen.

▲ WARNUNG!

Überhitzung! Feuergefahr.

Die maximal zulässige Umgebungstemperatur ta beträgt 45° C.

Vermeiden Sie die direkte Bestrahlung des Displays durch andere intensive Lichtquellen. Zu starke Erhitzung kann zu Beschädigung oder automatischer Abschaltung des Gerätes im Betrieb führen.

▲ WARNUNG!

Herausfallen der Steuerung - Verletzungsgefahr!



Prüfen Sie den sicheren Sitz der Steuerung im Gerät. Verletzungsgefahr durch Herausfallen der Steuerung.

Allgemeine Hinweise

Pflegehinweise

HINWEIS

Reinigen Sie die Oberfläche des Gerätes niemals mit Lösungsmitteln oder starken Putzmitteln.

Verwenden Sie stattdessen ein sauberes Tuch, das mit Wasser und ein wenig mildem Spülmittel befeuchtet wurde.

Reinigen Sie verschmutzte elektrischen Kontakte mit einem Wattestäbchen oder Ähnlichem.

Halten Sie die Kontaktelemente der elektrischen Steckverbindungen stets sauber und lassen Sie korrodierte Kontakte durch einen zertifizierten ARRI Servicepartner ersetzen.

Verwenden Sie zur Desinfektion des Produktes nur Desinfektionsmittel mit höchstens 70% Alkoholgehalt.

Bestimmungsgemäße Verwendung

HINWEIS

Das Produkt ist ein optionales Zubehör des ARRI Orbiter. Es dient zur Steuerung des Scheinwerfers. Die Sicherheits- und Installationshinweise sind zu befolgen! Eine andere als die beschriebene Verwendung führt zur Beschädigung dieses Produktes. Darüber hinaus ist dies mit Gefahren, wie Kurzschluss, Brand, elektrischer Schlag etc., verbunden. Das gesamte Produkt darf nicht geändert bzw. umgebaut werden!

Einführung

Die Steuerung für den Orbiter dient zur intuitiven Steuerung der Orbiter LED-Leuchte.

Die von Grund auf neu gestaltete Steuerung für den Orbiter ist ein evolutionärer Schritt in der Steuerung von Scheinwerfern. Mit einem 4-Zoll-Vollfarbdisplay, Schnellnavigationstasten und integrierten Sensoren ermöglicht die Steuerung für den Orbiter eine einfache Bedienung über eine grafische Benutzeroberfläche. Eine vereinfachte Menüstruktur und neu gestaltete Benutzeroberflächen sorgen für übersichtliche Bildschirmansichten und eine übersichtliche Bedienung auf einen Blick.

Das intuitive Design macht das Ändern von Farben oder das Finden einer Einstellung einfacher als je zuvor. Das Bedienfeld ist abnehmbar und kann mit Hilfe einer Verlängerungsleitung abgesetzt vom Gerät verwendet werden.

Weitere Informationen zum Orbiter finden Sie in der Dokumentation des Scheinwerfers. Sie steht zum Download im Download-Bereich der ARRI Webseite www.arri.com bereit.

Lieferumfang

HINWEIS

Das Verpackungsmaterial enthält verwertbares Material. Entsorgen Sie das Verpackungsmaterial der Umwelt zuliebe bei einer geeigneten Entsorgungsstelle.

ARRI schließt jede Haftung für Schäden, die durch ungeeignete Lagerung, Transport oder Entsorgung entstehen, aus.

Im Lieferumfang der Steuerung ist folgendes Zubehör enthalten:

- Tasche
- Lanyard
- D-Ring
- Klettband
- Kurzanleitung

Verlängerungsleitungen zum Anschluss an den Orbiter müssen separat erworben werden:

- · L2.0033799, Kabel für Steuerung, 5 m
- L2.0033800, Kabel für Steuerung, 15 m

Verwenden der Steuerung

Die optionale Steuerung für Orbiter kann direkt am Scheinwerfer oder mit einer Verlängerungsleitung abgesetzt vom Orbiter verwendet werden. Die Steuerung wird bei Verwendung direkt am Orbiter in der Mulde an der Rückseite des Gerätes magnetisch gehalten (siehe Bild unten). Die Steuerung für den Orbiter verbindet sich automatisch mit dem Gerät, wenn es in die Mulde eingesetzt wird.



▲ WARNUNG!

Starker Neodym-Magnet. Verletzungsgefahr.



Neodym-Magnete sind extrem leistungsstark.



Die sehr starke Kraft zwischen den Magneten kann schwerwiegende Verletzungen verursachen. Finger und andere Körperteile können zwischen zwei Magneten eingeklemmt werden.



Starke Magnete können den Betrieb von Herzschrittmachern oder anderen implantierten medizinischen Geräten beeinträchtigen.

Entnehmen und Einsetzen der Steuerung für den Orbiter

Die Steuerung darf bei eingeschaltetem Gerät entnommen und eingesetzt werden. Die letzte Einstellung des Scheinwerfers bleibt bei der Entnahme der Steuerung erhalten.

Entnehmen der Steuerung:

- Drücken Sie die Steuerung etwas nach links.
- Heben Sie die Steuerung rechts aus der Mulde.
- Ziehen Sie die Steuerung nach rechts aus der Mulde.

Einsetzen der Steuerung:

- Schieben Sie die Steuerung schräg nach links in die Mulde.
- Drücken Sie die rechte Seite der Steuerung in die Mulde. Schieben Sie die Steuerung nach rechts, bis sie einrastet. Die Steuerung wird magnetisch in der Mulde fixiert. Bei eingeschaltetem Gerät ist die Steuerung nach kurzer Zeit betriebsbereit.

Verbinden und Trennen der Verbindungsleitung der Steuerung

Stecken Sie den 4-poligen Lemo-Verbinder der Verbindungsleitung in die Geräteverbinder des Scheinwerfers und der Steuerung. Wenden Sie beim einstecken des Verbinders keine Gewalt an. Richten Sie den roten Punkt des Leitungsverbinders am roten Punkt des Geräteverbinders aus. Er kennzeichnet die richtige Lage des Leitungsverbinders zum Geräteverbinder. Der Verbinder verriegelt automatisch. Ziehen Sie den Ring des Lemo-Verbinders nach hinten, um den Verbinder zu entriegeln und herauszuziehen.

