



Æther Link

IP66 rated 1 Universe CRMX wireless transceiver for permanent outdoor installation



USER MANUAL

Thank you for choosing PROLIGHTS

Please note that every PROLIGHTS product has been designed in Italy to meet quality and performance requirements for professionals and designed and manufactured for the use and application as shown in this document.

Any other use, if not expressly indicated, could compromise the good condition/operation of the product and/or be a source of danger.

This product is meant for professional use. Therefore, commercial use of this equipment is subject to the respectively applicable national accident prevention rules and regulations.

Features, specifications and appearance are subject to change without notice. Music & Lights S.r.l. and all affiliated companies disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document.

Product user manual can be downloaded from the website www.prolights.it, or can be inquired to the official PROLIGHTS distributors of your territory (https://www.prolights.it/sales_network.html).

Scanning the below **QR Code**, you will access the download area of the product page, where you can find a broad set of always updated technical documentation: specifications, user manual, technical drawings, photometrics, personalities, fixture firmware updates.



**Visit the download area
of the product page**



The PROLIGHTS Logo, PROLIGHTS names and all other trademark in this document pertaining to PROLIGHTS services or PROLIGHTS product are trademarks OWNED or licensed by Music & Lights S.r.l., its affiliates, and subsidiaries. PROLIGHTS is a registered trademark by Music & Lights S.r.l. All right reserved. Music & Lights – Via A. Olivetti, snc - 04026 - Minturno (LT) ITALY.

INDEX

SAFETY INFORMATION	02
1 - PACKAGING	05
PACKAGE CONTENT	05
OPTIONAL ACCESSORIES	05
2 - TECHNICAL DRAWING	05
3 - INSTALLATION	06
MOUNTING	06
4 - CONNECTION TO THE POWER SUPPLY	06
CONNECT TO THE MAINS	06
5 - START UP	06
CONNECT AND DISCONNECT POWER FROM THE PRODUCT	06
6 - DMX CONNECTION	07
CONNECTION OF THE CONTROL SIGNAL: DMX LINE	07
INSTRUCTIONS FOR A RELIABLE DMX CONNECTION	07
CONNECTION DAISY CHAIN OF THE DMX LINE	07
7 - PRODUCT OVERVIEW	08
8 - SHORTCUT	09
9 - RDM FUNCTIONS	10
10 - TEST OF IP65 RATING	11
11 - MAINTENANCE	12
MAINTENANCE THE PRODUCT	12
VISUAL CHECK OF PRODUCT HOUSING	12
TROUBLESHOOTING	12

SAFETY INFORMATION



WARNING!

- See <https://www.prolights.it/product/AETHERLINK#download> for installation instructions.
- Please read carefully the instruction reported in this section before installing, powering, operating or servicing the product and observe the indications also for its future handling.



This unit is not for household and residential use, only professional applications.



Connection to mains supply

- The Connection to the mains supply must be carried out by a qualified electrical installer.
- Use only AC supplies 100-240V 50-60 Hz, the fixture must be electrically connected to ground (earth).
- Select the cable cross section in according with the maximum current draw of the product and the possible number of products connected at the same power line.
- The AC mains power distribution circuit must be equipped with magnetic+residual current circuit breaker protection.
- Do not connect it to a dimmer system; doing so may damage the product.
- The product has XLR sockets for DMX input and output.
- Connection of the control signal: DMX LINE.
- Notice: this control circuit is not isolated.
- Cumulative leakage current of less than 3.5mA on the control circuit.



Protection and Warning against electrical shock

- Do not remove any cover from the product, always disconnect the product from AC power before servicing.
- Ensure that the fixture is electrically connected to ground (earth). And use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault (earth-fault) protection.
- Before using the fixture, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.
- Isolate the fixture from power immediately if the power plug or any seal, cover, cable, or other components are damaged, defective, deformed or showing signs of overheating.
- Do not reapply power until repairs have been completed.
- Refer any service operation not described in this manual to PROLIGHTS Service team or an authorized PROLIGHTS service center.



