

VGA, HDMI, MHL Auto-Switching Transmitter with HDBaseT™



- 2 HDMI inputs and 1 VGA input
- Supports all HDMI resolutions including 4K (UHD)
- VGA input is scaled to 1080p to ensure proper image on all HDMI displays
- Manual or automatic input selection
- Automatic Control of display power via RS-232
- Uses only one Cat6

The UHBX-SW3-S is a multi-input Switcher/Sender with HDBaseT™ output. The device accommodates 2 HDMI and 1 VGA inputs with audio. The HDMI #1 input also supports MHL (Mobile High-Definition Link) with phone-charging feature to allow video presentation from a smart-phone using just a passive cable.

The VGA input also accepts YPbPr Component video. The sender can manually or automatically switch between the various inputs and extends the video using HDBaseT™ standard. To control the power on/off function of the remote display, the switcher can generate RS232, and IR control signals which are extended using the same Cat6 cable. Virtually all VGA and HDMI resolutions are supported including 4K (UHD). 4K video can be extended to 330 ft (100m) while 1080p signals can go as far as 500 ft (150m). The switcher is powered through the same cable from the receiver using PoH (Power-over-HDBaseT) standard, making installations as simple as possible. The UHBX-R-PSE receiver includes a small power supply and provides HDMI, RS-232 and IR outputs.

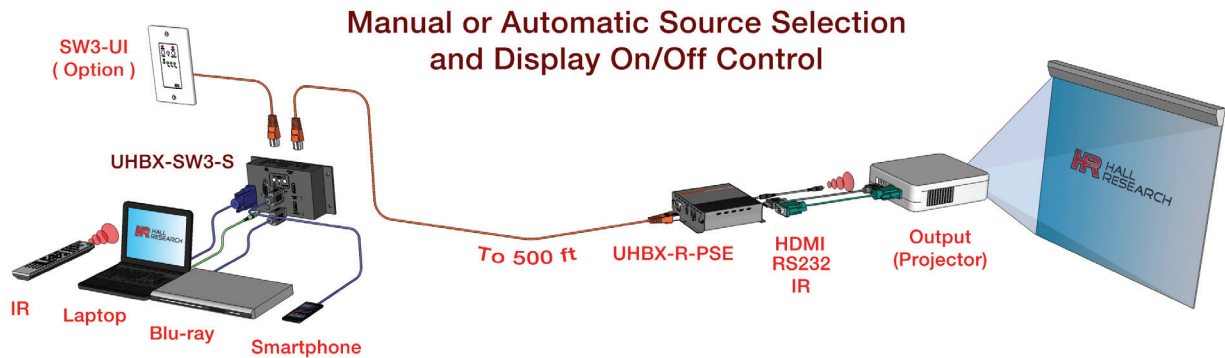
To ensure a proper image on the display, the switcher's VGA input is scaled to 1080p (user specifiable). This eliminates compatibility issues with various notebook or PC VGA formats that may not be displayable on an HDMI TV if not scaled to a standard HDTV resolution such as 1080p. The user can also configure the unit to pass-through 3.5 mm audio input from an MP3 audio player independent of the VGA signal.

The UHBX-SW3-S can manually or automatically control the power on/off function of the remote display. If a video is detected on the input, in automatic power mode, the switcher will issue the desired ON command, and if there is no video, it can issue an OFF command after a programmed delay. The power commands can be RS232, or IR based on the user's needs. To select the control method and to enter the commands, a USB port is provided on the surface mountable box for programming using Hall Research's free Windows® GUI software. In addition, the surface mountable box features an IR detector that can extend IR signal to the remote receiver. In this way, an IR remote can be pointed to the transmitter and its signal will be extended to the TV.

The UHBX-SW3-S complies fully with HDBaseT Alliance's design specifications and may be connected to displays or projectors with HDBaseT inputs without the external receiver. In that case, a PoH compliant power inserter would be needed to power the surface mountable box.

The UHBX-SW3-S is a culmination of Hall Research's expertise in high-definition analog and digital video scaling and extension technologies and is fully designed and manufactured in the USA.

Block Diagram



Specifications

Video Inputs:	2x HDMI (1 MHL), 1x HD15 (VGA or YPbPr)
Video Connectors:	HDMI Female, HD15 Female, RJ45 for HDBaseT output
Input Standards:	HDMI 1.4, MHL 2.0, DVI 1.0, VESA VGA, NTSC 3.58
HDCP Support:	Yes, v1.4 (Repeater)
Supported Resolutions:	HDMI 480p to 4K UHD, MHL to 1080p, VGA 640x480 to 1920x1080, YPbPr Supports 4K@60 Hz (4:2:0 8 bit color) or 4K@30 Hz (4:4:4 and 8 bit color)
Audio Inputs:	Unbalanced stereo audio for VGA input (Line Level)
Audio Connectors:	3.5mm Mini-stereo, Female Frequency Response: 20Hz ~ 20KHz
Control:	Mini-USB (GUI setup) Programmable push buttons (Input selection and Power toggle) RS-232 transmit IR transmit (pass-through or generated) Auto-switching, auto-power on/off available External keypad ("Aux CTRL") port
Power Supply:	Device is PoH 'PD' (Powered Device); receives power from compatible 'PSE' (Power Sourcing Equipment) Receiver
Power Consumption:	(3.0A @ 5V w/UHBX-R-PSE - 15 Watts max)
Supported VGA Res:	Detailed Timings 1920 x 1080 60hz 1360 x 768 60hz 1280 x 720 60hz Established Timings 640 x 480 60hz 800 x 600 60hz 1024 x 768 60hz Standard Timings 1280 x 720 16:9 1280 x 1024 5:4 1280 x 960 4:3 1280 x 800 16:10 1600 x 1200 4:3 1680 x 1050 16:10 1440 x 900 16:10
Video Bandwidth:	HDMI 25MHz-300MHz TMDS Clock, VGA 350MHz, YPbPr
Dimensions:	5.7"x2.95"x1.21"