HINWEIS

Verwenden Sie die Steuerung direkt am Orbiter oder abgesetzt mittels Verbindungsleitung. Werden zwei Steuerungen zeitgleich verwendet, so hat die Steuerung an der Verbindungsleitung Vorrang.

Funktion und Verhalten der Bedienelemente

Die folgende Übersicht zeigt die Funktionen und das Verhalten der Bedienelemente.

Element	Eingabe	Ergebnis	
		Wert des ausgewählten Parameters ändern	
	Drehen	Blättern in einer Liste oder zwischen Icons (z.B. Effekte, Source, Farbfilter) auf dem Display	
		Markiertes Element des Displays wählen, bestätigen oder Wert übernehmen.	
	Einzeldruck	Eine Ebene höher springen.	
Encoder	Emzeiardek	Wenn der Intensitätsparameter gewählt ist: Zwischen dem aktuellen Helligkeitswert und Blackout wechseln.	
		Keine Funktion	
	Doppeldruck	Erweiterte Farbsteuerung (ECC): Zurücksetzen des ausgewählten Wertes auf seine Grundeinstellung	
	Dreifachdruck	Keine Funktion	
		Erweiterte Farbsteuerung (ECC): Zurücksetzen aller Werte auf ihre Grundeinstellungen	
	Kurzer Druck	Öffnet MODE Ansicht	
MODE	Langer Druck	Speichert den aktuellen Farbmodus und seine Einstellungen als Favorit	
MENU	Kurzer Druck	Öffnet MENU Ansicht	
WENU	Langer Druck	Bedienteil sperren und entsperren (>3 s drücken)	
USER	Kurzer Druck	Öffnet USER Ansicht	
JOLK	Langer Druck	Öffnet die Programmier-Ansicht USER-Tasten	
Quick-Buttons	Kurzer Druck	Ruft die zugeordnete Funktion der Zeile 1 auf.	
Quick-Duttons	Langer Druck	Ruft die zugeordnete Funktion der Zeile 2 auf.	

Statusleiste

Die Statusleiste befindet sich am oberen Rand des Displays. Sie zeigt den aktuellen Modus, verschiedene Status-Symbole und Info-Texte. Die folgende Übersicht zeigt die Symbole und ihre Bedeutung.

Bereich	Symbol	Modus
		ССТ
		HSI
		X,Y Coordinates
		RGBACL
MODUS		Gel Selection
		Source Matching
		Effect
		Color Sensor
	*	Favorites

Bereich	Symbol	Bedeutung
		Erweiterte Farbsteuerung
	Ø	Blackout
	a	Bedienteil gesperrt
	A	Aktive Netzwerk- verbindung
		Highspeed- Modus
STATUS - SYMBOLE	*	Tungsten-Modus
	RGBW	Kalibrierter RGBACL- Farbraum
		Warnung Batteriespannung
		Fehler Batteriespanung
	84	Temperatur- warnung
	84	Über- temperatur

Textmeldung	Bedeutung	Symbol
Status OK	Gerät betriebsbereit. Keine Fehler- oder Warnmeldungen vorhanden	
Receiving: DMX	Empfang eines gültigen DMX-Signals	
Receiving: Art-Net	Empfang eines gültigen Art-Net-Signals	
Receiving: Art-Net w / Gateway	Empfang eines gültigen Art-Net-Signals. Gateway aktiv.	
Receiving: sACN	Empfang eines gültigen sACN-Signals	
Receiving: sACN w / Gateway	Empfang eines gültigen sACN-Signals. Gateway aktiv.	
Receiving: CRMX	Empfang eines gültigen CRMX-Signals (drahtloses DMX-Signal).	
DMX lost	Verlust des DMX-Signals.	
No Calibration Data	Kalibrierdaten nicht gefunden.	
Communication Error	Kommunikationsfehler	0

Menüstruktur

Die Tasten MODE, MENU und USER öffnen jeweils einen Menübaum mit unterschiedlichem Inhalt.

MODE			
ССТ	Intensity ECC CCT G/M		
HSI	Intensity ECC Hue Saturation		
X,Y Coordinates	Intensity ECC x Value y Value		
RGBACL	Intensity ECC Red Amber Green Cyan Blue Lime Calibration		
Gel Selection	Intensity ECC Gel Brand Category Base CCT No Color		
Source Matching	Intensity ECC Category Source		
Effect	Candle Clouds Passing Club Lights Cop Car Explosion Fire Fireworks Fluorescent Flicker Lightning Paparazzi Party Effect Pulsing Strobe Television Welding		
Color Sensor	Intensity ECC Sensor Calibration Momentary Continuous Help Activate		
Favorites			

MENU			
Light Control	Host/Client Mode Operational Mode Dimming Curve Tungsten Mode High Speed Mode Color Sensor Mode Color Sensor Calibration RGBACL Color Space		
DΜХ	Address Mode Loss Behaviour Mode Specification Reduce Channels Extended Color CRMX State CRMX Link Transition Type Termination RDM State DMX/RDM Gateway Valid Filter		
Network Settings	Connection IP Address Network Mode Subnet Mask Gateway Address DNS 1 DNS 2 Timeserver Logserver Bonjour State MAC Address		
Art-Net & sACN	Art-Net/sACN State Art-Net Universe Art-Net Sub Uni Merge Mode sACN Universe		
Flash Drive Functions	Save Color Favorites Load Color Favorites Save Fixture Settings Load Fixture Settings Save System logs Update Firmware		
Display Setup	Auto Adjust Display Backlight Display Brightness Screen Mode Display Orientation Zoomed-In View		
Fixture Info	Status Data Power Errors Light Engine Temp Fixture Orientation Light Engine Hours System Hours Fixture Firmware Version Control Panel Serial Number Optics		
Fixture Settings	Language		
Factory Reset			

Menü "Mode"

Ab Firmware 1.0.

