RGB-HDMI 300

RGB TO HDMI SCALER

- RGB and HDTV component video to HDMI scaling
- Selectable output rates up to 1920x1200, including HDTV 1080p/60
- Auto-Image™ setup
- Auto Input Memory
- HDMI output selectable as RGB or component video
- Picture control adjustments with on-screen display
- RS-232 serial control

The Extron RGB-HDMI 300 is a high performance RGB to HDMI scaler that converts incoming analog component video and RGBHV signals to HDMI. It accepts HDTV and high resolution computer-video signals, and offers HDMI output rates up to 1920x1200, including HDTV 1080p/60. The RGB-HDMI 300 is ideal for applications where newer displays with only HDMI inputs are to be integrated into systems with analog RGB computer-video sources.

DESCRIPTION

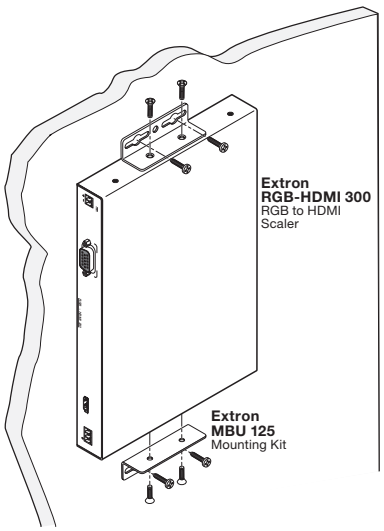
The Extron **RGB-HDMI 300** is a high performance RGB to HDMI scaler that converts incoming analog component video and RGBHV signals to HDMI signals. It accepts HDTV and high resolution computer-video signals up to 1920x1200, and offers multiple, selectable HDMI output rates up to 1920x1200, including HDTV 1080p/60. The RGB-HDMI 300 is housed in a compact, low-profile enclosure for placement behind flat-panel displays, and offers several features for streamlining integration and enhancing system operation, including Auto Input Memory, Auto-Image setup, and RS-232 serial control.

The RGB-HDMI 300 is ideal for various applications where newer consumer-based displays, equipped only with HDMI inputs, are to be used with sources that output analog RGB computer-video, or in an environment with an existing analog RGB signal distribution infrastructure. It can also be used in systems where consolidation of various source signals to a single, common output resolution is desired. For example, the RGB-HDMI 300 can be installed at the output of a switcher, with its HDMI output feeding the display.

In addition to high performance scaling, the RGB-HDMI 300 includes several integrator friendly features for expediting set-up and system operation. An on-screen display facilitates display of information pertaining to the incoming signal and adjustment of picture settings, including positioning, size, zoom, brightness, contrast, and detail. Internal test patterns are available for calibration and setup. Configurations can be conveniently saved and recalled from up to three memory presets from the front panel, and up to 16 additional presets through RS-232 serial control.

With Auto Input Memory, the RGB-HDMI 300 automatically stores image settings for each new incoming signal. When the signal is recognized again from a newly connected source, image settings are automatically restored. Auto-Image, a feature common to many Extron scalers and signal processors, allows for quick and easy set-up of incoming analog RGB signals.

The RGB-HDMI 300 features RS-232 serial control with front and rear ports. It is housed in a 1" high, half rack width enclosure that allows for discreet installation, such as behind a flat panel display or above a projector.



FEATURES

- **RGB and HDTV component video to HDMI scaling**
- **61 selectable output rates up to 1920x1200, including HDTV 1080p/60** – The output rate can be selected manually using the on-screen menu system or via RS-232 serial control. It can also be automatically selected based on the display EDID, or set to match the incoming signal rate.
- **Auto-Image setup** – For expedited presentation set-up, the RGB-HDMI 300 automatically optimizes the image by analyzing and then adjusting to the incoming source, eliminating complex and time-consuming set-up procedures.
- **Auto Input Memory** – When activated, the RGB-HDMI 300 automatically stores size, position, contrast, brightness, and detail information based on the incoming signal. When the same signal is detected again, these image settings are automatically recalled from memory.
- **HDMI output selectable as RGB or component video**
- **Picture controls for brightness, contrast, detail, and horizontal and vertical positioning, sizing, and zoom**
- **Memory presets** – Three memory presets are available to store and recall sizing, centering, detail, contrast, and brightness information. An additional 16 memory presets are available via RS-232 serial control.
- **On-screen display** – The RGB-HDMI 300 features an on-screen display which displays status information pertaining to the currently selected input, and facilitates easy adjustment of picture settings.
- **RS-232 serial control port** – Using serial commands, the RGB-HDMI 300 can be controlled and configured via the Extron Windows®-based control program, or integrated into third-party control systems. Extron products use the SIS™ - Simple Instruction Set command protocol, a set of basic ASCII code commands that allow for quick and easy programming.
- **Internal test patterns for calibration and setup** – Nine test patterns are available, including a crop pattern, color bars, alternating pixels, and four film aspect ratio patterns - 1.33, 1.78, 1.85, and 2.35.
- **Front panel security lockout** – This feature locks out all front panel functions; all functions however, are available through RS-232 control.
- **1" high, half rack width metal enclosure** – With a low profile enclosure, the RGB-HDMI 300 can be discreetly installed, such as behind a plasma or LCD flat-panel display.
- **External universal power supply included** – Provides worldwide power compatibility.

