

# Wireless Indoor & Outdoor DMX



## BASIC OPERATION

The Cognitive Radio Multiplexer (CRMX) Indoor and Outdoor Wireless DMX by Leviton is the first automated and adaptive wireless technology specifically developed for the lighting industry. CRMX wireless transmissions never disturb, or are disturbed by, other wireless equipment. This fully automated feature offers unrivaled convenience and peace of mind during operation. The wireless DMX products offer this innovation in rugged enclosures designed to meet the particular requirements of the entertainment and archtainment markets.

## APPLICATIONS

- Wireless DMX distribution
- Theatres
- Houses of worship
- Performing arts centers
- Convention centers

## FEATURES

- Automated Cognitive Coexistence - CRMX wireless transmissions never disturb, or are disturbed by, other wireless equipment. This fully automated feature offers unrivaled convenience and peace of mind during operation.
- Synchronization, error correction and low latency - Precision timing mechanism guarantees synchronized frame delivery. Advanced algorithms recreate corrupt or lost radio packages. Latency is industry best; below 5ms in multi-universe system

- Fidelity - The DMX frame output is identical to the frame input
- DALI Support - First system to offer DALI support and integrated DMX to DALI protocol conversion. (WCRMX- O1R only)
- Security - 128 bit encryption ensures no hacker intrusion.
- Ease of Mounting - Indoor models offer multiple mounting options to facilitate easy rigging or rack mounting.
- IP65 Classification - Outdoor models are rated for use in humid environments.
- Upgradeable - Software and firmware easily upgradable.
- Listings: FCC and ETSI certificates, CE approved, (low voltage supply) UL power supplies available if requested

# PRODUCT DATA

## SPECIFICATIONS

	WCRMX-C1T	WCRMX-I1T	WCRMX-I1R	WCRMX-O1T	WCRMX-O1R
<b>Supported Protocols</b>					
USITT DMX512 and DMX512-A	Yes				
DMX to DALI conversion	No			Yes	
Firmware upgrade	TIA/EIA-485	XLR		TIA/EIA-485	
<b>DMX Interface</b>					
Number of universes supported	1				
Full DMX fidelity and frame integrity	Yes				
Error correction and packet recovery	Yes				
Frame synchronization	< 0.01ms				
End-to-end DMX latency	< 5ms				
Auto sensing of DMX frame rate and frame size	Yes				
Supported DMX frame rates	0.8 - 7352 Hz	1 - 830 Hz*		0.8 - 7352 Hz	1 - 830 Hz*
Number of DMX channels supported	0 - 512				
Loss of DMX input behavior	Timeout after 1.25s	DMX driver output will go into high impedance state		Timeout after 1.25s	DMX driver output will go into high impedance state
ESD protected interfaces	Yes				
W-DMX™ Compatibility	No	Yes		No	Yes
<b>Power</b>					
High voltage input	N/A	85-264VAC/47-70HZ/3W			
Low voltage input	N/A	12VDC ± 20%/3W		N/A	
Transient protected power inputs	N/A	Yes			
<b>RF Characteristics</b>					
Automated cognitive coexistence	Yes				
Dynamic adaptive frequency hopping	Yes				
Recoverable radio packet error rate	30%				
Operational frequency range	2402-2480MHz				
RF output	100mW (20dBm)				
RF modulation	GFSK				
Sensitivity at 0.1% packet error rate	-96dBm				
Tested link range using standard antenna in urban area	500m				
Recovery time upon loss of signal	Less than 1s				
<b>Approvals</b>					
FCC: 15.247 & 68 Class B; Canada ICES 003	Yes				
CE; EN 301 489-1; EN 301 489-17; EN 300-328-1; EN 300-328-2; EN 60 950	Yes				

\* Limited by the DMX512-A standard

## SPECIFICATIONS

	WCRMX-C1T	WCRMX-I1T	WCRMX-I1R	WCRMX-O1T	WCRMX-O1R
<b>Environment</b>					
Operating temperature range (ambient)	-20°C to +50°C / -4°F to 122°F				
Humidity	0-90% non-condensing			Water jets protected	
<b>Physical</b>					
Enclosure	N/A	Black anodized extruded aluminum		IP65 housing	
Dimensions (WxHxD) not including antennas	1.1" x 0.47" x 2.6" / 2.75 x 1.2 x 6.5cm	4.3" x 1.7" x 6.3" / 11 x 4.4 x 16 cm		6.8" x 3.5" x 1.5" / 17.3 x 8.9 x 3.8cm	
Weight	0.02lb/10g	1.54 lb/700g		.55 lb/249g	
<b>Connectors</b>					
Antenna connector	RP-TNC			N Female	
DMX connectors	N/A	1 XLR 5-pin gold plated male	1 XLR 5-pin gold plated female	Screwless terminal 20-28AWG	
DC input	N/A	Pluggable terminal strip, Phoenix® MSTB 2.5		N/A	
AC input	N/A	IEC 320 -C14 Male		Screwless pluggable terminal 16-28AWG	
DALI	N/A			Screwless pluggable terminal 16-28AWG	
Supplied Accessories	2dbi RP-TNC antenna, 5.9" Coaxial Cable	AC power cord, DC power connector, 2dbi RP-TNC antenna		2dBi N antenna	

## ORDERING INFORMATION

CAT NO.	DESCRIPTION
<b>WCRMX-C1T</b>	Wireless CRMX single universe DMX transmitter for installation into Piccolo & Piccolo scan consoles, supports 1 full DMX universe of up to 512 channels maximum, includes Antenna & 5.9" Coaxial Cable
<b>WCRMX-I1T</b>	Wireless CRMX single universe DMX transmitter, supports 1 full DMX universe of up to 512 channels maximum
<b>WCRMX-I1R</b>	Wireless CRMX single universe DMX receiver, supports 1 full DMX universe of up to 512 channels maximum
<b>WCRMX-O1T</b>	Wireless CRMX single universe DMX slim outdoor transmitter, supports 1 full DMX universe of up to 512 channels maximum
<b>WCRMX-O1R</b>	Wireless CRMX single universe DMX outdoor receiver, supports 1 full DMX universe of up to 512 channels maximum and DALI conversion
ACCESSORIES	DESCRIPTION
<b>WCRMX-oRK</b>	Fit kit for 19" EIA rack assembly for Wireless DMX transmitters and receivers

## Leviton Mfg. Co., Inc. Lighting & Energy Solutions

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**LEVITON SPECIFICATION SUBMITTAL**

JOB NAME:	CATALOG NUMBERS:
JOB NUMBER:	

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