Nach Auswahl eines einstellbaren Parameters (z.B. "Intensity") öffnet sich ein neues Menü, das die Einstellung des Parameters über den Encoder oder die Quick-Buttons ermöglicht. Das Menü schliesst sich, wenn einige Sekunden keine Einstellung geändert wird oder der Quick-Button "Done" gedrückt wird.

Ebene 1	Ebene 2	Ebene 3	Funktion
	· Intensity		Helligkeit
	• ECC		Erweiterte Farbsteuerung
	• <u>CCT</u>		Farbtemperatur
сст	• G/M		Grün/Magenta-Punkt
		Back	Zurück zum Effekt
	· Intensity		Helligkeit
	• ECC		Erweiterte Farbsteuerung
	· Hue		Farbton
HSI	• Saturation		Farbsättigung
		Back	Zurück zum Effekt
	• Intensity		Helligkeit
	• ECC		Erweiterte Farbsteuerung
	• x Value		X-Wert der Farbe
X,Y Coordinates	• y Value		Y-Wert der Farbe
		Back	Zurück zum Effekt
	· Intensity		Helligkeit
RGBACL	• ECC		Erweiterte Farbsteuerung
	• Red		Intensität "Rot"
	• Amber		Intensität "Amber"
	• Green		Intensität "Grün"
KOBACL	• Cyan		Intensität "Cyan"
	• Blue		Intensität "Blau"
	• Lime		Intensität "Lime"

Ebene 1	Ebene 2	Ebene 3	Funktion
		• Intensity • ECC	Helligkeit Erweiterte Farbsteuerung
		Cal. to On	Kalibrierung aktivieren oder deaktivieren (klicken zum Umschalten)
	• Calibration	• CCT	Farbtemperatur, wenn Kalibrierung aktiv (On)
RGBACL		• G/M	Grün/Magenta-Punkt, wenn Kalibrierung aktiv (On)
		• Done	Einstellung übernehmen und Menü schließen
		Back	Zurück zum Effekt
	• Intensity • ECC		Helligkeit Erweiterte Farbsteuerung
	• Gel		Filter
	• Brand		Auswahl des Filterherstellers (Rosco / Lee) und öffnen der entsprechenden Filterliste.
Gel Selection	• Category • Base CCT		Kategorie Basis-Farbtemperatur
	No Color		Alle Filter deaktivieren
		Back	Zurück zum Effekt
	• Intensity • ECC		Helligkeit Erweiterte Farbsteuerung
③ ●	• Category		Lichtquelle, Kategorie
Source Matching	• Source		Lichtquelle
		Back	Zurück zum Effekt
		Intensity	Helligkeit
		Speed	Geschwindigkeit
	Candle	CCT Range	Farbtemperatur
		Change Effect	Anderen Effekt wählen
		Intensity	Helligkeit
Effect		Speed	Geschwindigkeit
	Clouds	Offset	Offset zwischen Geräten
	Passing	Sync	Effekt synchronisieren
		Change Effect	Anderen Effekt wählen

Ebene 1	Ebene 2	Ebene 3	Funktion
	Club Lights	Intensity	Helligkeit
		Speed	Geschwindigkeit
		Color Variety	Farbkombination
		Change Effect	Anderen Effekt wählen
		Intensity	Helligkeit
		Color Combo	Farbkombination
	Cop Car	Flash Pattern	Blitzmuster
		Change Effect	Anderen Effekt wählen
		· Intensity	Helligkeit
	<i>II</i> .	• Trigger	Effekt starten
	Explosion	• Decay	Verzögerung
		•Change Effect	Anderen Effekt wählen
		Change Color	Menü "Color Mode" öffnen
Effect	Fire	Intensity	Helligkeit
		Speed	Geschwindigkeit
		CCT Range	Farbtemperatur
		Change Effect	Anderen Effekt wählen
	Fireworks	Intensity	Helligkeit
		Speed	Geschwindigkeit
		Colors	Farbkombination
		Change Effect	Anderen Effekt wählen
	Fluorescent Flicker	• Intensity	Helligkeit
		• Speed	Geschwindigkeit
		• Frequency	Flackerfrequenz
		•Change Effect	Anderen Effekt wählen
		●Change Color	Menü "Color Mode" öffnen

Ebene 1	Ebene 2	Ebene 3	Funktion
		• Intensity	Helligkeit
		• Speed	Geschwindigkeit
	J Lightning	• Frequency	Blitzfrequenz
		• Sync	Synchronisation mit anderen Geräten
		•Change Effect •Change Color	Anderen Effekt wählen Menü "Color Mode" öffnen
		• Intensity	Helligkeit
	-	• Speed	Geschwindigkeit
	Paparazzi	Flash Type	Blitzlicht-Typ
		•Change Effect •Change Color	Anderen Effekt wählen Menü "Color Mode" öffnen
		Intensity	Helligkeit
	BE	Speed	Geschwindigkeit
	Party Effect	Saturation	Sättigung
Effect		Change Effect	Anderen Effekt wählen
		• Intensity	Helligkeit
	- / -	• Frequency	Pulsfrequenz
	Pulsing	• Duration	Pulsdauer
		•Change Effect •Change Color	Anderen Effekt wählen Menü "Color Mode" öffnen
		• Intensity	Helligkeit
	Strobe	• Speed	Geschwindigkeit
		•Change Effect •Change Color	Anderen Effekt wählen Menü "Color Mode" öffnen
		Intensity	Helligkeit
		Speed	Geschwindigkeit
	Television	CCT Range	Farbtemperatur
		Change Effect	Anderen Effekt wählen

Ebene 1	Ebene 2	Ebene 3	Funktion
		• Intensity	Helligkeit
	\$.**	• Speed	Geschwindigkeit
Effect	Welding	• Min. Level	Mindesthelligkeit
		•Change Effect	Anderen Effekt wählen
		•Change Color	Menü "Color Mode" öffnen
	· Intensity		Helligkeit
	• ECC		Erweiterte Farbsteuerung
	• Sensor Cal.		Sensorkalibration (Tungsten, Daylight, LED, Rohdaten)
	• Momentary		Aktuelles Umgebungslicht übernehmen
Color Sensor	· Continuous		Umgebungslicht folgen
	• Help		Kontext-sensitive Hilfe
	Activate	Back	Messung starten
	•	Back	oder zurück zum Effekt
Favorites		Delete Favorite	Favorit auswählen oder löschen

