

# EXT-4K600A-MF-51-HBTLS



4K Ultra HD 600 MHz Multi-Format 5x1 Scaler  
w/ Auto-Switching & Split HDMI & HDBaseT™ Outputs



## AUTO-SWITCH 4K ULTRA HD 600 MHz HDMI, DISPLAYPORT™ 1.2 AND VGA. SCALE AND EXTEND UP TO 70 METERS/230 FEET, OVER A SINGLE CAT-5.

The EXT-4K600A-MF-51-HBTLS is a 5x1 Presentation Switcher with three 4K 600 MHz HDMI, one DisplayPort™ 1.2, one VGA, five independently assignable stereo analog audio, & one balanced/unbalanced microphone/line input. The latter features switchable 48V Phantom Power and Ducking. The five video inputs, along with their embedded or assigned audio, can be switched automatically or manually. Control options include the front panel, hand-held IR remote with On-Screen-Display, electrical IR, RS-232, Telnet/UDP, web server interface, & contact closure.

The split HDMI and HDBaseT™ outputs feature a scaler, configurable to 3840 x 2160, 30 Hz, 4:4:4. They feed a local and a remote display simultaneously, adding flexibility in larger presentation environments. The Switcher and its recommended Receiver (the EXT-UHDA-HBTL-RX, sold separately) use Gefen's implementation of the HDBaseT™ technology

to extend the HDMI output of the Switcher up to 230 feet/70 meters at 1080p Full HD and up to 130 feet/40 meters at 4K, using one CAT-5e or better cable. The HDMI and DisplayPort™ inputs support resolutions up to 4K DCI (4096 x 2160) 60 Hz 4:4:4, with HDCP 2.2 and 1.4. The HDMI input & output, and the HDBaseT™ output support 2 channels of LPCM digital audio. The VGA input supports resolutions up to WUXGA (1920 x 1200) and 1080p Full HD. When used with third-party adaptors, the VGA input also supports Component (YPbPr) and Composite video. The Switcher features an analog L/R audio de-embedder. The optional Receiver also features analog and digital audio (optical and coaxial) outputs. Any or all audio outputs can be connected to sound-reinforcement systems at the source side or the remote end, adding impact and presence to AV presentations. The 5x1 Switcher features Advanced EDID Management to ensure that sources are optimized for the displays in use. The Switcher, when used with the optional HDBaseT™ Receiver, provides 2-way RS-232 and IR extension, facilitating control of the Switcher, AV sources placed near the Switcher, and the remote display or another device placed near the Receiver unit. Industry-standard Power-Over-HDBaseT™ (POH) technology provides

power from the Switcher to the Receiver, over the same cable that extends the AV signal. The Switcher features an integrated IR Sensor on its front panel as well as an electrical IR input. If the switcher is mounted in a location where its IR sensor is not within line of sight, a Gefen EXT-RMT-EXTIRN IR Extender Module or a third-party controller with electrical IR output can be connected to the IR input on its back panel. The 5x1 Switcher features a compact form-factor that can be placed on a shelf or securely mounted on or under a surface. The optional Receiver's small, ultra-low-profile enclosure can be securely surface-mounted, and conveniently hidden away from sight in the equipment closet or behind the display. Locking HDMI ports on the Switcher & locking power jacks on both units ensure long-lasting and reliable connections.

### Note:

Shielded (STP) CAT-5e or better cable is recommended. Unshielded (UTP) CAT-5e or better cable may be acceptable depending on cable quality but is not the preferred choice. Care should always be given to keep these cables away from power lines and other sources of electromagnetic interference.

## FEATURES\*

- Automatic switching of all video inputs
- Manual switching of video inputs via front panel buttons, handheld IR remote, electrical IR, RS-232, Telnet/UDP, and web server interface
- Split HDMI and HDBaseT™ Outputs feed local and remote displays simultaneously
- Inputs:
  - 3x HDMI
  - 1x DisplayPort™
  - 1x VGA
  - 5x L/R Unbalanced Analog Audio
  - 1x L/R Balanced and Unbalanced Mic/Line
- Outputs:
  - 1x HDMI
  - 1x HDBaseT™
  - 1x L/R Unbalanced Analog Audio
- Selectable 48V Phantom Power for Mic input
- Microphone Ducking feature
- HDMI and DP inputs support up to 600 MHz TMDS clock and 18 Gbps data throughput
- HDMI and DP inputs support up to 4K DCI 4096 x 2160, 60 Hz, 4:4:4 and 4K Ultra HD 3840 x 2160, 60 Hz, 4:4:4
- VGA input supports up to WUXGA (1920 x 1200, 60 Hz, 4:4:4) and 1080p Full HD (60 Hz, 4:4:4)
- HDMI and HDBaseT™ outputs support up to 300 MHz TMDS clock and 10.2 Gbps data throughput
- HDMI and HDBaseT™ outputs support up to 4K Ultra HD 3840 x 2160, 30 Hz, 4:4:4
- Configurable built-in scaler up to 3840 x 2160, 30 Hz, 4:4:4
- Each of the 5 unbalanced audio inputs can

