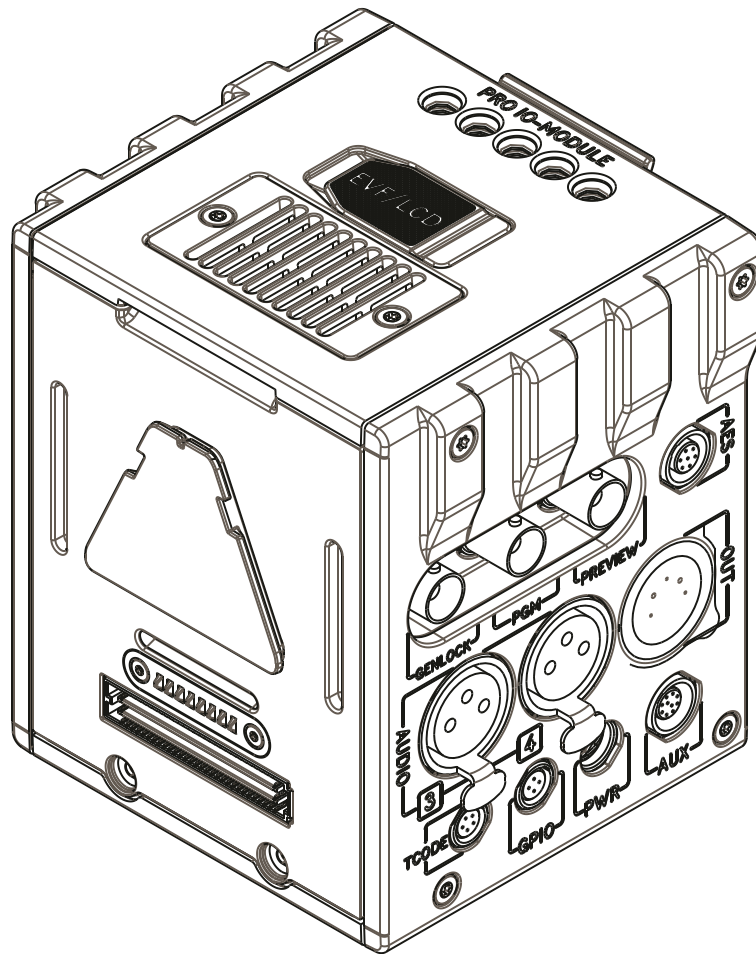




PRO I/O MODULE OPERATION GUIDE



PRO I/O MODULE
RED.COM

PRO I/O MODULE OPERATION GUIDE

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DISCLAIMER

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COMPLIANCE STATEMENTS

INDUSTRIAL CANADA EMISSION COMPLIANCE STATEMENTS

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENTS



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used

in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ▶ Reorient or relocate the receiving antenna.
- ▶ Increase the separation between the equipment and receiver.
- ▶ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ▶ Consult the dealer or an experienced radio/TV technician for help.

In order to maintain compliance with FCC regulations, shielded

cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of the manufacturer could void the users authority to operate this equipment.

NOTE: This device complies with Part 15 of the FCC Rules.

Operations subjected to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including that may cause undesirable interference.



CAUTION: If the device is changed or modified without permission from RED, the user may void his or her authority to operate the equipment.

AUSTRALIA AND NEW ZEALAND STATEMENTS

RED declares that the radio equipment described in this document comply with the following international standards.

- ▶ IEC 60065 - Product Safety

RED declares digital devices described in this document comply with the following Australian and New Zealand standards.

- ▶ AS/NZS CISPR 22 – Electromagnetic Interference
- ▶ AS/NZS CISPR 24 – Electromagnetic Immunity
- ▶ AS/NZS 61000.3.2 – Power Line Harmonics
- ▶ AS/NZS 61000.3.3 – Power Line Flicker

JAPAN STATEMENTS



This is a Class B product based on the standard of the Voluntary Control Council for Interference (VCCI) for information technology equipment. If this equipment is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

この装置は、情報処理装置等電波障害自主規制協議会 (VCCI) の基準に基づくクラス B 情報技術装置です。この装置は家庭環境で使用することを目的としていますが、ラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをしてください。

EUROPEAN UNION COMPLIANCE STATEMENTS



Information

RED declares that products with the CE marking comply with the EMC Directive (2004/108/EC) and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community. Compliance with these directives implies conformity to the following European Product Family Standards.

Information

- ▶ EN 55022 (CISPR 22) – Electromagnetic Interference
- ▶ EN 55024-1 (CISPR 24) – Electromagnetic Immunity
- ▶ EN6100-3-2 (IEC610000-3-2) – Power Line Harmonics
- ▶ EN6100-3-2 (IEC610000) – Power Line Flicker
- ▶ EN 60065 (IEC60065) – Product Safety

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Products with the ROHS marking comply with the Restriction of Hazardous Substances Directive (2011/65/EU) issued by the Commission of the European Community.

INFORMATION

Products with the CE marking comply with the EMC Directive (2004/108/EC) and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community. Compliance with these directives implies conformity to the following European Product Family Standards.

- ▶ EN 55022 (CISPR 22) – Electromagnetic Interference
- ▶ EN 55024-1 (CISPR 24) – Electromagnetic Immunity
- ▶ EN 61000-3-2 (IEC610000-3-2) – Power Line Harmonics
- ▶ EN 61000-3-3 (IEC610000) – Power Line Flicker
- ▶ EN 60065 (IEC60065) – Product Safety

USAGE RESTRICTIONS FOR PRODUCTS THAT INCORPORATE REDLINK



Products that fall into this category are denoted by inclusion of the Class 2 identifier symbol (exclamation mark in a circle) accompanying the CE Mark on the products regulatory label, example to the left.