Menübaum "Menu"

Ebene 1	Ebene 2	Ebene 3	Erläuterung
		Off	Client-Modus aus
	Host/Client Mode	On	Client-Modus aktiv
	Off	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		High Color	Hohe Farbqualität
		High Output	Hohe Helligkeit
	Operational Mode High Color Rendering	Low Noise	Leiser Betrieb
		Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		• Exponential	Exponentielle Dimmerkurve
		• Logarithmic	Logarithmische Kurve
	Dimming Curve Exponential	· Linear	Lineare Dimmerkurve
Light Control		· "S" Curve	S-Dimmerkurve
		• Dismiss	Menü verlassen Kontext-sensitive Hilfe
		Help Off	Kein Tungsten-Modus
		On	Tungsten-Modus aktiv
	Tungsten Mode Off		
		Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		Off	Kein Highspeed-Modus
	High Speed Mode	On	Highspeed-Modus aktiv
	Off	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		Momentary	Umgebungslicht übernehmen
	Color Sensor Mode	Continuous	Umgebungslicht folgen
	Momentary	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen

Ebene 1	Ebene 2	Ebene 3	Erläuterung
	Color Sensor Calibration	Help	Kontext-sensitive Hilfe
	Tungsten	Dismiss	Kontext-sensitive Hilfe Menü verlassen Direkte Farbmischung Kalibrierte Farbmischung Kontext-sensitive Hilfe Menü verlassen
Light		Direct	Direkte Farbmischung
Control	RGBACL Color Space	Calibrated	Kalibrierte Farbmischung
	Direct	Help	Kontext-sensitive Hilfe
		Dismiss	Kontext-sensitive Hilfe Menü verlassen Direkte Farbmischung Kalibrierte Farbmischung Kontext-sensitive Hilfe Menü verlassen DMX Adresse - Kanäle Modus DMX Adresse + 10 DMX Adresse + Hanäle Modus DMX Adresse + 10 DMX Adresse + 10 DMX Adresse + 10 DMX Adresse + 10 Menü verlassen Kontext-sensitive Hilfe Folgende DMX Modi stehen zur Verfügung: 01: CCT & RGBACL 8 bit 02: CCT 8 bit 03: CCT 8 HSI 8 bit 04: RGBACL 8 bit 05: HSI 8 bit 06: CCT & RGBACL 16 bit 07: CCT 16 bit 09: RGBACL 16 bit 10: HSI 16 bit 11: Gel selection 16 bit 12: Gel selection 16 bit 13: x,y coordinates 8 bit 14: x,y coordinates 16 bit 15: Source matching 16 bit 17: Lighting effects 8 bit 18: Lighting effects 16 bit 19: Ultimate DMX mode 16 bit 19: Ultimate DMX mode 16 bit Context-sensitive Hilfe Menü verlassen Letzten DMX-Wert halten
		- Footprint -10	
		+ Footprint +10	
	Address 001	• -1 • -100	
		· +1 • +100	
		• Dismiss	Menü verlassen
		• Help	
DMX	Mode 	Help	Verfügung: 01: CCT & RGBACL 8 bit 02: CCT 8 bit 03: CCT & HSI 8 bit 04: RGBACL 8 bit 05: HSI 8 bit 06: CCT & RGBACL 16 bit 07: CCT 16 bit 09: RGBACL 16 bit 10: HSI 16 bit 11: Gel selection 8 bit 12: Gel selection 16 bit 13: x,y coordinates 8 bit 14: x,y coordinates 16 bit 15: Source matching 16: Source matching 17: Lighting effects 8 bit 18: Lighting effects 16 bit 19: Ultimate DMX mode 16 bit Kontext-sensitive Hilfe
		Hold Last Black Out	Ausblenden
	Loss Behaviour		2 Minuten halten, dann
	Hold Last Command	H2MF0	ausblenden
		Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen

Ebene 1	Ebene 2	Ebene 3	Erläuterung
	Made Consideration	X.Y	Active DMX specification (only information, future firmware versions with selection)
	Mode Specification 4.5	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		Off	Reduzierte DMX-Kanalzahl
	Reduce Channels	On	Volle DMX-Kanalzahl
	Off	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		Off	Ohne erweiterte Farbsteuerung
	Extended Color	On	Mit erweiterter Farbsteuerung
	Off	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		Off	CRMX ausschalten
	CRMX State	On	CRMX einschalten
DMX	Off	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		Unlink	CRMX-Verbindung lösen
	CRMX Link Unlinked	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		• Direct	Überblendung direkt
	Transition Type	• White Black	Überblendung über weiß Überblendung über schwarz
	Direct	• Over • Under	Überblendung über Weißpunkt Überblendung unter Weißpunkt
		• Dismiss Help	Menü verlassen Kontext-sensitive Hilfe
		Off	DMX Linie nicht terminiert
	Termination	On	DMX Linie terminiert
	Off	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen

Ebene 1	Ebene 2	Ebene 3	Erläuterung
		Off	RDM nicht aktiv
	RDM State	On	RDM aktiv
	On	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		Off	Gateway nicht aktiv
DMX	DMX/RDM Gateway	On	Gateway aktiv
September 17	On	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		Off	DMX Datenstromprüfung aus
	Valid Filter	On	DMX Datenstromprüfung aktiv
	On	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
	Connection	Not connected	Keine Netzwerkverbindung
	Not connected	Connected	Netzwerkverbindung
		• <	Zu Block nach links wechseln
		•>	Zu Block nach rechts wechseln
	IP Address	• +1 • -1	Adresse +1 / -1
		• +10 • -10	Adresse +10 / -10
Network		• Dismiss	Menü verlassen
Settings		• Help	Kontext-sensitive Hilfe
		• DHCP • Auto IP	
		• Art-Net 2.x	Option wählen
	Network Mode DHCP	Art-Net 10.x	Space Hallon
		• Manual	
		• Dismiss Help	Menü verlassen Kontext-sensitive Hilfe

