



USER MANUAL

DUX-MTX-WP

100-METER WALL-PLATE HDBT TRANSMITTER



TABLE OF CONTENT

IMPORTANT SAFETY INSTRUCTIONS	03
INTRODUCTION	04
PACKING LIST	05
SPECIFICATIONS	06
CABLE SPECIFICATIONS.....	07
PANEL OVERVIEW	08
AUTO & MANUAL INPUT SWITCHING	10
EDID SWITCH	11
INSTALL HARDWARE	12
TROUBLESHOOTING	14

IMPORTANT SAFETY INSTRUCTIONS



NOTE:

We reserve the right to change the content from time to time without notice.



WARNINGS:

To reduce the risk of fire, electric shock or product damage, please observe the following Safety Instructions while installing and operating the product:



Do not expose this apparatus to rain, moisture, dripping or splashing. No objects filled with liquids, such as vases, shall be placed on the apparatus.



Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.



To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



Do not place sources of naked flames, such as lighted candles, on the unit.



Clean this apparatus only with dry cloth.



Unplug this apparatus during lightning storms or when unused for long periods of time.



Protect the power cord from being walked on or pinched particularly at plugs.



Only use attachments/accessories specified by the manufacturer.



Refer all servicing to qualified service personnel.

INTRODUCTIONS



DUX-MTX-WP Wall Plate 2x1 Transmitter switches VGA and HDMI Inputs to one HDBT Outputs and is able to transmit 1080P@60Hz with 48 bit Deep Color HD Audio up to 100m/328ft and Ultra HD 4K signal up to 70m/230ft.

DUX-MTX-WP automatically detects and switches between VGA and HDMI Input signals when connected, with HDMI Input enjoying the priority when both Inputs are active. Manual switching is also allowed using the front panel SELECT button.

A/V transmission, power, bi-directional IR and RS232 serial communication and Ethernet pass-through over one signal Cat6a/7 cable, DUX-MTX-WP provides users with an added level of convenience. An EDID Switch is also available for immediate EDID setting adjustment while communication or compatibility becomes an issue for the users.

Fully compliant with HDMI 1.4, compatible with HDMI 2.0 and HDCP 2.2, DUX-MTX-WP comes as an excellent solution for commercial or residential applications where switching between VGA and HDMI over distance is required.

Features

- 2x1 switching between VGA IN and HDMI IN to HDBT OUT.
- Capable of transmissions
 - Via Cat5e/6 cable:
 - Up to 70m/230ft: 4K@30Hz YUV 4:4:4 24bit or 4K@60Hz YUV 4:2:0 24bit
 - Up to 100m/328ft: 1080p@60Hz 36bit
 - Via Cat6a/7 cables:
 - Up to 100m/328ft: 4K@30Hz YUV 4:4:4 24bit or 4K@60Hz YUV 4:2:0 24bit
 - Up to 100m/328ft: 1080p@60Hz 48bit
- Auto signal detection, auto & manual switching between VGA and HDMI Inputs.
- Fully compliant with HDMI 1.4, and compatible with HDMI 2.0(4K@60Hz 4:2:0).
- HDCP 2.2 compliant.
- EDID management for VGA input.
- A/V transmission, bi-directional IR, RS232, Ethernet pass-through over HDBaseT.
- Support one-way PoE and can be powered by an HDBT Receiver with PSE (Power Supply Equipment).
- Compact size for convenient and unobtrusive installation.



NOTE: The actual signal transmission distance depends on signal resolution and cable quality.

PACKING LIST

- 1 x DUX-MTX-WP
- 1 x Power Adapter (12 VDC, 1.5A / 2-pin Phoenix connector)
- 1 x Phoenix Male Connector (3.5 mm, 3-pin)
- 2 x Phoenix Male Connector (3.5 mm, 2-pin)
- 1 x Wall Plate Plastic Panel (2-gang US)
- 1 x User Manual

SPECIFICATIONS

Technical	
Input	1 x HDMI IN 1 x VGA IN 1 x AUDIO IN
Input Signal Type	HDMI: TMDS
Input Resolution	HDMI: Up to 4K@60Hz YUV 4:2:0 VGA: Up to 1920 x 1200@60Hz
Audio Input	Analog Stereo Audio: 1 x 3.5mm mini jack
Audio Format	HDMI: Multichannel digital audio supporting up to 7.1 DTS Master HD and DolbyTrue HD VGA: Stereo
Input Video Level	0.5-1.0 V p-p
Output	1 x HDBT OUT
Output Signal Type	HDBT
Output Resolution	Up to 4K@60Hz YUV 4:2:0
Video Impedance	100 Ω
Maximum Pixel Clock	297 MHz
General	
Operating Temperature / RH	32°F ~ 113°F (0°C ~ 45°C) 10% ~ 90%, non-condensing
Storage Temperature / RH	-4°F ~ 140°F (-20°C ~ 70°C) 10% ~ 90%, non-condensing
Power Supply	12 VDC 1.5A
Power Consumption	3.36 W
ESD Protection	Human-body model: • ± 8 kV (Air-gap discharge) • ± 4 kV (Contact discharge)
Dimension (W x H x D)	105.6 mm x 36.2 mm x 91 mm
Weight	0.20 kg
Certification	CE, FCC