Installation

- Make sure that all visible parts of the product are in good visible condition before its use or installation.
- Make sure the point of anchorage is stable before positioning the projector.
- When suspending the fixture above ground level, secure it against failure of primary attachments by attaching a safety cable that is approved as a safety attachment for the weight of the fixture to the attachment point on the main frame of the product. In case the safety cable, enter in action, it needs to be replaced with a new one.
- Install the product only in well ventilated places.
- For non temporary installations, ensure that the fixture is securely fastened to a load-bearing surface with suitable corrosionresistant hardware.
- For a temporary installation with clamps, ensure that the quarter-turn fastener and/or screws are turned fully, and secured with a suitable safety cable.

T_a 45°C

Max operating ambient temperature (T_a)

- Do not operate the fixture if the ambient temperature (T_a) exceeds 45 °C (113 °F).

T_a -20°C

Minimum operating ambient temperature (T_a)

- Do not operate the fixture if the ambient temperature (T_a) is below -20 °C (-4 °F).



Protection from burns and fire

- The exterior of the fixture becomes hot during use. Avoid contact by persons and materials.
- Ensure that there is free and unobstructed airflow around the fixture.
- Keep flammable materials well away from the fixture
- Do not attempt to bypass thermostatic switches or fuses.

IP66

Permanent Outdoor use

- This product is rated with an IP (Ingress protection) for permanent outdoor use when used and serviced according to the instruction contained in this document.
- Never use the fixture in places subject to vibrations or bumps.
- Make certain that no inflammable liquids, water or metal objects enter the fixture.
- Excessive dust, smoke fluid, and particle build up degrades performance, causes overheating and will damage the fixture.
- Damages caused by inadequate cleaning or maintenance are not covered by the product warranty.

T_c 60°C

Temperature of the external surface

- The surface of the fixture can reach up to 60 °C (140 °F) during operation. Avoid contact with people and materials.



Maintenance

- Only technicians who are authorized by PROLIGHTS or Authorised service partners are permitted to open the fixture.
- Users may carry out external cleaning, following the warnings and instructions provided, but any service operation not described in this manual must be referred to a qualified service technician.
- Important! Excessive dust, smoke fluid, and particle build up degrades performance, causes overheating and will damage the fixture. Damages caused by inadequate cleaning or maintenance is not covered by the product warranty.



Radio receiver/transmitter

This product contains a radio receiver and/or transmitter:

- Maximum output power: 17 dBm.
- Frequency band: 2.4 GHz.
- Frequency range: 2402MHz ~ 2479MHz.
- Channel number: 78 channels.
- Channel spacing: 1MHz.
- Modulation type: GFSK.
- Antenna description: Internal antenna, 2.5dBi (MAX).



Disposal

- This product is supplied in compliance with European Directive 2012/19/EU – Waste Electrical and Electronic Equipment (WEEE). To preserve the environment please dispose/ recycle this product at the end of its life according to the local regulation.
- Don't throw the unit into the garbage at the end of its lifetime.
- Make sure to dispose according to your local ordinances and/or regulations, to avoid polluting the environment!
- The packaging is recyclable and can be disposed.



The products to which this manual refers comply with:

- 2014/53/UE - Radio Equipment Directive (RED).
- 2011/65/EU - Restriction of the use of certain hazardous substances (RoHS)



FCC Compliance:

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 1. This device may not cause harmful interference, and
 2. This device must accept any interference received, including interference that may cause undesired operation.



Other approvals

- The product meets the safety requirements of the certification procedures of the market in which it is placed and sold.