Ebene 1	Ebene 2	Ebene 3	Erläuterung
		· /8	Subnet 255.000.000.000
	Subnet Mask	· /16	Subnet 255.255.000.000
	5555	• /24	Subnet 255.255.255.000
		• Dismiss • Help	Menü verlassen Kontext-sensitive Hilfe
		· <	Zu Block nach links wechseln
		•>	Zu Block nach rechts wechseln
	Gateway Address	• +1 • -1	Adresse +1 / -1
		• +10 • -10	Adresse +10 / -10
		• Dismiss Help	Menü verlassen Kontext-sensitive Hilfe
Network Settings		• <	Zu Block nach links wechseln
		•>	Zu Block nach rechts wechseln
	DNS 1	· +1 • -1	Adresse +1 / -1
		• +10 • -10	Adresse +10 / -10
		• Dismiss Help	Menü verlassen Kontext-sensitive Hilfe
		· <	Zu Block nach links wechseln
		•>	Zu Block nach rechts wechseln
	DNS 2	• +1 • -1	Adresse +1 / -1
		• +10 • -10	Adresse +10 / -10
		• Dismiss • Help	Menü verlassen Kontext-sensitive Hilfe

Ebene 1	Ebene 2	Ebene 3	Erläuterung
		• <	Zu Block nach links wechseln
		•>	Zu Block nach rechts wechseln
	Timeserver	• +1 • -1	Adresse +1 / -1
		• +10 • -10	Adresse +10 / -10
		• Dismiss • Help	Menü verlassen Kontext-sensitive Hilfe
		· <	Zu Block nach links wechseln
Network		•>	Zu Block nach rechts wechseln
Settings	Logserver	• +1 • -1	Adresse +1 / -1
		• +10 • -10	Adresse +10 / -10
		• Dismiss • Help	Menü verlassen Kontext-sensitive Hilfe
		Off	Bonjour aus
	Bonjour State	On	Bonjour an
	On	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
	MAC Address n/a		MAC-Adresse des Geräts
		• Automatic	Automatische Erkennung
Art-Net & sACN		• Art-Net Only	Nur Art-Net
	Art-Net/sACN State Automatic	• sACN Only	Nur sACN
		• Off	Keine Netzwerkverwendung
		• Dismiss • Help	Menü verlassen Kontext-sensitive Hilfe

Ebene 1	Ebene 2	Ebene 3	Erläuterung
		• <	Eine Stelle nach links
		•>	Eine Stelle nach rechts
	Art-Net Universe 0	-1	Adresse -1
		• +1	Adresse +1
		• Dismiss • Help	Menü verlassen Kontext-sensitive Hilfe
	Art-Net Net Sub Uni Net 0 Sub 0 Uni 0		Anzeige des Art-Net Netzes, des Sub-Netzes und des Universums
		Last	Der zuletzt empfangene Wert eines Kanals wird verwendet
Art-Net & sACN	Merge Mode	Highest	Der höhere Wert eines Kanals wird verwendet
	Last Takes Preced.	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		• <	Eine Stelle nach links
		•>	Eine Stelle nach rechts
	sACN Universe	· -1	Adresse -1
		• +1	Adresse +1
		• Dismiss Help	Menü verlassen Kontext-sensitive Hilfe
	Save Color Favorites		Farb-Favoriten auf Wechsel- Speichermedium speichern
	Load Color Favorites		Farb-Favoriten von Wechsel- Speichermedium laden
Flash Drive	Save Fixture Settings		Geräteeinstellungen auf Wech- sel-Speichermedium speichern
Functions	Load Fixture Settings		Geräteeinstellungen von Wechsel-Speichermedium laden
	Save System Logs		Systemlog auf Wechsel- Speichermedium speichern
	Update Firmware		Firmware aktualisieren

Ebene 1	Ebene 2	Ebene 3	Erläuterung
		Off	Automatische Helligkeits- einstellung aus
	Auto Adjust	On	Automatische Helligkeits- einstellung an
	On	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
Display Setup		Always On	Display-Beleuchtung immer an
	Display Backlight	10 Sec Off	Display-Beleuchtung schaltet sich nach 10s aus
	Always on	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
	Display Brightness Auto Adjust		Zeigt die Einstellung des Menüs "Auto Adjust"
		• Dark	Dunkler Hintergrund
		· Light	Heller Hintergrund
	Screen Mode Dark	• Auto Switch	Automatische Umschaltung
		• Dismiss	Menü verlassen
		• Help	Kontext-sensitive Hilfe
		Automatic	Automatische Einstellung der Orientierung
Display Setup		Normal	Display-Darstellung normal (Tasten unterhalb des Displays)
	Display Orientation Automatic	Upside Down	Display-Darstellung um 180° gedreht
		Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen
		Disable	Normale Darstellung
	Zoomed-In View	Enable	Vergrößerte Darstellung
	Enable	Help	Kontext-sensitive Hilfe
		Dismiss	Menü verlassen

Ebene 1	Ebene 2	Ebene 3	Erläuterung
	Status Ready		Gerätestatus
	Data No Activity		Zeigt das empfangene Daten- protokoll: - Kein Empfang (No Activity) - DMX - CRMX - Host/Client-Modus - Art-Net & Gateway - Art-Net - sACN & Gateway - sACN - Kommunikationsfehler
Fixture Info	Power		Stromversorgung (Netzspannung oder Akkupack)
	Errors No Error		Fehlerstatus Kein Fehler oder Fehlerliste
	Light Engine Temp 0°C		Temperatur der Light Engine (°C oder °F)
	Fixture Orientation Pitch: 0°		Orientierung im Raum: - Neigung (Pitch) - Drehung (Roll) - Richtung (Heading)
	Light Engine Hours 0 sec		Betriebsstunden der Light Engine
	System Hours 0 sec		Betriebsstunden des Schein- werfers
	Fixture Firmware Version n/a		Firmware-Version des Geräts
	Fixture Serial Number n/a		Seriennummer des Geräts
	Control Panel Firmware Version 1.0.7		Firmware-Version des Control Panels
Fixture Info	Control Panel Serial Number L2.0033732-39132		Seriennummer des Control Panels
	Optics No Optics Attached		Vom Gerät erkannte Wechseloptik: - No Optics Attached (keine Optik erkannt) - Open Face Optik OK - Projektionsoptik OK - Open Face Optik FEHLER - Projektionsoptik FEHLER
Fixture Settings	Language English		Menüsprache
F	actory Reset		Gerät auf die Werkseinstellungen zurücksetzen (muss bestätigt werden)