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)



The Waste Electrical and Electronic Equipment (WEEE) mark applies only to countries within the European Union (EU) and Norway. This symbol on the product and accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product to designated collection points where it will be accepted free of charge. Alternatively, in some countries you may be able to return your products to your local retailer upon purchase of an equivalent

new product.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

For business users in the European Union, if you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

FRANCE

Usage Restrictions - Geographic Area Where Restriction Applies : France

For mainland France:

- ▶ 2.400 - 2.4835 GHz (Channels 1-16) authorized for indoor use
- ▶ 2.400 - 2.454 GHz (Channels 1-10) authorized for outdoor use

Restrictions d'utilisation - Zone géographique où les restrictions s'appliquent : France

Pour la France métropolitaine

- ▶ 2.400 - 2.4835 GHz (Canaux 1 à 16) autorisé en usage intérieur
- ▶ 2.400 - 2.454 GHz (Canaux 1 à 10) autorisé en usage extérieur

NORWAY

This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund.

Dette gjelder ikke for det geografiske området innenfor en radius av 20 km fra sentrum av Ny-Ålesund.

RESPONSIBLE PARTY:

RED Digital Cinema
34 Parker
Irvine, CA 92618
USA

PRO I/O MODULE OPERATION GUIDE

SAFETY INSTRUCTIONS

- ▶ DO NOT use near water. Avoid exposing to moisture. The unit is not waterproof, so contact with water could cause permanent damage to the unit as well as electric shock and serious injury to the user. DO NOT use in the rain or under other conditions with high moisture without appropriate protection, and immediately remove power source if exposed to moisture.



WARNING: To reduce the risk of fire or electric shock, do not expose to rain or moisture.

- ▶ DO NOT expose to excessive vibration or impact (shock). Be careful not to drop. Internal mechanisms may be damaged by severe shock.
- ▶ Clean only using a dry cloth. When cleaning, remember that it is not waterproof and moisture can damage electronic circuitry. DO NOT rinse or immerse, keep dry at all times. DO NOT use soaps, detergents, ammonia, alkaline cleaners, and abrasive cleaning compounds or solvents. These substances may damage lens coatings and electronic circuitry.



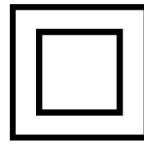
CAUTION: Proper ventilation requires a minimum 1/2" (1,25 cm) clearance between ventilation openings and external surfaces. Verify that objects that can block the fan intake and exhaust ports do not impede airflow. Failure to permit adequate airflow may result in overheating of the camera, degraded operation and in extreme situations, damage to the camera.

- ▶ DO NOT operate or store near any heat sources such as radiators, heat registers, stoves, or any other apparatus that produce heat. Store in a protected, level and ventilated place. Avoid exposure to temperature extremes, damp, severe vibration, strong magnetic fields, direct sunlight or local heat sources during storage. Remove any batteries from the camera before storage. Recommended storage and usage temperatures are:

- Operating range: 0°C to 40°C (32°F to 104°F)
- Storage range: -20°C to 50°C (-4°F to 122°F)

If there are any performance issues when operating within this temperature range, please file a support ticket at <https://support.red.com>.

- ▶ The Pro I/O Module is NOT HOT SWAPPABLE, meaning you cannot remove or install it while the camera is turned on. Before installing or removing the Pro I/O Module, you MUST turn off the camera. Failure to do so may result in damage to the accessory and/or camera BRAIN that will not be covered under warranty.
- ▶ Do not bypass the third prong of the grounding-type plug on the power cord of the AC Power Adaptor. A grounding-type plug has two blades and a third "grounding" prong. The third prong is provided for your safety. A grounding-type plug shall be connected to an outlet with a protective earthen connection. If the grounding-type plug does not fit into your outlet, do not attempt to modify the plug or outlet, consult a qualified electrician.
- ▶ Protect all power cords from being pinched, walked on or driven over by a vehicle. Replace any power cords suspected of sustaining damage due to crushing or other forms of damage.



Products marked with this symbol are class 2 devices. These devices are not provided with a grounding type plug.



CAUTION: The power cord plug for the AC Power Adaptor is used as the power disconnect. To disconnect all power from the AC Power Adaptor, unplug the power cord plug from the wall outlet. During use, the power cord plug should remain easily accessible at all times.

- ▶ Lithium-ion batteries may be subject to special handling requirements pursuant to federal and local laws. Please refer to specific shipping instructions included with your battery regarding proper transport of your battery. Do not handle your battery if it is damaged or leaking. Disposal of batteries must be in accordance with local environmental regulations. For example, California law requires that all rechargeable batteries must be recycled by an authorized recycle center. Storing batteries fully charged or in high temperature conditions may permanently reduce the life of the battery. Available battery capacity may also be temporarily lessened after storage in low temperature conditions.



WARNING: Do not expose the battery to excessive heat.



WARNING: Danger of explosion if an incorrect battery is charged or used to power the camera and accessories. Replace only with the same or equivalent type battery.



CAUTION: Refer all service and repair to qualified RED service personnel. To reduce the risk of electric shock, and damage to the camera or accessories, DO NOT attempt to perform any servicing other than any procedures that are recommended in the operating instructions.



