

Emerge® MPX

Wireless HD Multipoint Extender

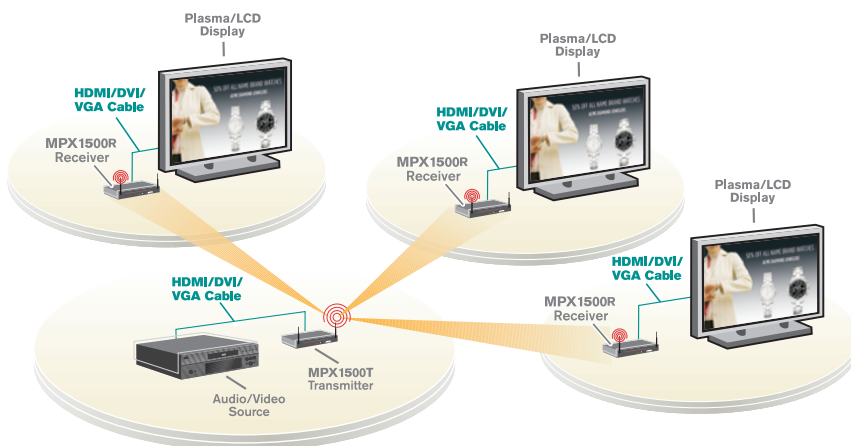


High-definition audio and video

The Avocent Emerge MPX multipoint extender provides wireless or wired connectivity for distribution of high-definition content from a source to one or more destinations. The Emerge MPX transmitters and receivers work in unison to form a managed audio video extension network able to deliver a synchronized stream of high-definition computer graphics or video and associated audio from a source to as many as eight display devices in a wired or wireless manner. Display device control data, content protection and interactive device control signals, including IR and serial are passed from source to sink through the extension network, providing a fully managed solution.

Designed for high-definition media support used in professional A/V applications, the MPX1500 transmitter and receiver include a universal media port based upon a digital video interface (DVI) connector. Supporting both digital and analog video allows the MPX to use DVI, HDMI, or VGA signals. The MPX system works like a video splitter and a video extender by wirelessly delivering audio and video to multiple displays up to 1000 feet away. Both transmitter and receiver offer coaxial and optical audio. All MPX extenders feature web-based diagnostic tools for ease of central management.

For system control and configuration, the Emerge MPX extender solution is accessible through two user interfaces: an on-board web server that allows browser-based unit control and configuration, and a front panel display that provides push-button access to system status. The extenders allow for control of attached audio-visual equipment through RS-232 serial and infrared connections. The Emerge MPX product is field upgradeable to support future functionality.



The Emerge MPX multipoint extender solution includes a transmitter and receivers for wired or wireless professional audio-visual applications. The MPX1500T transmitter and MPX1500R receiver have a universal media port based upon a digital video interface (DVI) connector. Supporting both digital and analog video allows the MPX to use DVI, HDMI, or VGA signals.

FEATURES AND BENEFITS

- **Wireless or Wired Extension.** Provides installation flexibility for wireless or wired high-definition applications.
- **Universal DVI-I Video Port.** The MPX1500 T/R features a single DVI-I media port that supports VGA, component, DVI-A, DVI-D, and HDMI video.
- **Enhanced Audio.** Supported audio standards include stereo analog audio supported via white and red RCA connectors; coaxial digital audio (S/PDIF) supported via RCA connector; and optical digital audio supported via Toslink connector.
- **Point to Multipoint Distribution.** High-definition computer graphics or video and associated audio can be distributed to as many as eight display devices.
- **Dual Serial Port.** The MPX1500T provides dual serial ports to allow dual functions such as when controlling a display while accepting input from a proximity sensor.
- **IR Rx Port.** The IR Rx Port allows the MPX1500T to be installed in any orientation or within a secure closet while allowing a source device to be controlled from the point of presentation.
- **Web Control Interface.** Allows local or remote control and configuration of the system without special software tools.
- **Serial Interface.** Allows integration with third party control systems.
- **AES 128 Bit Encryption.** Audio-visual information is encrypted with built-in Advanced Encryption Standard (AES) for secure transmission.
- **Small Form Factor.** Smaller profile allows convenient installation and saves space where it's needed the most.