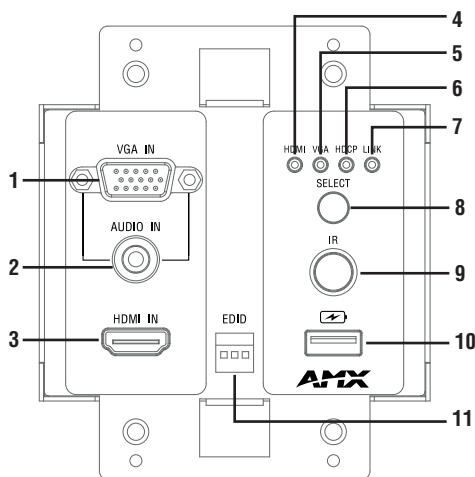
CABLE SPECIFICATIONS

To ensure best performance of DUX-MTX-WP, please use stright-through Category cables wired to T568B standard and a HDBT Receiver device which also supports 100-meter transmission.

Cable Type	Range	Supported Video
Cat5e/6	100m/328ft	1080p@60Hz 36bit
	70m/230ft	1080p@60Hz 3D 4K@30Hz YUV4:4:4 4K@60Hz YUV4:2:0
Cat6a/7	100m/328ft	1080p@60Hz 36bit 1080p@60Hz 48bit 1080p@60Hz 3D 4K@30Hz YUV4:4:4 4K@60Hz YUV4:2:0

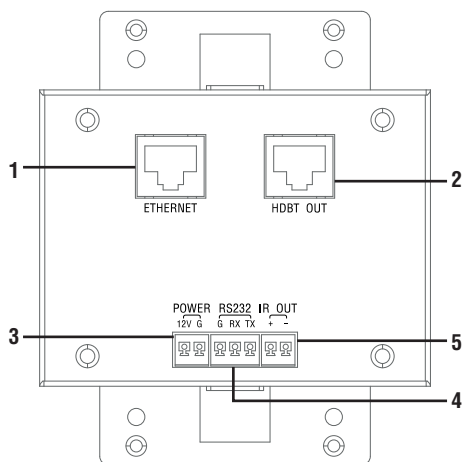
PANEL OVERVIEW

Front Panel



Item	Name	Description
1	VGA IN	Connects to a VGA source.
2	AUDIO IN	Used with VGA source for audio signal input.
3	HDMI IN	Connects to an HDMI source.
4	HDMI LED	On: HDMI signal is being transmitted. Off: No HDMI signal is being transmitted or the signal is unstable.
5	VGA LED	On: VGA signal is being transmitted. Off: No VGA signal is being transmitted or the signal is unstable.
6	HDCP LED	On: HDCP video is being transmitted. Blinking: Non-HDCP video is being transmitted. Off: No HDMI signal.
7	LINK LED	On: HDBT OUT is linked. Off / Blinking: HDBT OUT is not linked or there is a link error.
8	SELECT Button	Press the button to select the input source.
9	IR	IR sensor. With built-in IR Receiver (30-55 kHz).
10	USB	USB connector. Used for power supply.
11	EDID	Used to adjust the EDID setting. Default setting is for 1920*1080 VGA Input. (For more information, please refer to EDID MANAGEMENT.)

Rear Panel



Item	Name	Description
1	ETHERNET	Connects to an Ethernet device.
2	HDBT OUT	Connects to an HDBT Receiver via a CatX cable.
3	POWER	Connects to the Power Adapter provided.
4	RS232	For RS232 pass-through.
5	IR OUT	Connects to an IR Emitter.

AUTO & MANUAL INPUT SWITCHING

After powered on, DUX-MTX-WP will automatically detect the VGA IN and HDMI IN ports for input signals. In such auto-switching mode, HDMI IN will always enjoy priority over VGA IN.

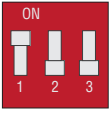
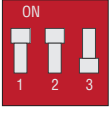
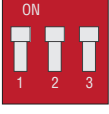
AUTO SWITCHING		
HDMI IN	VGA IN	Auto Select
Yes	No/Yes	HDMI
No	No	HDMI
No	Yes	VGA

Otherwise, users can select the desired input source using the “SELECT” button on the front panel when valid VGA and HDMI signals are both present.

