lumenradio
Creating Connectivity for a Better Tomorrow

OUTDOOR WIRELESS DMX

With groundbreaking patented Cognitive Coexistence technology, our CRMX™ technology for wireless DMX has become the de-facto wireless lighting control standard across the globe. Our Wireless DMX products offers unprecedented reliability and will give you the trust you need to control your fixtures wirelessly. Running on the unlicensed 2,4 GHz frequency all of our products can be used anywhere in the world.

CRMX Outdoor

CRMX Outdoor is an adaptation of the CRMX Nova product line for outdoor use with the same advanced CRMX technology and features for wireless DMX and RDM distribution. With its discreet and secure metal housing and integrated shock absorption, CRMX Outdoor is built to withstand any outdoor environment for many years.

CRMX OUTDOOR FLEX
IP67 RDM/ETHERNET FLEX PRODUCT

CRMX Outdoor Flex can be configured either as a transmitter, receiver or repeater for one full DMX/RDM universe of up to 512 channels. As a repeater, the Outdoor Flex can be used to build advanced network infrastructures over long distances while also acting as a receiver. The Outdoor Flex supports both wired and wireless RDM.

KEY FEATURES
- DMX512-A and RDM support
- Power over Ethernet support
- Ethernet or wired DMX input/output
- Up to 1000 meter link range
- 5 ms latency
- Automated Cognitive Coexistence
- Forward Error Correction
- IP67 classification
- Vandal proof casing

CRMX OUTDOOR RX
IP67 RDM RECEIVER

CRMX Outdoor RX is an outdoor receiver for one full DMX/RDM universe of up to 512 channels being transmitted by a CRMX transmitter.

KEY FEATURES
- DMX512-A and RDM support
- Up to 1000 meter link range
- 5 ms latency
- Automated Cognitive Coexistence
- Forward Error Correction
- IP67 classification
- Vandal proof casing

CRMX Slim

CRMX Slim is a compact and cost efficient wireless unit rated for permanent indoor and outdoor installations. CRMX Slim products can easily be mounted inside lighting poles or anywhere space is limited. The integrated DMX to DALI converter makes it a perfect solution where DMX and DALI fixtures are mixed in the same installation.

CRMX SLIM RX RDM
IP65 RDM RECEIVER WITH DALI

CRMX Slim RX RDM supports not only a full 512 channel universe of DMX and RDM, but also DALI and DSI. The integrated DMX to DALI/DSI converter supports up to 64 DALI addresses or 16 DALI groups as well as DALI or DSI broadcast. It is easily configured over RDM or from SuperNova.

KEY FEATURES
- DMX512-A and RDM support
- Up to 1000 meter link range
- 5 ms latency
- Automated Cognitive Coexistence
- Forward Error Correction
- IP65 classification
- Integrated DMX to DALI/DSI bridge

CRMX SLIM TX
IP65 DMX TRANSMITTER

The CRMX Slim TX supports one full DMX universe of up to 512 channels.

KEY FEATURES
- Support for DMX512-A
- Up to 1000 meter link range
- 5 ms latency
- Automated Cognitive Coexistence
- Forward Error Correction
- IP65 classification

CRMX Outdoor specifications

CRMX Outdoor specifications	CRMX Outdoor Flex	CRMX Outdoor Receiver
Model code (Order code)	ON-RFX1 (800-4101)	ON-RRX1 (800-4001)
Supported protocols		
USITT DMX-512 (1986 & 1990) and DMX512-A	Yes	Yes
Art-Net I, II & 3, ETCNet 2 & 3, Strand Show-Net, Streaming ACN, Pathport, KiNet V1 & V2	Yes, input any protocol and output any protocol	No
RDM ANSI E1.20	Yes	Yes
Firmware upgrade	Ethernet	TIA/EIA-485
Works with CRMX SuperNova RDM controller	Yes	Yes
DMX interface		
Number of universes supported	1	1
Full DMX fidelity and frame integrity	Yes[1]	Yes
Error correction and packet recovery	Yes	Yes
Frame synchronization	Less than 0.01 ms	Less than 0.01 ms
End-to-end DMX latency	Less than 5 ms[2]	Less than 5 ms
Auto sensing of DMX frame rate and frame size	Yes	Yes
Supported DMX frame rates	1 – 830 Hz[3] / 0.8 – 7352 Hz	1 – 830 Hz[3]
Number of DMX channels supported	0 – 512	0 – 512
Loss of DMX input behavior	DMX driver output will go into high impedance state in receiving and repeating mode. Timeout after 1.25s in transmitting mode	DMX driver output will go into high impedance state
W-DMX™ G2/G3/G4/G4S Compatibility[4]	Yes, in receive mode	Yes
Power		
High voltage input	100-240VAC / 47-70Hz / 0.12A / 10W	100-240VAC / 47-70Hz / 0.12A / 10W
Transient protected power input	Yes	Yes
RF characteristics		
Modes of operation	Transmitter, Receiver and Repeater	Receiver
Automated Cognitive Coexistence	Yes	Yes
Dynamic adaptive frequency hopping	Yes	Yes
Recoverable Radio Packet Error Rate	30%	30%
Operational frequency range	2402-2480 MHz	2402-2480 MHz
RF output in high power mode	300 mW (25 dBm)[5]	300 mW (25 dBm)[5]
RF output in normal power mode	100 mW (20 dBm)	100 mW (20 dBm)
RF output in low power mode	35 mW (15 dBm) or 10 mW (10 dBm)	35 mW (15 dBm) or 10 mW (10 dBm)
RF modulation	GFSK	GFSK
Sensitivity at 0.1% Packet Error Rate	-96 dBm	-96 dBm
Tested link range (High power mode using standard antennas in free line-of-sight)	Up to 1000 m	Up to 1000 m
Recovery time upon loss of radio link	Less than 1 s	Less than 1 s
Approvals		
FCC: 15.247&68 Class B; Canada ICES 003 CE; EN 301 489-1; EN 301 489-3; EN 300 328; SS-EN 61547:2009; EN 60 950; ARIB STD-T66 - Japan	Yes	Yes
Environment		
Operating temperature range (ambient)	-20° C to +50° C -4° F to 122° F	-20° C to +50° C -4° F to 122° F
Humidity	Ingression protection, submerged down to 1 m	Ingression protection, submerged down to 1 m
Physical		
Enclosure	IP67 Vandal proof housing	IP67 Vandal proof housing
Dimensions (W x H x D) excluding antenna	201 x 244 x 78 mm 7.9” x 9.6” x 3”	201 x 244 x 78 mm 7.9” x 9.6” x 3”
Weight	1.6 kg, 3.5 lbs	1.6 kg, 3.5 lbs
Connectors		
Antenna connector	N female	N female
DMX connector	Pluggable terminal strip, Phoenix® MSTB 2.5	Pluggable terminal strip, Phoenix® MSTB 2.5
AC input	13AWG Pluggable terminal strip	13AWG Pluggable terminal strip
Supplied accessories	2 dBi N antenna	2 dBi N antenna