Technical Specifications

MPX1000T: Transmitter Mechanical / Power / Environmental

Size: 7.54" (192 mm) D, 17.0" (431 mm) W, 1.7" (43 mm) H

Weight: 5.5 lbs (2.5 Kg) with full A/V module

Power (AC input/frequency): 100 - 240 VAC / 50 - 60Hz

Operating Temperature: 32°F (0°C) to 118.4°F (48°C)

Storage Temperature: -4°F (-20°C) to 140°F (60°C)

Humidity: 20% to 80% (Non-condensing)

MPX1000T/MPX1500T/R: Transmitter / Receiver Connections (Front)**MPX1000T**

IR Receiver: IR input

3.5mm Mini-Jack: IR Blaster output, 38KHz +/- 1KHz; the IR Blaster port supports enough drive current to handle 4 IR LEDs

SMA Connector (2): Antenna connectors

MPX1500T/R

2.5mm Mini-Jack: IR input (optional IR-RX adapter with 1m cable is required)

3.5mm Mini-Jack: IR blaster output, 38KHz +/- 2KHz; the IR blaster port supports enough drive current to handle 4 IR LEDs

RP-SMA Connector (2): Antenna connectors

USB: USB 1.1 (not used at this time)

MPX1000T/MPX1500T/R: Transmitter / Receiver Connections (Rear)**MPX1000T**

L1 (RJ-45): Ethernet 10/100 IEEE 802.3, used for local network control of device; **L2 (RJ-45):** Ethernet 10/100 IEEE 802.3, used for streaming video

RS-232 (Female): Serial control input (Tx, Rx, CTS, and DTS)

Power: IEC / **Input Module:** Input module slot

Radio: Protocol: IEEE 802.11a; **UNII 1 (4 channels) band:** 5.15-5.25 GHz, and **UNII 3 (4 channels) band:** 5.725-5.825 GHz; 2.4 GHz ISM Band (11 channels)

MPX1500T/R

Power: DC barrel connector

Serial (RJ-45): Dual serial port for control of attached display devices. Requires optional DB9-DUAL female serial cable

L1 (RJ-45): Ethernet connector 10/100 IEEE 802.3, used for streaming video and web access; **L2 (RJ-45) for MPX1500T:** Ethernet connector 10/100 IEEE 802.3

DVI-I: AV output port that supports a wide range of digital and analog video modes

RCA Jacks (2): Left and right jacks for unbalanced analog audio

S/PDIF: Digital audio output. Operation of this port may require a firmware upgrade

MPX1000MT-HDMI: Transmitter HDMI Input Module**Connections**

RCA Female (2): Unbalanced audio input

HDMI: Digital audio/video control

Video

HDMI A/V Input Port: Supports 720 x 480p, 720p, 800 x 600 at 60Hz, 640 x 480 at 60Hz, and 1024 x 768 at 60Hz

Audio

Line Audio Inputs: Less than or equal to 10K Ohm with 0-36dB of headroom (Sensitivity)

Frequency Response: The analog audio frequency response: 20 Hz - 20 KHz with a 3dB per octave roll-off beginning at 14KHz

MPX1000MT-HD15: Transmitter VGA Input Module**Connections**

RCA Female (2): Unbalanced audio input

HD15: Analog video input

Video

HD15 A/V Input Port: Supports 640 x 480 at 60 Hz, 800 x 600 at 60Hz, 1024 x 768 at 60Hz, 1280 x 720 at 60Hz, and 1280 x 768 at 60Hz

Audio

Line Audio Inputs: Less than or equal to 10K Ohm with 0-36dB of headroom (Sensitivity)

Frequency Response: The analog audio frequency response: 20Hz - 20KHz with a 3dB per octave roll-off beginning at 14KHz

MPX1500T/R: Receiver Mechanical / Power / Environmental

Size: 4.55" (116 mm) D, 6.92" (176 mm) W, 1.00" (25.4 mm) H

Weight: 1.4 lbs (0.64 Kg)

Power (AC input/frequency): 100 - 240 VAC / 50 - 60Hz

Operating Temperature: 32°F (0°C) to 118.4°F (48°C)

Storage Temperature: -4°F (-20°C) to 140°F (60°C)

Humidity: 20% to 80% (Non-condensing)

MPX1500T/R: Audio

Line Audio Inputs: Less than or equal to 10K Ohm with 0-36db of headroom (Sensitivity)