MANUAL SWITCHING (USING “SELECT” BUTTON)			
Current Input	HDMI IN	VGA IN	Press SELECT Button will Select
HDMI	No/Yes	No	HDMI
HDMI	Yes	Yes	VGA
VGA	Yes	Yes	HDMI
VGA	No	Yes	VGA

EDID MANAGEMENT

EDID (Extended Display Identification Data) is a data structure provided by a digital display to describe its capabilities to a video source. DUX-MTX-WP features an EDID management that can be used when its EDID setting's does not meet the installation requirements. By default, the EDID Switch is set for 1920 x 1080 VGA input.

SWITCH SETTING	MODE	
	For VGA Input	Fix 1280 x 800 as Native Video
	For VGA Input	Fix 1920 x 1200 as Native Video
	For VGA Input	Fix 1920 x 1080 as Native Video (Default)
	For VGA Input	Fix 1280 x 720 as Native Video
	For VGA Input	Fix 1024 x 768 as Native Video
	For VGA Input	Fix 800 x 600 as Native Video
	For VGA Input	Reserved for future use
	For VGA Input	Reserved for future use
N/A	For HDMI Input	Copy from detected sink



NOTE: To take effect the EDID settings, unplug and plug the VGA cable.

INSTALL HARDWARE



WARNING:

- Before installation, disconnect the power supplies of all the devices.
- Please use quality cables and accessories specified or provided by the manufacturer.
- During installation, connect and disconnect cables with caution.

To install DUX-MTX-WP (See Application Example: System Wiring on Page 13):

1. Connect DUX-MTX-WP's **HDMI IN** or **VGA IN** to an HDMI or VGA input source (e.g. Blu-ray player, game console, satellite/cable TV, media server, etc.) through a quality HDMI or VGA cable. (**AUDIO IN** may also be connected when VGA IN is in use.)
2. Connect DUX-MTX-WP's **HDBT OUT** to an HDBT Receiver (e.g. DUX-RX) via a high-quality CatX cable.
3. Connect an HDMI display device (e.g. TV or projector) to HDMI OUT of the HDBT Receiver.
4. Connect the included Power Adapter to DUX-MTX-WP.
5. Power on all the devices and start operation.