Menübaum "User"

Das Menü "User" dient zum Programmieren der 10 User-Buttons. Drücken Sie einen User-Button und wählen Sie die gewünschte Funktion mit dem Encoder aus.

Technische Daten

Abmessungen und Gewicht

Breite	
Höhe	34 mm
Tiefe	101 mm
Gewicht	0,35 kg

Konstruktion

Farbe	Schwarz
Gehäuse	Kunststoffgehäuse
Schutzart	IP24 Für feuchte Umgebung geeignet
	(mit Orbiter Regenhaube L2.0037805 und Montage im Scheinwerfer)
IP20 Fi	ür trockene Umgebung geeignet (ohne Orbiter Regenhaube L2.0037805)

Installation

Befestigung	Montage in Gerätemulde des Orbiter, Magnethalter
Zulässige Umgebungstemperatur t _a	20° C bis +45° C
Schutzklasse	
Betriebsspannung	42 V ==

Anschlüsse

Verbindung zum Scheinwerfer, wenn in Gerätemulde eingesetzt	4-polige Kontaktleiste
Verlängerungsleitung der Steuerung	
Gewinde für D-Ring	

Zertifizierungen

Die Steuerung für Orbiter ist ein fertiger Apparat, der in Kombination mit anderen Apparaten die Funktionseinheit Orbiter bildet. Eine Übersicht über die von der Funktionseinheit Orbiter vorliegenden Zertifikate finden Sie im Dokument Orbiter Sicherheits- und Installationshinweise.

Lieferumfang

Steuerung, Tasche, Lanyard, D-Ring, Klettband, Kurzanleitung

Firmware

Die neueste Firmware finden Sie unter www.arri.com/lios.



Open Source Software Lizenzen

Für die Bedienung und Steuerung des Geräts nutzt ARRI eigene oder fremde Software, die nicht unter eine sogenannte Open Source Lizenzbedingung fallen. Diese Software / Softwarekomponenten sind urheberrechtlich geschützt. Die urheberrechtlichen Befugnisse von ARRI und Dritten sind zu respektieren.

Ferner sind in dem vorliegenden Gerät Softwarekomponenten enthalten, die unter Open Source Lizenzbedingungen weitergegeben werden. Sie können die enthaltenen Open Source Komponenten nebst den dazugehörigen Urheberrechtsvermerken, Kopien der jeweils gültigen Lizenzbedingungen sowie gegebenenfalls weitere Informationen den Dokumenten im Anhang entnehmen. Die dort ausgewiesenen Haftungs- und Gewährleistungsregelungen der Open Source Lizenzbedingungen gelten nur im Verhältnis zu den jeweiligen Rechteinhabern.





Orbiter

OPEN SOURCE SOFTWARE LICENSES

L5.0038985 / L03649 10 / 2020



Overview

This part provides the license texts of most Open Source Software (OSS) products used on the ARRI Orbiter. Licenses, which do no require to be shipped with binary distributions of the software, may be omitted.

Offer for all GPLv2/LGPLv2.1 licensed software:

You can get a complete machine-readable copy of the corresponding source code. You can download the source code for free from the Orbiter download page. This offer is valid for 3 years, starting from when you purchased your Orbiter or downloaded the latest software update.

Common licenses used by multiple open source packages

Apache License, Version 2.0

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
- implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR
- 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.

GNU General Public License, Version 2

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

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

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 Lesser General Public License instead of this License.

GNU Lesser General Public License, Version 2.1

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1. February 1999

Copyright (C) 1991, 1999 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.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software—to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, 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 and use pieces of it in new free programs; and that you are informed that you can do these things.

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

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, 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 library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete 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 distribute a copy of this License along with the Library.

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 Library or any portion of it, thus forming a work based on the Library, 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) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an



argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, 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 Library, 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 Library.

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

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you 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.

If distribution of 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 satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

 d) If distribution of the work is made by offering access to copy from a
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be 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.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

- 7. 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 not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
- b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.
- 8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library 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.
- 9. 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 Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.
- 10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library 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 with this License.
- 11. 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 Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library 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 Library.

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.

- 12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library 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.
- 13. The Free Software Foundation may publish revised and/or new versions of the 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 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 Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, 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

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "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 LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. 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 LIBRARY 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 LIBRARY (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 LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. 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 library's name and an idea of what it does. Copyright (C) year name of author

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either

version 2.1 of the License, or (at your option) any later version.

This library 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 GNII

Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; 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.

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

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

signature of Ty Coon, 1 April 1990 Ty Coon, President of Vice

That's all there is to it!

Mozilla Public License, Version 2.0

Mozilla Public License Version 2.0

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 terminated 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

* 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
*

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 http://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.

Orbiter main unit

Apache License

CMSIS CPU core / compiler support Copyright (c) 2009-2017 ARM Limited. All rights reserved.

SPDX-License-Identifier: Apache-2.0

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

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.

BSD license

glib-2.0

Copyright (c) 1997-2012 University of Cambridge

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 University of Cambridge 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.

klibc

This license applies to all files in directory and its subdirectories, unless otherwise noted in individual files.

Some files are derived from files copyrighted by the Regents of The University of California, and are available under the following license:

Note: The advertising clause in the license appearing on BSD Unix files was officially rescinded by the Director of the Office of Technology Licensing of the University of California on July 22 1999. He states that clause 3 is "hereby deleted in its entirety."