INDOOR USE ONLY: Products marked with this symbol are designed for use indoors only.

PRO I/O MODULE OPERATION GUIDE

01 | PRO I/O MODULE INTRODUCTION

PRO I/O MODULE



Pro I/O Module

The Pro I/O Module brings together the essential input and output (I/O) connections in one (1) module, providing a central hub for professional audio and video components. The Pro I/O Module offers the following features:

- ▶ Centralized ports that make it easy to manage connections and cables.
- ▶ LCD/EVF port that allows you to connect an additional RED® LCD or EVF.
- ▶ Customizable triggers that interface with third-party GPIO and RS232 control devices.
- ▶ Mounting points for an additional DSMC® module or a REDMOTE®.
- ▶ Internal cooling system that maintains an appropriate operating temperature.

WARNING: DO NOT use the EVF/LCD port on the +1 Adaptor Module if a Pro I/O Module is connected to the DSMC BRAIN®. The Pro I/O Module overrides the EVF/LCD and AUX power out ports when connected.

SYSTEM REQUIREMENTS

- ▶ The Pro I/O Module is compatible with all EPIC and SCARLET® BRAINs.
- ▶ The Pro I/O Module requires either the Module Adaptor or the +1 Adaptor Module to be connected to the BRAIN.
- ▶ The Pro I/O Module requires that your DSMC is on firmware v3.3.18 or later.

PRO I/O MODULE OPERATION GUIDE

ADDITIONAL RESOURCES

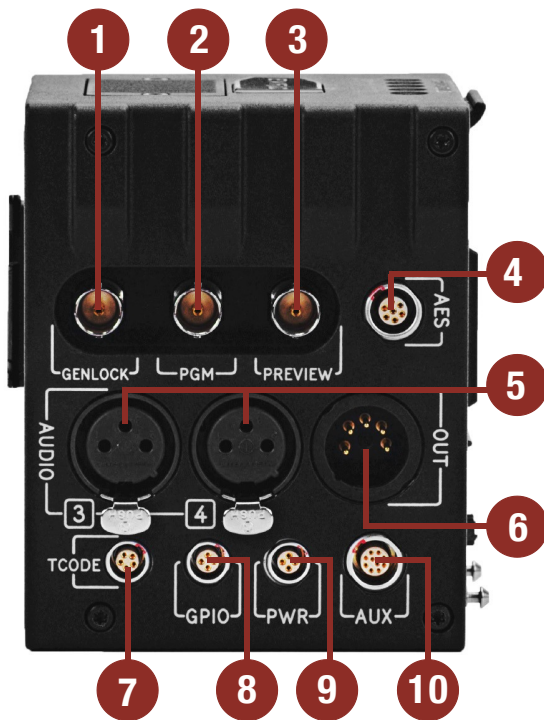
The following resources offer additional information about RED, the DSMC system, and the RED community:

- ▶ **RED.com:** Check the [official RED website](#) for latest information about RED products.
- ▶ **RED Learn Articles:** RED offers [in-depth technical articles](#) about RED cameras, post-production, and digital cinematography.
- ▶ **RED.com/downloads:** Go to the [RED Downloads page](#) to download the latest firmware, operation guides, and post production software.
- ▶ **DSMC Toolkit:** Go to the [RED Downloads page](#) to find the [DSMC Toolkit](#) that offers a number of helpful tools and resources to customize and improve your DSMC workflow and operation.
- ▶ **Support.red.com:** Check the [RED SUPPORT site](#) for FAQs, or to file a support ticket.
- ▶ **Bomb Squad Support:** For more information, contact your Bomb Squad representative.
- ▶ **In-camera Help:** Select the **Help** button on an in-camera screen to open up the help for that screen.
- ▶ **Reduser.net:** Discuss all things RED on the [REDUSER](#) third-party forum.

PRO I/O MODULE OPERATION GUIDE

02 | PRO I/O MODULE CONNECTORS

PRO I/O MODULE CONNECTORS



*Pro I/O Module
Connectors*

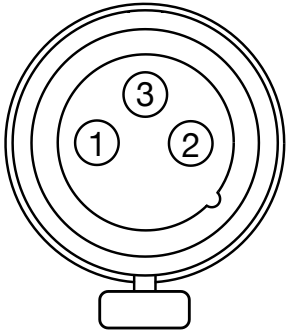
PRO I/O MODULE CONNECTORS

#	CONNECTOR	DESCRIPTION
1	GENLOCK	Genlock signal/sensor sync SMPTE 274/RS170A
2	PGM	HD-SDI program video signal
3	PREVIEW	HD-SDI preview video signal
4	AES	AES digital audio feed
5	AUDIO	Audio Input 3 and 4
6	OUT	Balanced line-level audio output (two channels)
7	TCODE	SMPTE timecode signal
8	GPIO	General Purpose Input/Output and auxiliary power output
9	PWR	Unregulated battery pass-through power
10	AUX	Supports RS232 Port remote Camera Control for an external RED Zoom motor

PRO I/O MODULE OPERATION GUIDE

AUDIO INPUT (AUDIO 3,4)

The two (2) 3-pin XLR connectors provide input for audio channels 3 and 4. Each port supports 48 V 10mA phantom power. Each input may be independently set to either line or microphone level. If a channel is set to microphone, you can independently enable its 48 V phantom power output.