1 - PACKAGING

PACKAGE CONTENT

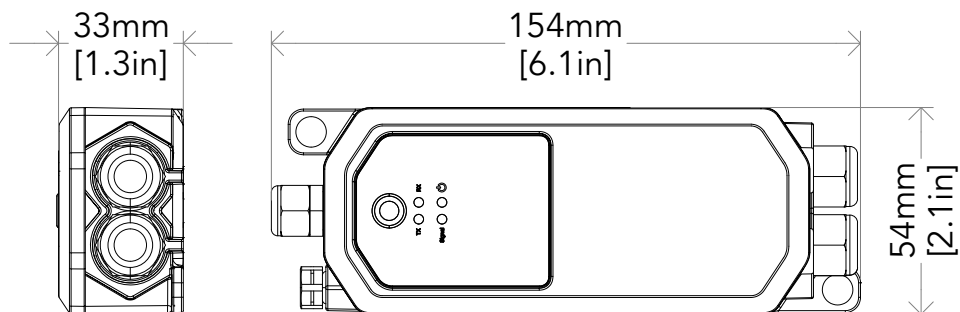
- 1 x AETHERLINK;
- 1 x 0,3 meters 3G1mmq power cable (BARE END - IP connection adapter);
- 1 x 5p XLR - IP connection female adapter;
- 1 x 5p XLR - IP connection male adapter;
- User Manual

OPTIONAL ACCESSORIES

Check the updated accessories list, description and informations of the product at the following link:

<https://www.prolights.it/product/AETHERLINK#accessories>

2 - TECHNICAL DRAWING



Weight: 0,4 kg - 0,88 lbs

Fig. 01

3 - INSTALLATION

MOUNTING

Check that the supporting structure can safely bear the weight of all installed fixtures, clamps, track adapter, cables, auxiliary equipment, etc. and complies with locally applicable regulations.

When suspending the fixture above ground level, secure it against failure of primary attachments by attaching a safety wire that is approved as a safety attachment for the weight of the fixture to an anchor point on the product main frame.

Do not use removable parts or weak anchors for secondary attachment.

Warning! When clamping the fixture to a truss or other structure at any angle, use clamps of half-coupler type. Do not use any type of clamp that does not completely encircle the structure when fastened.

4 - CONNECTION TO THE POWER SUPPLY


CONNECT TO THE MAINS

WARNING: For protection from electric shock, the fixture must be earthed!

The product is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-240 Volts (max absolute range : 90- 264V).

If you need to install a power plug on the power cable to allow connection to power outlets, install a grounding-type (earthed) plug, following the plug manufacturer's instructions. If you have any doubts about proper installation, consult a qualified electrician.

The max power consumption is 2W.

Core (EU)	Core (US)	Connection	Plug terminal marking
Brown	Black	Live	L
Blue	White	Neutral	N
Yellow+green	Green	Earth	

5 - START UP

CONNECT AND DISCONNECT POWER FROM THE PRODUCT

To apply and disconnect power to the product:

- Check that the product is installed and secured as indicated in the Safety Informations, and that personal safety will not be put at risk when the fixture lights up.
- Connect the power connector into the Mains input socket (100-240 VAC-50/60 Hz).
- The product is then ready for its operations and can be controlled through the available input signals on board.
- To disconnect power from the product, disconnect the Mains from the socket.

6 - DMX CONNECTION

CONNECTION OF THE CONTROL SIGNAL: DMX LINE

The product has connectors for DMX input and output.

The default pin-out on both connectors is as the following diagram:



Fig. 06

INSTRUCTIONS FOR A RELIABLE DMX CONNECTION

Use shielded twisted-pair cable designed for RS-485 devices: standard microphone cable cannot transmit control data reliably over long runs. 24 AWG cable is suitable for runs up to 300 meters (1000 ft). Heavier gauge cable and/or an amplifier is recommended for longer runs.

To split the data link into branches, use splitter-amplifiers in the connection line.

Do not overload the link. **Up to 32 devices may be connected on a serial link.**

NOTE: To connect the unit to your DMX network, it is necessary to use the adapters XLR 5 pin-IP67 signal connector, supplied with this product.

CONNECTION DAISY CHAIN OF THE DMX LINE

Connect the DMX data output from the DMX source to the product DMX input (male connector).