[1] Not in repeater mode   [2] Latency increased with repeater   [3] Limited by the DMX512-A standard
[4] Compatible with W-DMX™ transmitters on the 2.4 GHz band   [5] Allowed in North America only

CRMX Slim specifications

CRMX Slim specifications	CRMX Slim TX	CRMX Slim RX RDM
Model code (Order code)	OS-DTX1 (800-5101)	OS-RRX1 (800-5001)
Supported protocols		
USITT DMX-512 (1986 & 1990) and DMX512-A	Yes	Yes
RDM ANSI E1.20	No	Yes
Firmware upgrade	TIA/EIA-485	TIA/EIA-485
DALI (converted from DMX)	No	Yes, broadcast/16 groups/ 64 short addresses
Works with CRMX SuperNova RDM controller	No	Yes
DMX interface		
Number of universes supported	1	1
Full DMX fidelity and frame integrity	Yes	Yes
Error correction and packet recovery	Yes	Yes
Frame synchronization	Less than 0.01 ms	Less than 0.01 ms
End-to-end DMX latency	Less than 5 ms	Less than 5 ms
Auto sensing of DMX frame rate and frame size	Yes	Yes
Supported DMX frame rates	0,8 – 7352 Hz	1 – 830 Hz[1]
Number of DMX channels supported	0 – 512	0 – 512
Loss of DMX input behavior	Timeout after 1.25 s	DMX driver output will go into high impedance state
W-DMX™ G2/G3/G4/G4S Compatibility[2]	No	Yes
Power		
High voltage input	100-240VAC / 47-70Hz / 0.12A / 10W	100-240VAC / 47-70Hz / 0.12A / 10W
Transient protected power input	Yes	Yes
RF characteristics		
Modes of operation	Transmitter	Receiver
Automated Cognitive Coexistence	Yes	Yes
Dynamic adaptive frequency hopping	Yes	Yes
Recoverable Radio Packet Error Rate	30%	30%
Operational frequency range	2402-2480 MHz	2402-2480 MHz
RF output in high power mode	300 mW (25 dBm)[3]	300 mW (25 dBm)[3]
RF output in normal power mode	100 mW (20 dBm)	100 mW (20 dBm)
RF output in low power mode	35 mW (15dBm) or 10 mW (10 dBm)	35 mW (15 dBm) or 10 mW (10 dBm)
RF modulation	GFSK	GFSK
Sensitivity at 0.1% Packet Error Rate	-96 dBm	-96 dBm
Tested link range (High power mode using standard antennas in free line-of-sight)	Up to 1000 m	Up to 1000 m
Recovery time upon loss of radio link	N/A	Less than 1 s
Approvals		
FCC: 15.247&68 Class B; Canada ICES 003 CE; EN 301 489-1; EN 301 489-3; EN 300 328; SS-EN 61547:2009; EN 60 950; SRRC - China; ARIB STD-T66 - Japan	Yes	Yes
Environment		
Operating temperature range (ambient)	-20° C to +50° C -4° F to 122° F	-20° C to +50° C -4° F to 122° F
Humidity	Water jets protected	Water jets protected
Physical		
Enclosure	IP65 PC Plastic	IP65 PC Plastic
Dimensions (W x H x D) excluding antenna	90 x 174 x 40 mm 3.5” x 6.8” x 1.6”	90 x 174 x 40 mm 3.5” x 6.8” x 1.6”
Weight	0.25 kg, 0.5 lbs	0.25 kg, 0.5 lbs
Connectors		
Antenna connector	N female	N female
DMX connector	Screwless terminal 0.08-0.5 mm2 / 20-28AWG	Screwless terminal 0.08-0.5 mm2 / 20-28AWG
DALI connector	Screwless pluggable terminal 0.5-1.3 mm2 / 16-28AWG	Screwless pluggable terminal 0.5-1.3 mm2 / 16-28AWG
AC input	Screwless pluggable terminal 0.5-1.3 mm2 / 16-28AWG	Screwless pluggable terminal 0.5-1.3mm2 / 16-28AWG
Supplied accessories	2 dBi N antenna	2 dBi N antenna

[1] Limited by the DMX512-A standard   [2] Compatible with W-DMX™ transmitters on the 2.4 GHz band
[3] Allowed in North America only

All CRMX products are covered by the United States Patent No. 7,432,803.

CE FC RoHS ⚠ SRRC c(UL)us ARIB STD-T66

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