*Front Face of Audio Input (3-PIN XLR) Connector
(Looking at the Pro I/O Module)*

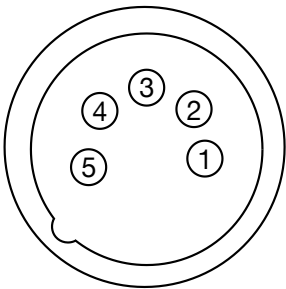
3-PIN XLR CONNECTOR

PIN	SIGNAL	DESCRIPTION	DIRECTION
1	GROUND	Camera ground	N/A
2	MIC/LIN IN +	Mic/Line input (+) 48 V phantom power	In
3	MIC/LIN IN -	Mic/Line input (-) 48 V phantom power	In

For more information about audio, see the [DSMC Operation Guide](http://www.red.com/downloads), available at www.red.com/downloads.

AUDIO OUTPUT (OUT)

A 5-pin XLR connector supports two (2) channels of balanced analog audio output.



*Front Face of Audio Output (5-PIN XLR) Connector
(Looking at the Pro I/O Module)*

5-PIN XLR CONNECTOR

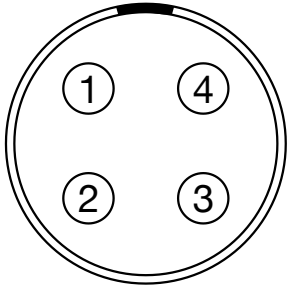
PIN	SIGNAL	DESCRIPTION	DIRECTION
1	GROUND	Camera Ground	N/A
2	MON OUT L +	(+) Line output, left channel	Out
3	MON OUT L -	(-) Line output, left channel	Out
4	MON OUT R +	(+) Line output, right channel	Out
5	MON OUT R -	(-) Line output, right channel	Out

For more information about audio, see the [DSMC Operation Guide](http://www.red.com/downloads), available at www.red.com/downloads.

PRO I/O MODULE OPERATION GUIDE

AUXILIARY POWER OUTPUT (PWR)

The LEMO EAG.0B.304.CLN connector supplies unregulated (+) 11.5 to 17 VDC battery pass-through power between pins 1 and 4. The maximum sustained current draw is 1.5A.



*Front Face of PWR Out Connector
(Looking at the Pro I/O Module)*

LEMO EAG.0B.304.CLN CONNECTOR

PIN	SIGNAL	DESCRIPTION	DIRECTION
1	GROUND	Camera Ground	N/A
2	N/A	Not Used	N/A
3	N/A	Not Used	N/A
4	+11.5 to +17 VDC	+11.5 to +17 VDC unregulated battery loop through output	Out

NOTE: Mating connector is FGG.0B.304.CLAD.

COMPATIBLE CABLE

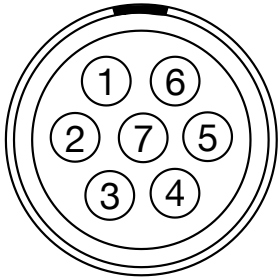
- ▶ **790-0209:** Pro I/O Aux Power Out + GPIO Cable 6'

PRO I/O MODULE OPERATION GUIDE

DIGITAL AUDIO INPUT (AES)

The LEMO EAG.1B.307.CLN connector provides four (4) channels of 24-bit, nominal 48KHz AES digital audio input.

NOTE: Audio samples in the range of 32 to 96 KHz are supported, but will be re-synchronized to 48 KHz.



*Front Face of Digital Audio Input
(LEMO EAG.1B.307.CLN) Connector
(Looking at the Pro I/O Module)*

LEMO EAG.1B.307.CLN CONNECTOR

PIN	SIGNAL	DESCRIPTION	DIRECTION
1	GROUND	Ground A	N/A
2	AES A +	AES A digital input +	In
3	AES A -	AES A digital input -	In
4	GROUND	AES A ground	N/A
5	AES B +	AES B digital input +	In
6	AES B -	AES B digital input -	In
7	TIMECODE OUT	SMPTE 12 M Timecode output	Out

NOTE: Mating connector is FHG.1B.307.CLAH.

For more information about audio, see the [DSMC Operation Guide](#), available at www.red.com/downloads.

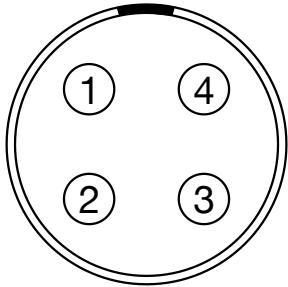
COMPATIBLE CABLE

- ▶ **790-0210:** Pro I/O Digital Audio Cable 10'

PRO I/O MODULE OPERATION GUIDE

GENERAL PURPOSE INPUT/OUTPUT (GPIO)

The LEMO EAG.0B.304.CLN connector provides an auxiliary power output connector with GPIO trigger/tally function. The auxiliary output supplies unregulated 9 to 17 VDC battery pass-through power between pins 1 and 4. The maximum sustained current draw is 1.5 Amp.



Front Face of General Purpose Input/Output (LEMO EAG.0B.304.CLN) Connector (Looking at the Pro I/O Module)

LEMO EAG.0B.304.CLN CONNECTOR

PIN	SIGNAL	DESCRIPTION	DIRECTION
1	GROUND	Camera Ground	N/A
2	GPI A	To activate, momentarily short pin 2 to 1	In
3	GPO A	When active, present 3.3V at 0.04 amps, maximum between pins 1 and 3	Out
4	+9 to +17 VDC	+9 to +17 VDC unregulated battery loop through output	Out

NOTE: Mating connector is FHG.0B.304.CLAD.