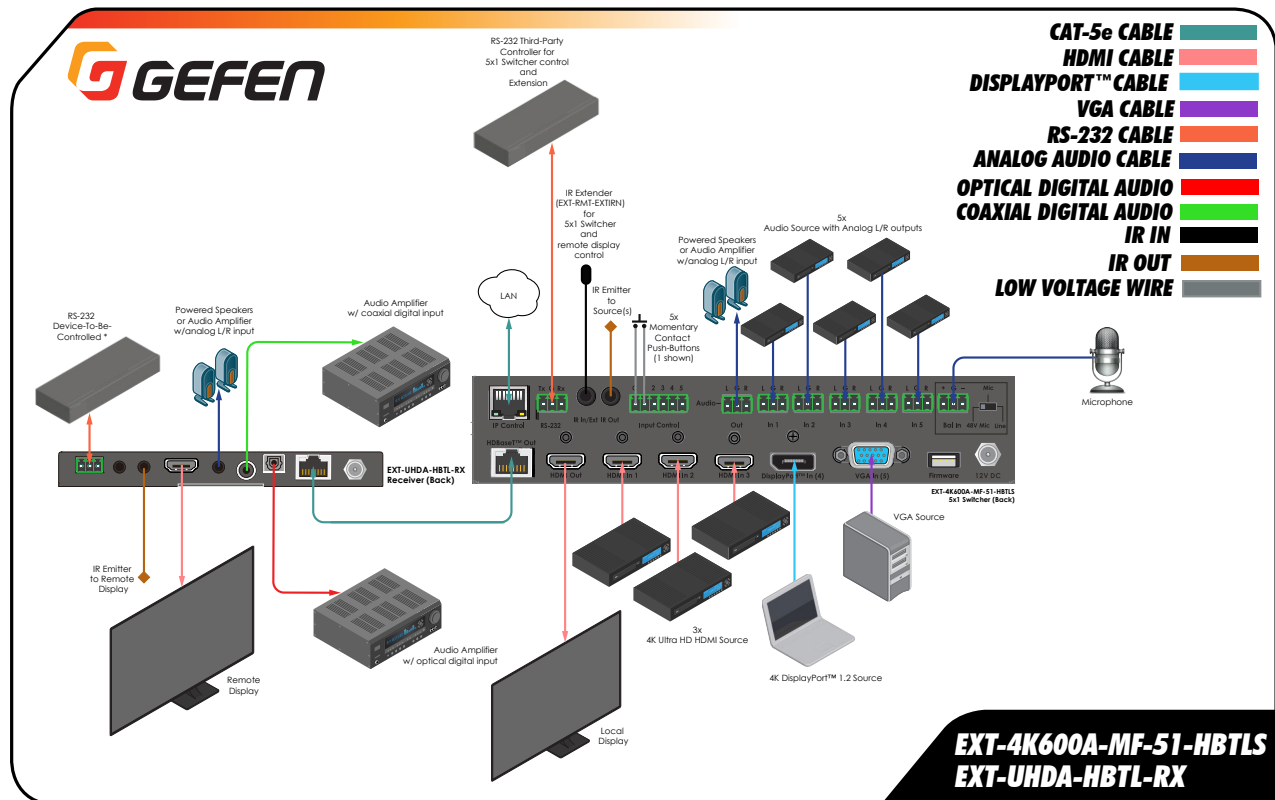
be associated with any of the video inputs and be embedded into then HDMI and HDBaseT™ outputs

