APPLICATION AREA

The CRMX Galileo MAX is a wireless lighting control product. It is designed to be used indoors or outdoors when installed in an IP65 or higher rated environmental enclosure.

CRMX Galileo MAX is used to replace the cable in DMX-512A systems. CRMX Galileo MAX can be used together with any CRMX compatible device using either CRMX Classic or CRXM² modes. CRMX Galileo MAX can also be configured to operate in W-DMX mode where it can communicate with W-DMX compatible devices.

GENERAL

All personnel must familiarize themselves with the instructions in this leaflet before using this product. This product must not be used if damaged. For additional documentation for CRMX Galileo series or CRMX in general, scan the QR code on this leaflet or visit www.lumenradio.com.

WARRANTY

All warranty claims for this product shall be directed to the local distributor/reseller. Warranty is deemed void if:

1. The product is modified, repaired or otherwise altered unless it has been directed by LumenRadio AB, or
2. The serial number on the product (the QR code) has been compromised.

SYSTEM OVERVIEW

A CRMX system replaces the need to use expensive and cumbersome DMX cables. Place the Galileo MAX unit in close proximity to the lighting controller, or connected to a local Ethernet network, and let it wirelessly trasmit the DMX and RDM data to Galileo RX receiver units or other CRMX compatible receivers – for instance built-in receivers in wireless-ready fixtures from any of LumenRadio's partners.

DMX data can be locally daisy-chained with a cable between fixtures that are physically close to each other.

The signal can be repeated to extend the range using a Galileo RX unit with the repeater option.
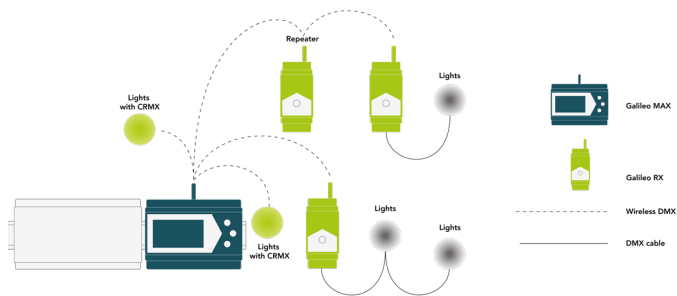
SAFETY

Only qualified electricians or service personell trained by LumenRadio may perform installations with this product. Always follow local electrical code and regulations.

This products shall only be used together with limited power supplies with UL insulation class II.

Do not use the product if the product is damaged. Only use cables within the specified conductor sizes. This product may not be connected directly to mains power.

INSTALLATION

1. Verify that the product has no physical damage.
2. Clip the unit onto a DIN rail. If installed outdoors, this must be performed in a minimum IP65 rated environmental enclosure.
3. Mount the antenna or, if installed in an an enclosure, mount the antenna coax cable.
4. Connect the power supply in accordance with the specified voltage.
5. Connect the Ethernet cable to the RJ45 connector.
6. Power on and verify that the unit starts up correctly without any errors.
7. Set the unit up for the correct protocol to use. See further details on this by scanning the QR code on this guide.

CRMX Galileo MAX
by LumenRadio

Scan for additional
information

www.lumenradio.com

BOX CONTENT

1 pc. CRMX Galileo MAX unit	1 pc. RP-SMA antenna
1 pc. 2-pin terminal plug for power	1 pc. Quick start guide (this leaflet)

SPECIFICATIONS

Power supply:	12-24 VDC +/- 10%
Max. power consumption:	8.5W
Self-healing fuse:	Yes
Rated wire size:	0.2 - 1.5mm2
	24-16 AWG
IP rating:	IP X0
Dimensions (W x H x D):	107 x 93 x 58.7 [mm]
Weight:	195g
Antenna connector:	RP-SMA
Operating temp. range:	-20 to +55°C
Storage temp. range:	-30 to +80°C
Humidity:	0–90% non-condensing
Frequency range CMRX/W-DMX:	24024-2480 MHz (ISM band)
Frequency range WiFi:	5170-5330MHz (ISM band)
	5490-5590 MHz (ISM band)
Max. RF power CRMX/W-DMX:	100mW (280mW in US)
Max RF power WiFi:	50mW
Supported protocols:	Art-Net, Streaming ACN, RDM
Supported RF protocols:	CRMX, CRMX², W-DMX G3 & G4S
Ethernet:	10/100 Mbps via RJ45 connector
PoE:	IEEE 802.3af
USB:	Version 2.0 (only for software updates)

LEGAL

CRMX is a trademark of LumenRadio AB, W-DMX is a trademark of Wireless Solution Sweden AB. Wireless Solution Sweden AB is a fully-owned subsidiary of LumenRadio AB. DMX-512A, RDM and Streaming ACN refers to ANSI national standards developed and maintained by ESTA, Entertainment Services and Technology Association. Art-Net Trademark Designed and Copyright Artistic Licence Engineering Ltd.

This product makes use of US patents 7,432,803; 8,457,023; 10,208,680; EU patents EP 2415317, EP 2803248; China patents CN 102369774, CN 104041189B and others.
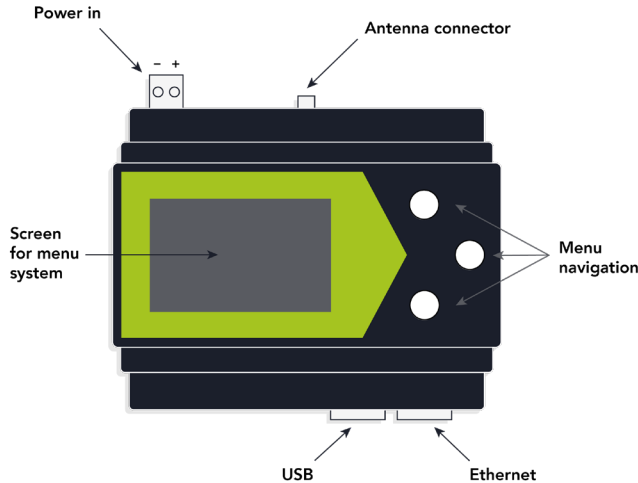
Verison of this quick start guide: Version 1 (2023-12-04)

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YOUR GALILEO MAX UNIT

NETWORK SETTING

For Galileo MAX to be able to receive data and to be accessible on the network, it is required to set up the network properly.