For more information about GPIO, see the [DSMC Operation Guide](http://www.red.com/downloads), available at www.red.com/downloads.

GENLOCK

The 75 OHM BNC Connector supports SMPTE 274/RS170A Tri-Level Sync.

75 OHM BNC CONNECTOR

PIN	SIGNAL	DESCRIPTION	DIRECTION
Center	Sync	SMPTE ST 274 RS 170A Tri-Level Sync	In
Shield/Screen	GROUND	Camera ground	N/A

For more information about genlock, see the [DSMC Operation Guide](http://www.red.com/downloads), available at www.red.com/downloads.

COMPATIBLE CABLE

- ▶ **790-0341:** RED HD-SDI Cable (6')

PRO I/O MODULE OPERATION GUIDE

PROGRAM AND PREVIEW OUTPUT (PGM, PREVIEW)

The 75 OHM BNC connector can connect up to two (2) channels of 48 KHz Audio. The default setting provides preview video output.

75 OHM BNC CONNECTOR			
PIN	SIGNAL	DESCRIPTION	DIRECTION
Center	HD-SDI	SMPTE ST 292 HD-SDI	Out
Shield/Screen	GROUND	Camera ground	N/A

The Program and Preview Output connectors are identical to the HD-SDI Out connector on the DSMC BRAIN. For more information, see the HD-SDI Out section of the [DSMC Operation Guide](http://www.red.com/downloads), available at www.red.com/downloads.

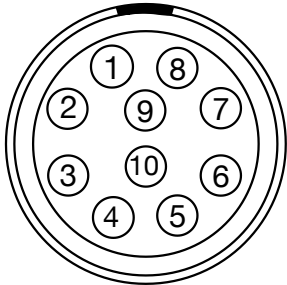
COMPATIBLE CABLE

- ▶ **790-0341**: RED HD-SDI Cable (6')

PRO I/O MODULE OPERATION GUIDE

RS232 PORT (AUX)

The LEMO EAG.1B.310.CLN connector has a 10 pin interface fixed programmable function GPIO pins. The RS232 Port (AUX) has regulated 12 VDC power at nominal 750 mA.



*Front Face of RS232 Port
(LEMO EAG.1B.310.CLN) Connector
(Looking at the Pro I/O Module)*

LEMO EAG.1B.310.CLN CONNECTOR

PIN	SIGNAL	DESCRIPTION	DIRECTION
1	GROUND	Camera ground	N/A
2	RS232	Primary RS232 TX	Out
3	+ 12 V DC	12 VDC power at nominal 750 mA	Out
4	GPO B	GPO B: When active, present 3.3 V at 0.04 amps maximum between pins 1 and 4	Out
5	SW 2	SW 2 : To activate, momentarily short pin 5 to 1	In
6	GPI B	GPI: To activate GPI trigger, momentarily short pin 6 to 1	In
7	SW 1	SW 1: To activate, momentarily short pin 7 to 1	In
8	RS232 RX	Primary RS232 RX	In
9	SEC RS232 TX	Secondary RS232 TX	Out
10	SEC RS232 RX	Secondary RS232 RX	In

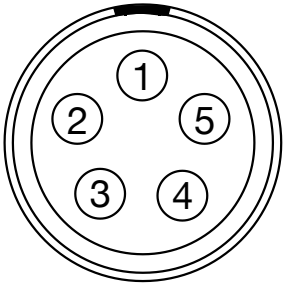
NOTE: Mating connector is FGG.1B.310.CLAH.

For more information about GPIO, see the [DSMC Operation Guide](#), available at www.red.com/downloads.

PRO I/O MODULE OPERATION GUIDE

TIMECODE (TCODE)

The LEMO EAG.0B.305.CLN connector supports SMPTE timecode input and output. Pin 5 is a timecode output. Pins 2 and 3 can be used together to receive a balance SMPTE 12M serial timecode input. Pin 2 can be used by itself (leave pin 3 open) to receive a single-ended SMPTE 12M serial timecode input.



*Front Face of Timecode
(LEMO EAG.0B.305.CLN) Connector
(Looking at the Pro I/O Module)*

LEMO EAG.0B.305.CLN CONNECTOR

PIN	SIGNAL	DESCRIPTION	DIRECTION
1	GROUND	Camera Ground	N/A
2	TIMECODE IN(S)	Timecode input - SMPTE single ended	In
3	TIMECODE IN(D)	Timecode input - SMPTE double ended	In
4	WORDCLOCK	48 KHz Word Clock Output	Out
5	TIMECODE OUT	SMPTE 12 M Timecode output	Out

NOTE: Mating connector is FHG.0B.305.CLAD.

For more information about timecode, see the [DSMC Operation Guide](http://www.red.com/downloads), available at www.red.com/downloads.

COMPATIBLE CABLE

- ▶ **790-0212:** Pro I/O Time Code Cable 3'

PRO I/O MODULE OPERATION GUIDE

EVF/LCD

The EVF/LCD is a custom digital video and power interconnection between the camera and a RED® EVF or RED LCD Monitor.

NOTE: The pin-out of this interface is not published.

For more information about monitoring, see the [DSMC Operation Guide](http://www.red.com/downloads), available at www.red.com/downloads.

