HD100STP CAT Extender

HD100STP-EX

Installation Guide

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Description

The HD100STP HDMI extender simplifies HD video connectivity using 1 Cat6A cable. The HD100STP is a multi-format extender that extends 1080p, 4x2k ultra HD, 3D video and Advanced bitstream multichannel audio formats 200ft on 1 single Cat6A cable.

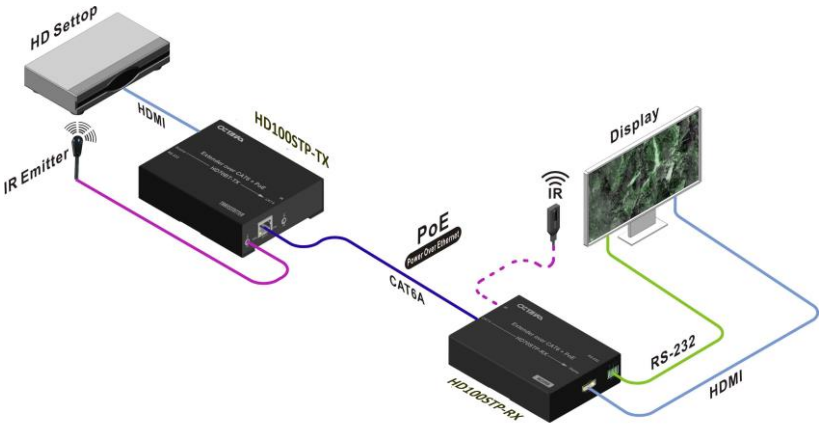
The HD100STPEX also extends IR, RS-232 controls and PoE power thus simplifying installations while delivering high quality uncompressed 1080P HD video and audio

Utilizes Power over Ethernet, PoE, to directly power the connected HDSTP100-RX receiver thus allowing clean and compact installations. Bi-directional IR and RS-232 extension enable easy integration and control of all connected devices via remote or 3rd part control systems.

Features

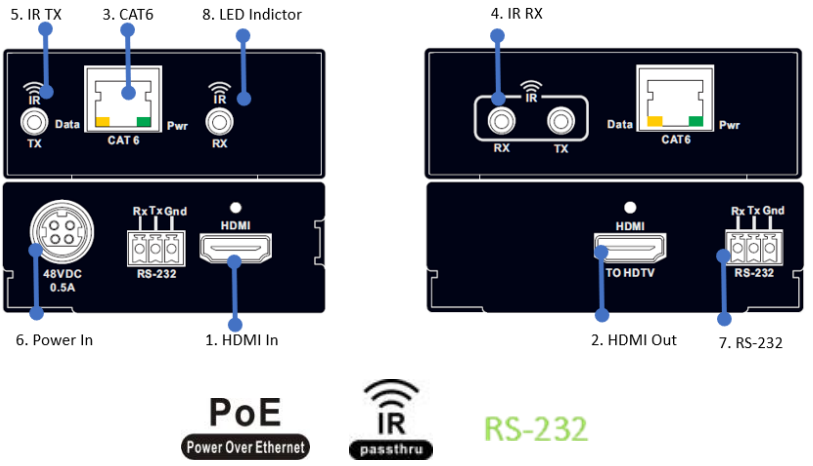
- Extend HD video over 1 single Cat6A cable up to 200ft
- Native uncompressed 1080P, and common 3D resolutions supported
- 4K2k Ultra HD video resolution
- Dolby Digital, DTS, Dolby Tru HD, DTS Master Audio pass thru.
- Power over Ethernet, PoE, provides power to Zone Receiver unit
- Bi-Directional IR
- Wideband IR 20-60 KHz circuitry for maximum IR remote compatibility.
- CEC pass thru
- RS-232 extension for controlling display device.

Application Diagram



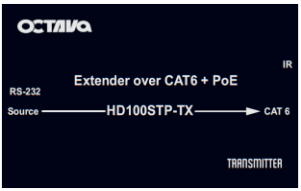
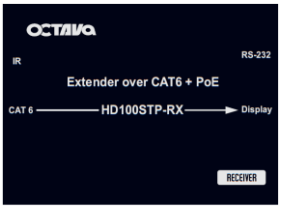
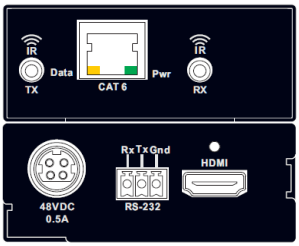
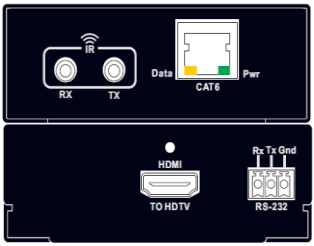
PoE Power Over Ethernet IR passthru RS-232

Front and Back Panel



1	HDMI In	connect to video source
2	HDMI Out	connect to display
3	CAT6	Link TX unit with RX unit
4	IR RX	IR Receiver port
5	IR TX	IR Emitter port
6	Power In	Power Input. Powers transmitter and Zone Receiver unit.
7	RS-232	Serial Port connection.
8	Power and Data LED indicator	See page 9.