Setting	Description
DHCP	On: receive IP settings from network's DHCP server Off: manually set settings (see below for details)
IP	The unit's IP address, for instance 10.0.0.23
Netmask	Netmask address, for instance 255.255.0.0
Gateway	Default gateway's IP. Set to 0.0.0.0 if not used.

WIFI

The Galileo MAX has built-in WiFi with an internal antenna. This can be enabled during installation to allow for easy access from a computer, tablet or phone. It is recommeded to turn WiFi off after installation is finished.

Set the WiFi up as an access point to allow devices to join.

WEB UI

The Galileo MAX has a web UI allowing all settings to be performed more easiliy than on the small front-panel screen. This can be accessed from any web browser via Ethernet or WiFi. Navigate to http://a.b.c.d where a.b.c.d is the device's IP address. Or if only one device is present on the network you can use http://galileomax.local instead.

LINKING RECEIVERS

Before you can control any fixtures you must set up the wireless network by linking receivers to the transmitter.

1. Make sure the receivers are unlinked and that they are within communication range.
2. If a receiver is already linked, please see the receiver's user manual for instructions on how to unlink it.
3. In the menu system - navigate to "Outputs" and then select the output you wish to link to. Then select "Link" to start the linking process.
4. Wait for the link process to finish.
5. You can now repeat these steps for any other outputs on the Galileo MAX.

UNLINKING RECEIVERS

Unlinking can be performed from the transmitter by selecting "Unlink" from the output's menu. This will unlink all currently powered receivers that are within range that are linked to this output.

Linking can also be done from one specific receiver. Please refer to the receiver's user manual for how to unlink that receiver.

MODE

Galileo MAX can operate in a number of different modes: CRMX^2, CRMX Classic, W-DMX G3 or W-DMX G4S. The one that is right for your installation depends on what your receivers support. It is recommended to use a CRMX mode if it is supported for optimal performance. Use CRMX Classic unless you need more universes. Some older receivers may only support receiving W-DMX. In this case you get maximum compatibility using G3 mode.

OUTPUTS

An output can be seen as a virtual DMX output port. Data is sent to an output after it has been received from a particular universe on the Ethernet network. In CRMX Classic, W-DMX G3 and G4S modes each radio contains one output. In CRMX^2 mode each radio contains two outputs.

EXPANDING WITH MORE OUTPUTS

Out-of-the-box the Galileo MAX has one radio, that is it has one or two outputs (two in CRMX2 mode, one in other modes).
Sometimes it can be required to make an installation with more DMX universes. In those cases, Galileo MAX can be connected to Galileo TX units to expand on the number of outputs while still receiving the data via the Ethernet network. Up to three Galileo TX units can be connected, which results in up to eight outputs in CRMX^2 mode or four outputs in other modes. For more information, visit the LumenRadio website.

NETWORK PROTOCOLS

Galileo MAX supports receiving data via Art-Net (version 4) and/or Streaming ACN (ANSI E1.31). It is possible to receive data from different protocols going to different outputs. This allows for great flexibility in your lighting network.

Art-Net uses broadcast or unicast and supports up to 32,768 universes on the network at the same time. Art-Net always requires proper IP address set-up.

Streaming ACN (also called sACN) uses multicast and can be more efficient on the network. Multicast also allow for sACN to work in some cases even with invalid IP settings.
sACN supports up to 64,000 universes on the same network and also supports universe synchronization for large-scale installations.

RDM (REMOTE DEVICE MANAGEMENT)

Galileo MAX supports RDM via Art-Net. This means that any third-party RDM controller that supports RDM over Art-Net can be used to configure and monitor RDM capable devices in the network – such as signal quality levels in the wireless system or temperature levels in a luminaire.

The specific RDM functions available to you depend on what is supported by the controller and by the RDM devices.

Galileo MAX also contains[1] a built-in RDM controller that can be accessed from the web UI through any web browser – from a computer, a phone or a tablet.

[1] Available during 2024 as a downloadable firmware update.

FIRMWARE UPDATE

The software on your Galileo MAX can be updated. It is recommended to look for an updated version of the software on the LumenRadio website. We are continuously releasing new software with improvements, fixes and new functionality.

Firmware can be updated via the USB port of your Galileo MAX unit:

1. Take a freshly formatted USB thumb drive. It should be formatted using FAT32.
2. After unpacking the firmware release zip file, copy the .swu file to the root of the USB thumb drive. Make sure to keep the filename intact.
3. In the menu system - navigate to "Settings" and then "Software update".
4. The unit will search for the update file on the USB thumb drive and install it.
5. Wait for the update to finish – it may take several minutes.
6. After installation you can remove the USB thumb drive.

OTHER TOPICS

For further reading or videos on how to use the functions of your Galileo MAX, scan the QR code on this leaflet to get to the LumenRadio website.

On the LumenRadio website, you will also find information about accessories such as IP rated enclosures, IP rated power supplies, power supplies, etc.