COMPATIBLE CABLES

- ▶ **790-0158:** LCD/EVF Cable (Right-to-Right) 7"
- ▶ **790-0162:** LCD/EVF Cable (Right-to-Right) 12"
- ▶ **790-0448:** LCD/EVF Cable (Right-to-Right) 18"
- ▶ **790-0449:** LCD/EVF Cable (Right-to-Right) 32"
- ▶ **790-0451:** LCD/EVF Cable (Right-to-Straight) 24"
- ▶ **790-0055:** LCD/EVF Cable 6'
- ▶ **790-0056:** LCD/EVF Cable 10'

PRO I/O MODULE OPERATION GUIDE

03

INSTALL AND CONNECT THE MODULE

INSTALL THE PRO I/O MODULE

REQUIRED TOOL: T20 Torx® driver

1. Turn off the BRAIN®.
2. Install a +1 Adaptor Module or a Module Adaptor. For more information about how to install adaptor modules, see the [DSMC Operation Guide](http://www.red.com/downloads), available at www.red.com/downloads.



Install +1 Adaptor Module

3. Insert the lip at the top of the Pro I/O Module into the recess at the top of the adaptor module.



Insert Pro I/O Module

4. Rotate the Pro I/O Module down flush with the rear of the adaptor module.

PRO I/O MODULE OPERATION GUIDE

5. Apply pressure and use a T20 Torx driver to turn the lock on the adaptor module clockwise to the lock position.



The Pro I/O Module is secured.

Turn the Lock Clockwise

REMOVE THE PRO I/O MODULE

REQUIRED TOOL: T20 Torx driver

1. Turn off the BRAIN.
2. Use a T20 Torx driver to turn the lock on the adaptor module counter-clockwise to the unlock position.



Turn the Lock Counter-Clockwise

PRO I/O MODULE OPERATION GUIDE

3. Rotate the Pro I/O Module upwards and down to disengage the lip at the top of the module from the adaptor module.



Rotate the Pro I/O Module Upwards

4. Remove the Pro I/O Module from the adaptor module.

PRO I/O GPIO AND PRO I/O SW

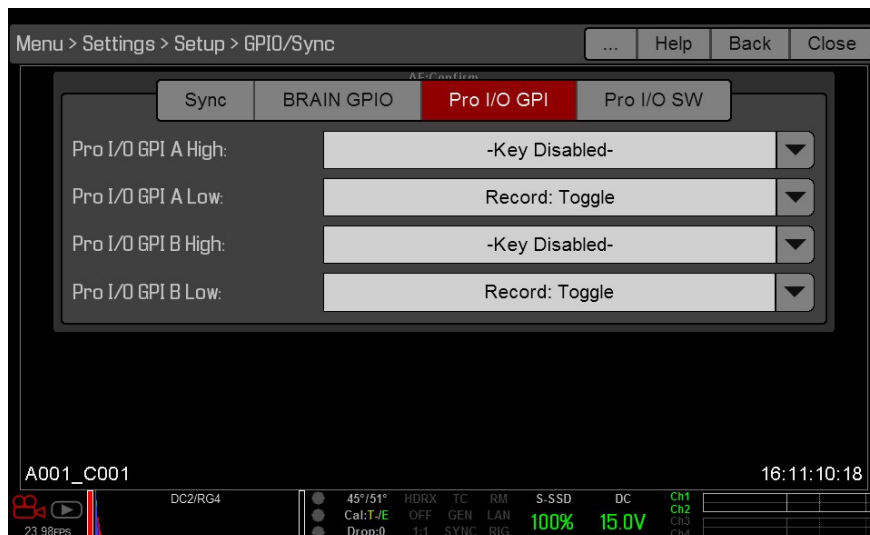
Go to **Menu > Settings > Setup > GPIO/Sync** on your DSMC to map input and output (I/O) actions to the GPIO and AUX connectors on the Pro I/O Module.

Low and High refer to the voltage. In practice, Low/High correlate to the press/release of a trigger or the on/off position of a switch.

- ▶ **Low:** The falling edge (transition from high voltage to low voltage).
- ▶ **High:** The rising edge (transition from low voltage to high voltage).

For example, to assign start/stop recording to the trigger, perform the following:

1. Connect a start/stop trigger to the GPIO connector on the Pro I/O Module.
2. Keep the default GPIO A High and Low settings (Key Disabled and Record: Toggle, respectively).



PRO I/O MODULE OPERATION GUIDE

DEFAULT GPIO OPTIONS

This table describes the I/O options for the GPIO connector on the Pro I/O Module:

I/O OPTION	DEFAULT ACTION	PIN
GPI A High	Key Disabled	2
GPI A Low	Record: Toggle	2

COMPATIBLE CABLE

- ▶ **790-0209:** Pro I/O Aux Power Out + GPIO Cable 6'

DEFAULT AUX OPTIONS

This table describes the I/O options for the AUX connector on the Pro I/O Module:

I/O OPTION	DEFAULT ACTION	PIN
GPI B High	Key Disabled	6
GPI B Low	Record: Toggle	6
SW 1 High	Key Disabled	7
SW 1 Low	Go to: Playback	7
SW 2 High	Key Disabled	5
SW 2 Low	Record: Toggle	5

COMPATIBLE CABLE

- ▶ **790-0211:** Pro I/O Aux/RS232 Cable 6'

PRO I/O MODULE OPERATION GUIDE

A

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

SPECIFICATION	DESCRIPTION
Weight	2.4 lbs
Dimensions	Height: 4.29" (109.00 mm) Width: 3.86" (98.00 mm) Depth: 3.84" (97.60 mm)
Current Draw	24 W when used with RED Touch 5.0" LCD
Auxiliary Power Output	1.5A continuous load at 11.5 to 17 VDC
Operating Range	0°C to 40°C (32°F to 104°F)
Storage Range	-20°C to 50°C (-4°F to 122°F)