- When used with optional EXT-UHDA-HBTL-RX HDBaseT™ Receiver, extends the HDMI output, 2-way IR, and RS-232 over a single CAT-5e:
  - 4K Ultra HD (3840 x 2160 @ 30 Hz, 4:4:4), up to 130 feet/40 meters (8-bit color)
  - 1080p Full HD (60 Hz) or WUXGA (1920x1200 @ 60 Hz), up to 230 feet/70 meters (up to 12-bit Deep Color)
- HDMI features supported:
  - HDMI 2.0
  - HDCP 2.2 and 1.4
  - 12-bit Deep Color (at 1080p)
  - LPCM 2.0 pass-through
  - CEC pass-through (Local HDMI output only)
  - Lip Sync pass-through
- DisplayPort™ features supported:
  - DP 1.2
  - HDCP 2.2 and 1.4
  - LPCM 2.0 pass-through
- VGA input supported formats:
  - VGA, YPbPr (Component Video), and Composite Video
- RS-232 extension and unit control
- 2-way IR extension and unit control
- Analog L/R unbalanced audio breakout
- 5 independent dry contacts for input switching
- Uses Gefen's implementation of HDBaseT™ technology with enhanced features
- Advanced EDID Management for rapid integration of source and display
- Field-updateable firmware via USB Type-A port

- Locking HDMI connectors
- Locking power connector
- Power over HDBaseT™ (POH) provides power to a compatible Receiver unit (such as EXT-UHDA-HBTL-RX) over the link cable
- IR In/Ext port works with Gefen EXT-RMT-EXTIRN IR Extender Module or electrical IR from a third-party controller
- Handheld IR Remote works with intuitive On-Screen-Display (OSD)
- IP Control via Telnet/UDP and web server interface
- Compact enclosure is top-or-bottom surface-mountable, or can be placed in a shelf

## SPECIFICATIONS\*

- Recommended HDBaseT™ Receiver: EXT-UHDA-HBTL-RX
- Maximum Input TMDS Clock/Bandwidth: 600 MHz/18 Gbps
- Maximum Output TMDS Clock/Bandwidth: 300 MHz/10.2 Gbps
- Video Input Connectors:
  - (3) HDMI Type A 19-pin, locking, female
  - (1) DisplayPort™ 20-pin, female
  - (1) VGA HD-15, female
- Video Output Connectors:
  - (1) HDMI Type A 19-pin, locking, female
  - (1) HDBaseT™ RJ-45, shielded
- L/R Unbalanced Analog Audio Input ports: (5) 3-pin Phoenix with removable plug
- L/R Balanced/Unbalanced Mic/Line Input port: (1) 3-pin Phoenix with removable plug
- L/R Analog Unbalanced Audio Output port: (1) 3-pin Phoenix with removable plug
- Input Control port: (1) 6-pin Phoenix with removable plug
- RS-232 port: (1) 3-pin Phoenix with removable plug
- IR In/Ext port: (1) 3.5mm mini-stereo jack
- IR Extender type: EXT-RMT-EXTIRN
- IR Output port: (1) 3.5mm mini-mono jack
- IR Remote Battery: (1) Lithium (CR2025)
- Firmware Update port: (1) USB Type-A, female
- Input Select Switches: (5) tact-type, with Blue LED indicator backlight
- Auto-Switching On/Off Switch: (1) tact-type, with Blue LED indicator backlight
- Power On/Off Switch: (1) tact-type, with Blue LED indicator backlight
- Mic/Line Configuration Switch: (1) 3-position slide-type
- Power Supply Connector: (1) 5.5mm barrel/2.1mm pin, Locking
- Power Supply: (1) 12V DC
- Power Consumption:
  - Not powering a Receiver: 12W maximum
  - Powering a Receiver: 24W maximum
- Operating Temperature: +32 to +122 °F (0 to +50 °C)
- Operating Humidity: 5% to 90% RH, non-condensing
- Storage Temperature: -4 to +185 °F (-20 to +85 °C)
- Storage Humidity: 0% to 95% RH, non-condensing
- MTBF: 50000 hours
- Dimensions (W x H x D, not including the connectors): 8.8" x 1.75" x 6.25" (223mm x 44mm x 158mm)
- Net Weight: 2.5 lbs. (1.2 kg)
- Shipping Weight: 4.0 lbs. (1.8kg)



**EXT-4K600A-MF-51-HBTL5**  
**EXT-UHDA-HBTL-RX**

\* Features and specifications are subject to change without notice.

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