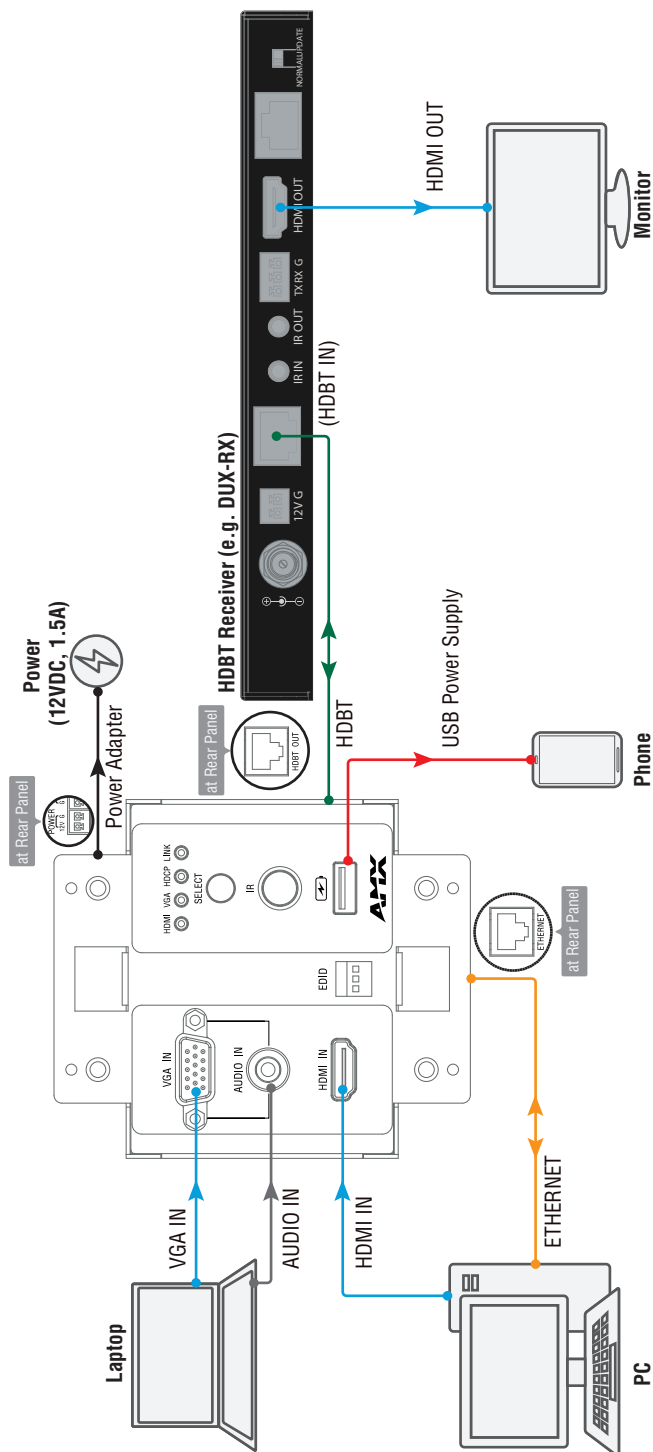


NOTE:

1) 70m/230ft @4K or 100m/328ft @1080p are maximum transmission distances realizable when DUX-MTX-WP and other devices are in perfect conditions and the straight cable runs with no electrical interference, bends, kinks, patch panels or wall outlets, etc. If any of these turns to be an issue in your installation, transmission distance will be affected.

2) When all set, check the LED indicators of DUX-MTX-WP. For LED indication, please refer to page 08.

3) DUX-MTX-WP supports one-way PoE and can be powered directly by an HDBT Receiver with PSE (Power Supply Equipment).



Application Example: System Wiring

TROUBLESHOOTING

1. Why the Link LED is off or blinking?

- Check that all the devices are on.
- Check that all the cables are qualified and connected properly.
- Check that the CatX cable used complies with the recommended specifications. For more information, see CABLE SPECIFICATIONS.

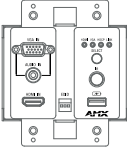
2. Why the display connected to the Receiver device shows no picture?

- Check that all the devices are on.
- Check that all the cables are qualified and connected properly.
- Check that the Link LED is steady on. For more information, see Q1 above.
- Check that the display works properly, and that the source device has normal signals output.
- Ensure that the display device supports HDCP.
- Ensure the CatX cable and the HDMI cables used complies with the recommended specifications. For more information, see CABLE SPECIFICATIONS.
- Check that your display device is switched to the correct source input mode.
- Check that no compatibility issue exists between the Receiver and the display. If so, replace the display with other models.
- When VGA input source is connected and used, check if the EDID Switch is in the correct position. For more information, see EDID MANAGEMENT.

3. Why the display connected to the Receiver shows snow or mosaic?

- Check that all the cables are qualified and connected properly.
- Check that Ethernet cables are Cat5e/6 or higher gauge.
- Check that the source input device has no such problem as snow, mosaic or with a damaged disc. If so, replace with another qualified input source.
- Check that no compatibility issue exists between the Receiver and the display. If so, replace the display with qualified models.

AMX DUX SERIES

DUX-8C	Compact 8x8 HDMI 2.0 matrix switcher for video signals up to 4K@60Hz 4:4:4 (bandwidth 18 Gbps)	
DUX-8D	Dual output 8x8 HDMI 2.0 matrix switcher with 4 mirrored HDBT outputs for video signals up to 4K@60Hz 4:4:4 (bandwidth 18 Gbps)	
DUX-TX	HDMI 1.4 over HDBT TX up to 100m	
DUX-RX	HDMI 1.4 over HDBT RX up to 100m	
DUX-TX-70	HDMI 1.4 over HDBT TX up to 70m	
DUX-RX-70	HDMI 1.4 over HDBT RX up to 70m	
DUX-SCL	HDMI scaler up to 4K@60Hz 4:4:4	
DUX-SRX	HDBT scaling receiver up to 4K@60Hz 4:4:4	
DUX-MTX	HDMI 1.4 & VGA over HDBT TX up to 100m	
DUX-MTX-WP	HDMI 1.4 & VGA over HDBT wall-plate TX up to 100 m	



© 2017 Harman. All rights reserved. ENZO, NetLinx, AMX, AV FOR AN IT WORLD, HARMAN, and their respective logos are registered trademarks of HARMAN. Oracle, Java and any other company or brand name referenced may be trademarks/registered trademarks of their respective companies.

AMX does not assume responsibility for errors or omissions. AMX also reserves the right to alter specifications without prior notice at any time.

The AMX Warranty and Return Policy and related documents can be viewed/downloaded at www.amx.com.

3000 RESEARCH DRIVE, RICHARDSON, TX 75082

AMX.com | 800.222.0193 | 469.624.8000 | +1.469.624.7400 | fax 469.624.7153

03.2017