Run the data link from the product DMX output (female connector) connector to the DMX input of the next fixture.

Terminate the data link by connecting a 120 Ohm signal termination.

The termination is prepared by 120Ω 1/4 W resistor between pins 2 and 3 of the male DMX connector. Install a DMX termination plug on the last fixture on the link. If a splitter is used, terminate each branch of the link.

NOTE: when not using the DMX input or DMX output connectors, you must seal the cable ends with the supplied caps.

7 - PRODUCT OVERVIEW

- 1. UNIVERSE DMX IN / OUT;
 - 2. GORE VALVE;
 - 3. LINK BUTTON;
 - 4. STATUS LEDs;
 - 5. POWER IN: for connection to the Mains 100-240V~/50-60Hz;
 - 6. POWER OUT: for connection of multiple units 100-240V~/50-60Hz;
 - 7. ANCHOR POINTS to install the fixture.
-

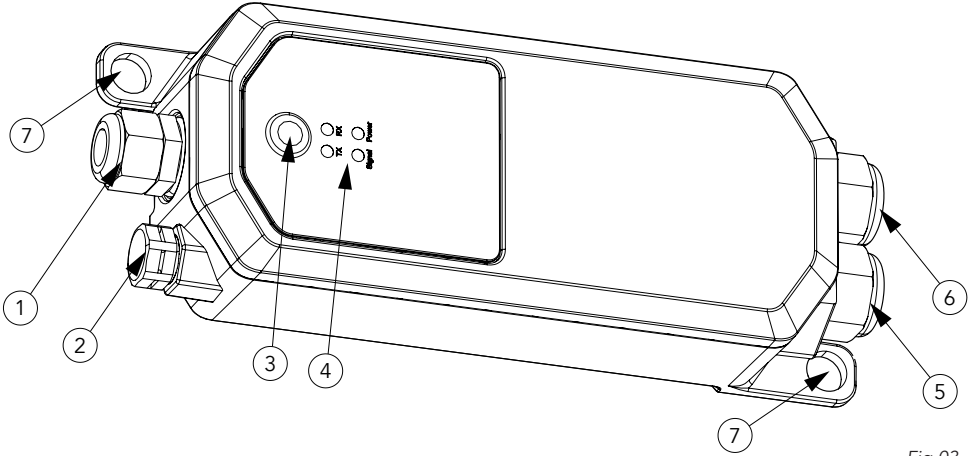


Fig.03

8 - SHORTCUT

Mode	Keys	Description
TX MODE	-	TX LED status FIXED ON
TX LINK	1 short press (link starts after 1 sec button has been released if button is not pressed anymore)	During the linking process => The TX LED flashes quickly. When linking is complete (so when AETHERLINK is connected to a device), the TX LED stays on all the time: no blinking, it's always on.
TX UNLINK	Keep pushed the button for 5 seconds	pressing the button only once, it performs the RX RESET or TX UNLINK. The TX LED starts blinking for 5 seconds then always on
TX MODE SWITCH CRMX/G4S/G3	1 short press + 2nd long press (3 seconds)	Changing the TX protocol is possible by pressing the button 3 times in a row: Follow the animation, with 3 quick push the device enters in TX MODE SELECTION, then 3 leds start blinking (means CRMX is selected), with a single push of the button the user can change mode (2 leds means G4S and 1 blinking led means G3), with another push it go back to CRMX and so on (triggert ype by firmware must be on button release to don't trigger wrong command). If the user keep pushed 3 seconds the button, the current selection is stored. If user doesn't push anything after 10 seconds the device go back to " "main" " .
TX to RX	Keep pushed the button for 10 seconds	Allows you to switch from TX to RX
RX MODE	-	LED status when in RX mode
RX RESET	Keep pushed the button for 5 seconds	pressing the button only once, it performs the RX RESET or TX UNLINK
RX to TX	Keep pushed the button for 10 seconds	Allows you to switch from RX to TX
FACTORY RELOAD	Keep pushed the button while power on	long pressing the button during the power on of the device, it performs a Factory Reload and resets all the settings to the default ones (TX CRMX + NOT LINKED)

NOTE: The Signal status LED is always ON with DMX signal, and is always OFF without DMX signal.