Installation

HD100STP-TX(transmitter)	HD100STP-RX(receiver)
	
	

	Installation Procedure
1	Connect "**CAT6"** of the **Transmitter and Receiver** with CAT6 cable. (see page 7 for cable recommendations.)
2	Connect HD source to HDMI In of Transmitter unit
3	Connect Display to HDMI out of Receiver unit
4	**IR connection(optional)-**configure and connect as shown in section: ***" IR Configuration" (****see page 8)*
5	**Serial connection(optional**)-configure and connect as shown in section: "**Serial Data (RS-232**)" (see page 10)
6	Connect power supply to the Transmitter
7	Verify that the PWR LED and Data LED Indicator are ON. (see page 9)
8	Turn on Source and Display.

Ethernet cable recommendations
Using Shielded Cat6A (STP, 24AWG or better) cable will ensure maximum signal integrity plus optimum rejection of external interference.

Note 2- Unshielded Cat5e and Cat6 cables can be used with your Octava system though they may result in limiting the maximum attainable distance depending on quality of cable.

	Cable Type	Note
1	Shielded(STP) Cat6A cable is recommended. 24 AWG or better	Recommended
2	UTP Cat5e/Cat6 cable	Acceptable. Note 2
Use EIA/TIA-568-B standard when terminating your LAN cables.		

Ethernet cable installation recommendations:

Use your cable suppliers recommended RJ-45 connector/crimp tool with your Cat5e, Cat6 cables and ensure you pay particular attention to the quality of the termination on all cables.

DO / Recommend	
✓	Use shielded CAT6 with good RJ-45 terminators
✓	Use a direct cable connection between the Transmitter and Receiver unit.
DO NOT	
✗	Do Not connect thru Ethernet switches or routers
✗	For optimum signal integrity avoid passing your signals though any form of Patch-panel, Wall-plate or punch-down terminations.
✗	Do Not connect cables thru extraneous RJ-45 couplers, wall plates.
✗	Do Not tightly coil /loop the Ethernet cables

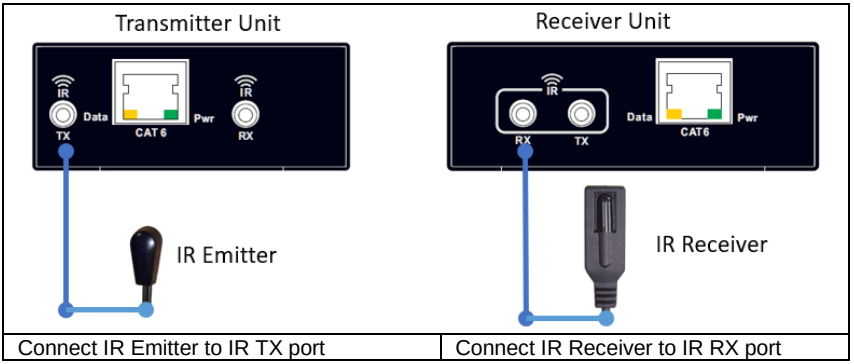
IR Configuration

I.R. can be sent in 2 directions:

1) from Receiver to Transmitter or
2) from Transmitter to Receiver unit.

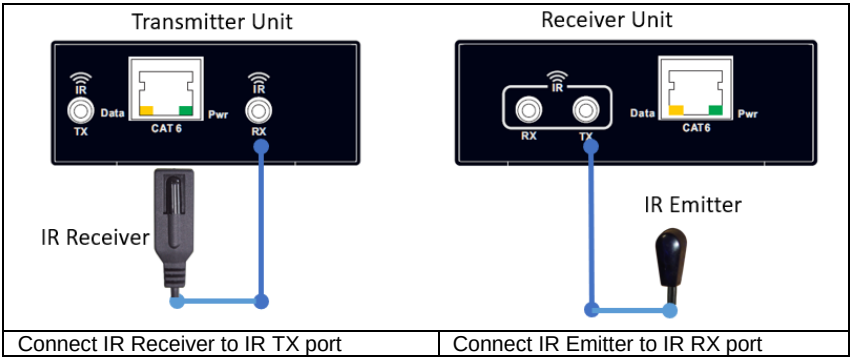
For proper operation, it is recommended that only Octava supplied I.R. emitter and receiver cables be used.

Configuration 1: Sending IR from Receiver to Transmitter Unit



Connect IR Emitter to IR TX port	Connect IR Receiver to IR RX port

Configuration 2: Sending IR from Transmitter to Receiver Unit



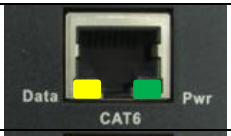
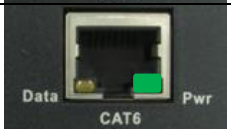
Connect IR Receiver to IR TX port	Connect IR Emitter to IR RX port

IR Emitter

An IR Emitter cable has been included with your Octava Product. The IR emitter cable enables you to control your source using I.R. remote control.