Copyright (c)

The Regents of the University of California. All rights reserved.

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

- 1. 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.
- 3. All advertising materials mentioning features or use of this software must display the following acknowledgement:
- This product includes software developed by the University of California, Berkeley and its contributors.
- 4. 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.

Unless otherwise *explicitly* stated, the following text describes the licensed conditions under which the contents of this libcap release may be used and

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

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

ALTERNATIVELY, this product may be distributed under the terms of the GNU General Public License (v2.0 - see below), in which case the provisions of the GNU GPL are required INSTEAD OF the above restrictions. (This clause is necessary due to a potential conflict between the GNU GPL and the restrictions contained in a BSD-style copyright.)

THIS SOFTWARE IS PROVIDED "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(S) 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.

Copyright (C) 2016 - 2019, Stephan Mueller <smueller@chronox.de>

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, and the entire permission notice in its entirety, including the disclaimer of warranties.
- 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. The name of the author may not be used to endorse or promote products derived from this software without specific prior

ALTERNATIVELY, this product may be distributed under the terms of the GNU General Public License, in which case the provisions of the GPL2 are required INSTEAD OF the above restrictions. (This clause is necessary due to a potential bad interaction between the GPL and the restrictions contained in a BSD-style copyright.)

THIS SOFTWARE IS PROVIDED "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE HEREBY 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 NOT ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

libpcre PCRE LICENCE

PCRE 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.

Release 8 of PCRE is distributed under the terms of the "BSD" licence, as specified below. The documentation for PCRE, 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 set of C++ wrapper functions, and a just-in-time compiler that can be used to optimize pattern matching. These are both optional features that can be omitted when the library is built.

THE BASIC LIBRARY FUNCTIONS

Written by: Philip Hazel Email local part: ph10 Email domain: cam.ac.uk

University of Cambridge Computing Service, Cambridge, England.

Copyright (c) 1997-2020 University of Cambridge All rights reserved.

PCRE JUST-IN-TIME COMPILATION SUPPORT

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

Copyright(c) 2010-2020 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) 2009-2020 Zoltan Herczeg All rights reserved.

THE C++ WRAPPER FUNCTIONS

Contributed by: Google Inc.

Copyright (c) 2007-2012, Google Inc. 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 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 University of Cambridge nor the name of Google Inc. nor the names of their 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.

End

newlib

Parts of libc/misc:

Copyright (C) 2004,2010 CodeSourcery, LLC

Permission to use, copy, modify, and distribute this file for any purpose is hereby granted without fee, provided that the above copyright notice and this notice appears in all copies.

This file is distributed WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPÓSE.

libc/machine/arm (most assembler files):

Copyright (c) 2008,2013-2015 ARM Ltd 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.
- 3. The name of the company may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY ARM LTD "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 ARM LTD PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL ARM LIBE 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.

protobuf

Copyright 2008 Google 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 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 MERCHANI ABILITY 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.

Code generated by the Protocol Buffer compiler is owned by the owner of the input file used when generating it. This code is not standalone and requires a support library to be linked with it. This support library is itself covered by the above license.

STM32F7xx CMSIS + HAL driver

© COPYRIGHT(c) 2016,2017,2018,2020 STMicroelectronics

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 STMicroelectronics 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.

util-linux-libuuid

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, and the entire permission notice in its entirety, including the disclaimer of warranties.
- 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. 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 "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE HEREBY 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 NOT ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

MIT license

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1996 - 2020, Daniel Stenberg, <daniel@haxx.se>, and many contributors, see the THANKS file.

All rights reserved.



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

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 OF THIRD PARTY RIGHTS. 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.

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 this Software without prior written authorization of the copyright holder.

Copyright (c) 1998-2000 Thai Open Source Software Center Ltd and Clark Cooper Copyright (c) 2001-2017 Expat maintainers

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.

This license applies to all files in directory and its subdirectories, unless otherwise noted in individual files.

Some files are derived from files derived from the include/ directory of the Linux kernel, and are licensed under the terms of the GNU General Public License, version 2, as released by the Free Software Foundation, Inc.; incorporated herein by reference

For all remaining files, the following license applies:

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:

Any copyright notice(s) 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.

The MIT License (MIT)

Copyright (c) <2015> Steffen Nüssle

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.

libffi - Copyright (c) 1996-2019 Anthony Green, Red Hat, Inc and others. See source files for details.

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.

Bootstrap The MIT License (MIT)

Copyright (c) 2011-2019 Twitter, Inc. Copyright (c) 2011-2019 The Bootstrap 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 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.

BootstrapVue The MIT License (MIT)

Copyright (c) 2016-2020 - BootstrapVue

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.

is-buffer The MIT License (MIT)

Copyright (c) Feross Aboukhadijeh

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.

Vue.is

The MIT License (MIT)

Copyright (c) 2013-present, Yuxi (Evan) You

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.

portal-vue MIT License

Copyright (c) 2017 Thorsten Lünborg

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.

popper

The MIT License (MIT)

Copyright © 2016 Federico Zivolo and contributors

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.

ES6-Promise

Copyright (c) 2014 Yehuda Katz, Tom Dale, Stefan Penner and contributors

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.

Musl libc

musl as a whole is licensed under the following standard MIT license:

Copyright © 2005-2020 Rich Felker, et al.

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.