9 - RDM FUNCTIONS

The product can communicate using RDM (Remote Device Management) protocol over a DMX512 Networks.

RDM is a bi-directional communications protocol for use in DMX512 control systems, it is the open standard for DMX512 device configuration and status monitoring.

The RDM protocol allows data packets to be inserted into a DMX512 data stream without affecting existing non-RDM equipment. It allows a console or dedicated RDM controller to send commands to and receive messages from specific fixtures.

The PIDs in the following tables are supported in the product.

Category	Parameter	Value	GET	SET
Product Information	SUPPORTED_PARAMETERS	0x0050	x	
	PARAMETER_DESCRIPTION	0x0051	x	
	PRODUCT_DETAIL_ID_LIST	0x0070	x	
	DEVICE_MODEL_DESCRIPTION	0x0080	x	
	MANUFACTURER_LABEL	0x0081	x	
	DEVICE_LABEL	0x0082	x	x
	FACTORY_DEFAULTS	0x0090	x	x
Power/Lamp Settings	DEVICE_HOURS	0x0400	x	x
	DEVICE_POWER_CYCLES	0x0405	x	x
Display Settings	DISPLAY_INVERT	0x0500	x	x
Control	IDENTIFY_MODE	0x1040	x	x

Manufacturer Specific PIDs

Parameter	PID	GET	SET	Value	Description
WIRELESS MODE	0x8213	x	x	0-3	0: TX CRMX 1: TX G4S 2: TX G3 3: RX
TX LINK	0x8214		x	0-1	0: Off 1: Link
RX RESET	0x8215	x	x	0-1	0: Off 1: On
TX UNLINK	0x8347	x	x	0-1	0: Off 1: On
TX RF OUTPUT POWER	0x8318	x	x	0-3	0: 5 mW 1: 15 mW 2: 40 mW 3:100 mW
CLEAN ALL DATA	0x82C8	x	x	0-1	0: No 1: Yes
TIMOFX FW	0x8369	x		V: x.x.x.x	
WIRELESS QUALITY	0x831A	x	x	0-255	

10 - MAINTENANCE

MAINTENANCE THE PRODUCT

It is recommended that the product be checked at regular intervals.

- For cleaning use a soft, clean cloth moistened with a mild detergent. Never use a liquid, it might penetrate the unit and cause damage to it.
- The user may also upload firmware (product software) to the fixture via the DMX signal input port using UPBOXPRO or UPBOX2 and instructions from PROLIGHTS.
- It is recommended to check at least annually if new firmware is available and a visual check of the status of the device and mechanical parts.
- All other service operations on the product must be carried out by PROLIGHTS, its approved service agents or trained and qualified personnel.
- It is PROLIGHTS policy to apply use the best quality materials available to ensure optimum performance and the longest possible component lifetimes. However, components are subject to wear and tear over the life of the product. The extent of wear and tear depends heavily on operating conditions and environment, so it is impossible to specify precisely whether and to what extent performance will be affected. However, you may eventually need to replace components if their characteristics are affected by wear and tear after an extended period of use.
- Use only accessories approved by PROLIGHTS.

VISUAL CHECK OF PRODUCT HOUSING

- The parts of the product cover/housing should be checked for eventual damages and breaking start at least every two months. If hint of a crack is found on some plastic part, do not use the product until the damaged part will be replaced.
- Cracks or another damages of the cover/housing parts can be caused by the product transportation or manipulation and also ageing process may influence materials.



PROLIGHTS is a trademark of
MUSIC & LIGHTS S.r.l.
musiclights.it

Via A.Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

prolights.it
support@prolights.it