1	Locate the IR receiver on the video source. Note, you may need to refer to your source data sheet.	
2	Remove the double sided tape on the IR Emitter	
3	Place the Emitter head over the source IR receiver	

LED Indicator

1		Normal operation: Pwr LED =solid green, Data LED =solid yellow
2		Lost Link: Pwr LED =solid green, Data LED =flashing yellow or off
3		No connection

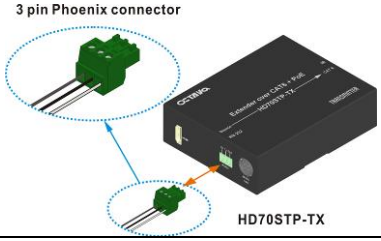
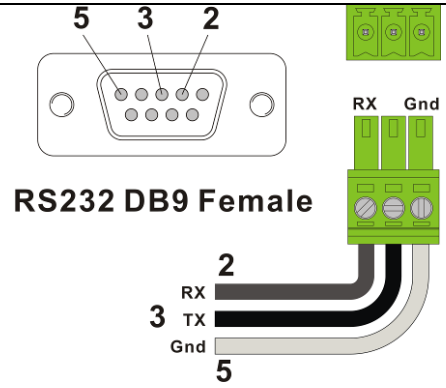
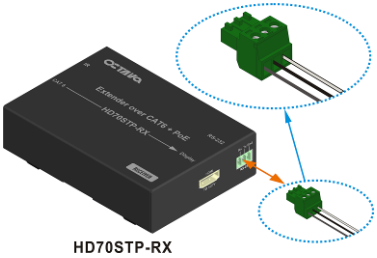
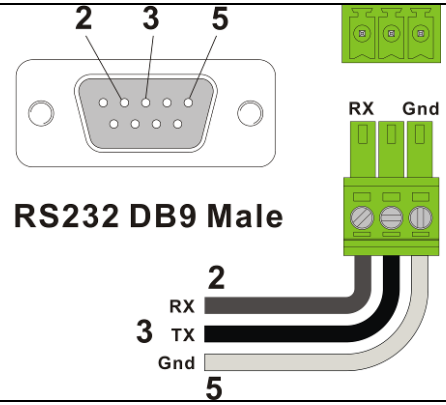
Serial Data (RS-232)

Serial control data can be sent using the RS-232 ports from Transmitter to Receiver unit for controlling the attached display.

A 3 pin Phoenix connector is provided to connect with a RS-232 serial cable. Prepare your serial cable according to diagram below

The following shows the cable configuration for sending serial commands from the TX to the RX (display side).

<table>
<tr><th colspan="2">Sending Serial Commands from TX unit to RX Unit.</th></tr>
<tr><td>Serial Port cable
(TX side)

Controller
Side
 
</td><td> 
</td></tr>
<tr><td>Serial Port cable
(RX side)
 
</td><td> 
</td></tr>
</table>

Mounting Tabs

The HD100STP includes removable wall mounting tabs. The wall mounting tabs can be removed if not needed

	**wall mounting tabs installed**
	**Wall mounting tabs can be removed if not needed.**

Warranty

Octava warrants the equipment purchased to be free from defects in material and workmanship under normal use and service for a period of 1 year. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 1 year from the date of receipt.
If Octava's equipment fails because of defects (1) year from the date of receipt, Octava will at its option, A) repair or replace the equipment, or B) request return of equipment for refund of the price paid for the product provided that the equipment has not been subjected to mechanical, electrical or other abuse or modifications.
Proof of sale required to claim warranty.

Disclaimers

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For Questions and support:

Email: info@octavainc.com
URL: www.octavainc.com

Parameter	Specifications	
Model	HD100STP-EX	
HDMI In	1	
HDMI Out	1	
CAT6 IN/OUT	1	
Link Distance CAT 6 Output	300ft @ 1080P	
Ethernet Cable Recommendation	Cat6a (Shielded, 24 AWG or better) recommended for 1080P and best performance	
EIA/TIA-568-B termination (T568B) recommended. • Punch-down connection block/panel will degrade performance and not recommended. • Use a single link of shielded CAT6a cable wherever possible. Using a Keystone connector will reduce link distance		
Video Resolution	1080P (60/50/24) , 720p(60/50), 1080i (60/50), current 3D consumer formats plus 4K. Uncompressed high definition (HD) video: 1080p@60Hz@36 bits 1080p@60Hz@48 bits, 3D, 4K x 2K	
Audio	2ch PCM, multi-channel and Advanced multi-channel bitstream digital audio	
Power over Ethernet (PoE)	Directly power the Zone receiver over CAT 6 cables. No power supply required near display side.	
Infrared IR (bi directional)	Bi -Directional IR. Send IR from display side to source side OR vice versa.	
Infrared Frequency	Wideband IR 20-60 KHz circuitry for maximum IR remote compatibility using Octava supplied IR cables.	
Serial Port (RS-232)	RS-232 extension for controlling display device.	
Dimension	Transmitter	4.5 x 2.8 x 1.1 in (11.5 x 7.1 x 2.9 cm)
	Receiver	4.5 x 3.3 x 1.1 in (11.5 x 8.3 x 2.9cm)
DC adapter (included)	48VDC, 1 adapter included	
Mounting Tabs	Included	

Rev.A