Line Audio Outputs: 600 Ohm with internal resistance of 150 Ohm

Frequency Response: The analog audio frequency response: 20Hz - 20KHz with a 3dB per octave roll-off beginning at 14KHz

MPX1500T/R: Radio Bands

UNII 1: (4 channels) 5.15-5.25 GHz / **UNII 3: (4 channels)** 5.725 to 5.825 GHz

ISM (11 channels) 2.412 to 2.462 GHz (supported in USA only)

MPX1500T/R: Digital A/V Output Port**Supports the following HDMI and DVI-D resolutions**

Computer resolutions (at 30 frames per second):

640 x 480 @ 60Hz	1280 x 720p @ 50Hz (720p)
720 x 480i @ 60Hz (480i)	1280 x 720p @ 60Hz (720p)
720 x 480p @ 60 Hz (480p)	1280 x 768 @ 60Hz
720 x 576i @ 50 Hz (576i)	1360 x 768 @ 60Hz
720 x 576p @ 50 Hz (576p)	1920 x 1080i @ 50Hz
800 x 600 @ 60Hz	1920 x 1080i @ 60Hz

MPX1500T/R: Analog A/V Output Port**Supports the following VGA resolutions**

Computer resolutions (at 30 frames per second):

640 x 480 @ 60Hz	1280 x 720p @ 50Hz (720p)
720 x 480p @ 60 Hz (480p)	1280 x 720p @ 60Hz (720p)
720 x 576p @ 50 Hz (576p)	1280 x 768 @ 60Hz
800 x 600 @ 60Hz	1360 x 768 @ 60Hz

Antennas

Two 2dB omni-directional (included) / 8dB directional antennas (optional) / 2 G-Band antennas

Extension Distances

Wired Distance: Wired distance limitations conform to Ethernet standards for a single subnet (no routing). Wireless Distance: 150 ft (45 m) wirelessly through walls; up to 1,000 ft (304 m) line-of-sight with optional directional antenna

Standards: FCC Class B, UL, cUL, RoHS, CE, ICES-003, WEEE

Warranty: Two years

Ordering Details

Part Number	Description
MPX1000T	Transmitter (Supports up to 8 receivers)
MPX1500T	Transmitter (Supports up to 8 receivers)
MPX1500R	Receiver
MPX1000MT-HDMI	Transmitter Module HDMI
MPX1000MT-HD15	Transmitter Module VGA
HGA51G-DIR30	Optional Directional Antenna
5G-1M	Antenna Extension Kit, 1 Meter Cable
5G-2M	Antenna Extension Kit, 2 Meter Cable
5G-3M	Antenna Extension Kit, 3 Meter Cable
LGA55G-OMN	Antenna Kit, Omni Reverse-SMA 136MM
IGA24G-OMN	Intermediate Gain (3dB) 2.4 - 2.5 GHz Omni-Directional Antenna
LGA24G-OMN	Low Gain (1.46dB) 2.4 - 2.5 GHz Omni-Directional Antenna
Accessories	
RMK-56	Table/Desk Mount Bracket
PBK-01	Optional Power Supply Bracket for MPX1500R
DMK-04	Wall Mount Kit for MPX1500R
DMK-07	Desk Mount Kit for MPX1500T
HD15-BNC3	Female Adapter Cable for Component Video for MPX1000T
HDMI-1M	Male to Male 1 Meter Cable for MPX T/R
DVI-HDMI	DVI-D Male to HDMI Female Adapter for MPX T/R
DVI-HDMI/CEC	Adapter for HDMI with CEC for MPX1500R
DVI-HD15F	DVI-D Male to HD15 Female Adapter with MPX1500 ID Bits
DB9-DUAL	Dual DB-9 Female Serial Cable for MPX1500R
DB9-UNI	Serial RJ-45 to DB-9 Female Kit Cable, 1 FT
DVI-BNC3	Adapter for Component Video for MPX1500R
IRB-Y	IR Blaster - Dual Splitter for MPX1500R/MPX1000T
IRB-100	IR Blaster for MPX1500R/MPX1000T
IR-RX	IR Receiver - 2.5mm Connector for MPX1500R



One Dambrackas Way, Sunrise, FL 33351
 TEL 800.275.3500 - 954.746.9000, Ext. 7110
 FAX 954.746.9101 - connectivity.sales@avocent.com
www.connectivity.avocent.com

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