Authors/contributors include:

A. Wilcox Ada Worcester Alex Dowad Alex Suykov Alexander Monakov Andre McCurdy Andrew Kelley Anthony G. Basile Aric Belsito Arvid Picciani Bartosz Brachaczek Benjamin Peterso Bobby Bingham Boris Brezillon Brent Cook Chris Spiegel Clément Vasseur Daniel Micay Daniel Sabogal Daurnimator **David Carlier** David Edelsohn Denys Vlasenko Dmitry Ivanov Dmitry V. Levin Drew DeVault **Emil Renner Berthing** Fangrui Song Felix Fietkau Felix Janda Gianluca Anzolin Hauke Mehrtens He X Hiltjo Posthuma Isaac Dunham Jaydeep Patil Jens Gustedt Jeremy Huntwork Jo-Philipp Wich Joakim Sindholt John Spencer Julien Ramseier Justin Cormack Kaarle Ritvanen Khem Rai Kvlie McClain



Leah Neukirchen Luca Barbato Luka Perkov M Farkas-Dvck (Strake) Mahesh Bodapati Markus Wichmann Masanori Ogino Michael Clark Michael Forney Mikhail Kremnyov Natanael Copa Nicholas J. Kain orc Pascal Cuoq Patrick Oppenlander Petr Hosek Petr Skocik Pierre Carrier Reini Urban Rich Felker Richard Pennington Ryan Fairfax Samuel Holland Segev Finer Shiz sin Solar Designer Stefan Kristiansson Stefan O'Rear Szabolcs Nagy Timo Teräs Trutz Behn Valentin Ochs Will Dietz William Haddon

William Pitcock

Portions of this software are derived from third-party works licensed under terms compatible with the above MIT license:

The TRE regular expression implementation (src/regex/reg* and src/regex/tre*) is Copyright © 2001-2008 Ville Laurikari and licensed under a 2-clause BSD license (license text in the source files). The included version has been heavily modified by Rich Felker in 2012, in the interests of size, simplicity, and namespace cleanliness.

Much of the math library code (src/math/* and src/complex/*) is Copyright © 1993,2004 Sun Microsystems or Copyright © 2003-2011 David Schultz or

Copyright © 2003-2009 Steven G. Kargl or

Copyright © 2003-2009 Bruce D. Evans or

Copyright © 2008 Stephen L. Moshier or

Copyright © 2017-2018 Arm Limited

and labelled as such in comments in the individual source files. All have been licensed under extremely permissive terms.

The ARM memcpy code (src/string/arm/memcpy_el.S) is Copyright © 2008 The Android Open Source Project and is licensed under a two-clause BSD license. It was taken from Bionic libc, used on Android.

The implementation of DES for crypt (src/crypt/crypt_des.c) is Copyright © 1994 David Burren. It is licensed under a BSD license.

The implementation of blowfish crypt (src/crypt/crypt_blowfish.c) was originally written by Solar Designer and placed into the public domain. The code also comes with a fallback permissive license for use in jurisdictions that may not recognize the public domain.

The smoothsort implementation (src/stdlib/qsort.c) is Copyright © 2011 Valentin Ochs and is licensed under an MIT-style license.

The x86_64 port was written by Nicholas J. Kain and is licensed under the standard MIT terms.

The mips and microblaze ports were originally written by Richard Pennington for use in the ellcc project. The original code was adapted by Rich Felker for build system and code conventions during upstream integration. It is licensed under the standard MIT terms.

The mips64 port was contributed by Imagination Technologies and is licensed under the standard MIT terms.

The powerpc port was also originally written by Richard Pennington, and later supplemented and integrated by John Spencer. It is licensed under the standard MIT terms.

All other files which have no copyright comments are original works produced specifically for use as part of this library, written either by Rich Felker, the main author of the library, or by one or more contibutors listed above. Details on authorship of individual files can be found in the git version control history of the

project. The omission of copyright and license comments in each file is in the interest of source tree size.

In addition, permission is hereby granted for all public header files (include/* and arch/*/bits/*) and crt files intended to be linked into applications (crt/*, ldso/dlstart.c, and arch/*/crt_arch.h) to omit the copyright notice and permission notice otherwise required by the license, and to use these files without any requirement of attribution. These files include substantial contributions from:

Bobby Bingham John Spencer Nicholas J. Kain Rich Felker Richard Pennington Stefan Kristiansson Szabolcs Nagy

all of whom have explicitly granted such permission.

This file previously contained text expressing a belief that most of the files covered by the above exception were sufficiently trivial not to be subject to copyright, resulting in confusion over whether it negated the permissions granted in the license. In the spirit of permissive licensing, and of not having licensing issues being an obstacle to adoption, that text has been removed.

nlohmann-json

MIT License

Copyright (c) 2013-2019 Niels Lohmann

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 (c) 2003 Michael E. Smoot Copyright (c) 2004 Daniel Aarno Copyright (c) 2017 Google 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.

Openembedded / Yocto

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.

Mozilla Public License

plog

Copyright (c) 2016 Sergey Podobry (sergey.podobry at gmail.com).

Mozilla Public License, Version 2.0, refer to section "Common licenses used by multiple open source packages" earlier in this document.

For source code please visit www.arri.com/contact and get in touch with your regional ARRI contact.

OpenSSL license

openssl

LICENSE ISSUES

The OpenSSL toolkit stays under a double license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts.

OpenSSL License

Copyright (c) 1998-2019 The OpenSSL Project. 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.
- 3. All advertising materials mentioning features or use of this software must display the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (http://www.openssl.org/)"
- 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact openssl-core@openssl.org.
- Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project.
- Redistributions of any form whatsoever must retain the following acknowledgment:
 - "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)"

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT "AS IS" AND ANY EXPRESSED 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 OpenSSL PROJECT OR ITS 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 product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Original SSLeay License

Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com) All rights reserved.

This package is an SSL implementation written by Eric Young (eay@cryptsoft.com). The implementation was written so as to conform with Netscapes SSL.

This library is free for commercial and non-commercial use as long as the following conditions are aheared to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed. If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

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

- Redistributions of source code must retain the 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.
- 3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

 "This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)"

 The word 'cryptographic' can be left out if the rouines from the library
- being used are not cryptographic related :-).

 4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement:

"This product includes software written by Tim Hudson (tjh@cryptsoft.com)"

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG "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 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.

The licence and distribution terms for any publically available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution licence [including the GNU Public Licence.]

zlib license

nanopb

Copyright (c) 2011 Petteri Aimonen <jpa at nanopb.mail.kapsi.fi>

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:

- 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.
- 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.

zli

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:

 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

Acknowledgments

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)

Contact:

If license information may be incomplete, wrong or missing entirely, please visit http://www.arri.com/contact and get in touch with your regional ARRI contact.