PRO I/O MODULE OPERATION GUIDE

B

PRO I/O MODULE COMPATIBILITY

ATTACH PRO I/O MODULE

You can dock the Pro I/O Module to the following devices:

- ▶ Module Adaptor
- ▶ +1 Adaptor Module

COMPATIBLE RED DEVICES

You can attach the following devices directly to the back of the Pro I/O Module:

- ▶ Pro Battery Module (Dual)
- ▶ Pro Battery Module (Quad)
- ▶ Quickplate Adaptor
- ▶ Quickplate Module
- ▶ REDMOTE
- ▶ REDVOLT XL Module

COMPATIBLE GENLOCK AND TIMECODE DEVICES

The Pro I/O Module is compatible with the same timecode generators and genlock devices as the DSMC BRAIN. For more information about what devices are compatible with the DSMC BRAIN, see the [DSMC Operation Guide](#), available at www.red.com/downloads.

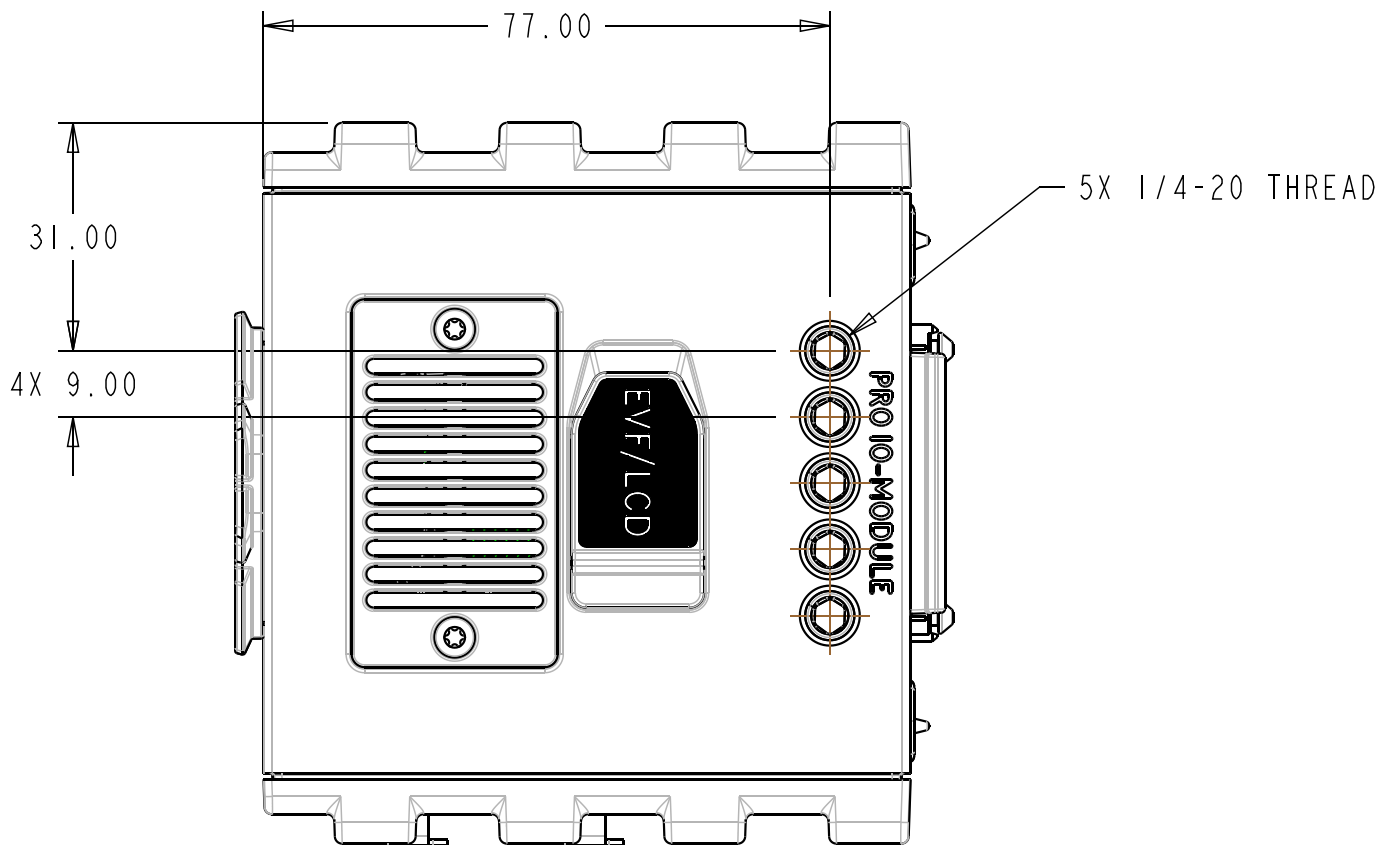
PRO I/O MODULE OPERATION GUIDE

C

PRO I/O MODULE DIMENSIONS

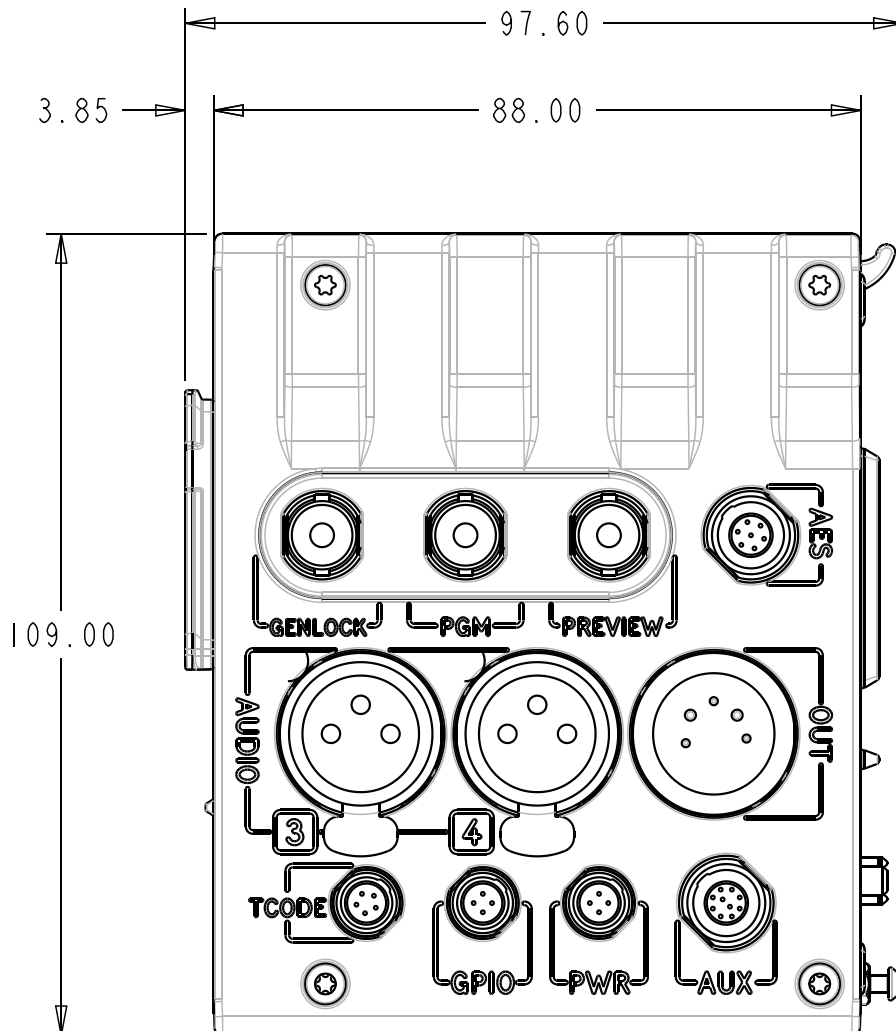
NOTE: Dimensions are shown in mm.

TOP VIEW



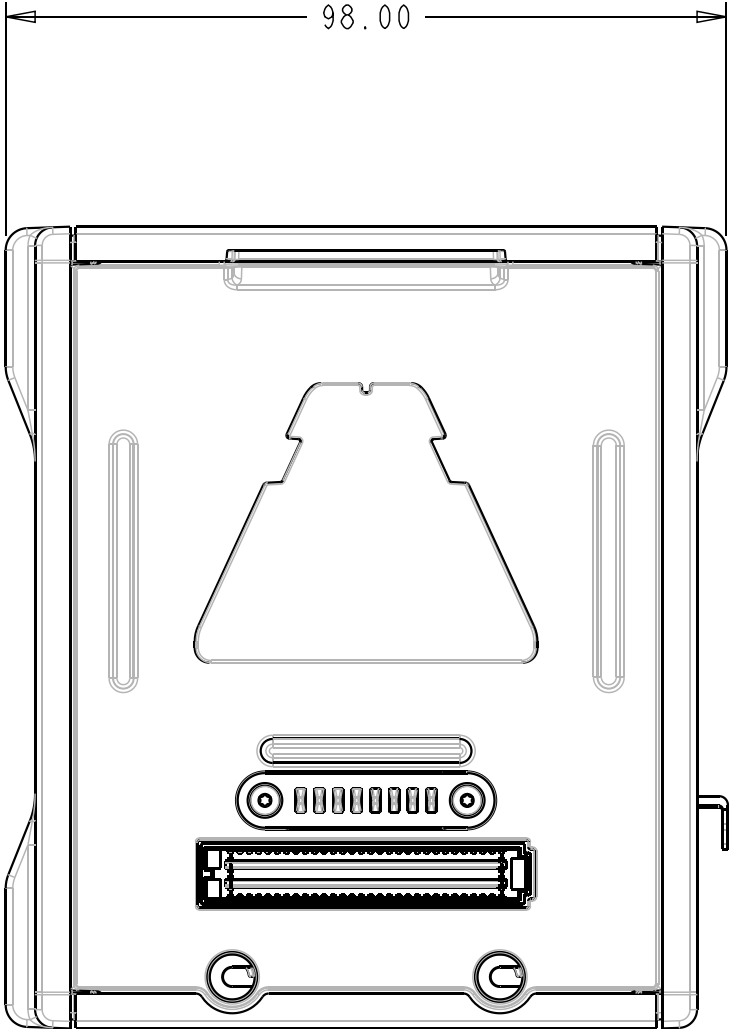
PRO I/O MODULE OPERATION GUIDE

SIDE VIEW



PRO I/O MODULE OPERATION GUIDE

BACK VIEW





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