VIDEO INPUT

Number/signal type	1 RGBHV
Connectors	1 female 15-pin HD
Nominal level	0.7 Vp-p for RGB
Minimum/maximum levels	Analog: 0.0 V to 2.0 Vp-p with no offset
Impedance	75 ohms
Horizontal frequency	30 kHz to 100 kHz
Vertical frequency	50 Hz to 120 Hz
Resolution range	640x480 to 1920x1200* or 480p, 576p, 720p, 1080i, or 1080p

NOTE: *Only the reduced blanking version of the 1920x1200 resolution is sampled at full bit rate.

Formats	RGB and YCbCr
Return loss	<-30 dB @ 5 MHz

VIDEO PROCESSING

Digital sampling	24 bit, 8 bits per color; 162 MHz standard
Colors	16.78 million

VIDEO OUTPUT

Number/signal type	1 single link HDMI
Connectors	1 female HDMI
Scaled resolutions	640x480[4,5,6], 800x600[4,5,6], 852x480[4,5,6], 1024x768[4,5,6], 1024x852[4,5,6], 1024x1024[4,5,6], 1280x768[4,5,6], 1280x800[4,5,6], 1280x1024[4,5,6], 1360x765[4,5,6],1365x768[4,5,6], 1365x1024[4,5,6], 1366x768[4,5,6], 1400x900[4,5,6], 1400x1050[4,5], 1600x1200[4,5], 1680x1050[4,5], 1920x1200[4,5], 480p[5], 576p[4], 720p[3,6], 1080p[1,2,3,4,5], 1080i[4,5] 1 = at 24 Hz, 2= at 25 Hz, 3 = at 30 Hz, 4 = at 50 Hz, 5 = 60 Hz, 6 = 75 Hz; or automatically selected resolution based on display EDID data; or locked to the input's resolution and refresh rate
Formats	RGB and YCbCr digital video

SYNC

Input type	RGBHV
Output type	DVI-D or HDMI digital video
Standards	SMPTE 259M, SMPTE 929, SMPTE 372, DVI 1.0, HDMI 1.2
Input level	0 V to 5.0 Vp-p
Input impedance	1k ohms

CONTROL/REMOTE— DECODER

Serial control ports	1 RS-232, 3.5 mm captive screw connector, 3 pole (rear panel) 1 RS-232, 2.5 mm mini stereo jack (front panel)
Baud rate and protocol	9600 baud, 8 data bits, 1 stop bit, no parity
Program control	Extron's control/configuration program for Windows® Extron's Simple Instruction Set (SIS™)

GENERAL

External power supply	100 VAC to 240 VAC, 50/60 Hz, external; to 12 VDC, 2 A, regulated
Power input requirements	12 VDC, 0.8 A
Temperature/humidity	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, noncondensing Operating +32° to +122°F (0° to +50°C) / 10% to 90%, noncondensing
Cooling	Convection, no vents
Mounting	
Rack mount	Yes, with optional 1U, 9.5" deep rack shelf (RSU 129, #60-190-01; RSB 129, 60-604-01); or 1U, 6" deep rack shelf (RSU 126, #60-190-10; RSB 126, 60-604-10)
Furniture mount	Furniture or wall mountable using optional MBU 125 mounting kit, part #70-077-01
Enclosure type	Metal
Enclosure dimensions	1.0 H x 8.75" W x 6.0" D (half rack wide) (2.5 cm H x 22.2 cm W x 15.2 cm D) (Depth excludes connectors and knobs.)
Product weight	1.6 lbs (0.7 kg)
Shipping weight	4 lbs (2 kg)
Vibration	ISTA/NSTA 1A in carton (International Safe Transit Association)
Regulatory compliance	
Safety	CE, CUL, C-tick, UL
EMI/EMC	CE, C-tick, FCC Class A, ICES, VCCI
Environmental	Complies with the appropriate requirements of WEEE.
MTBF	30,000 hours
Warranty	3 years parts and labor

NOTE: All nominal levels are at ±10%.

Model	Version Description	Part Number
RGB-HDMI 300	RGB to HDMI Scaler	60-907-01

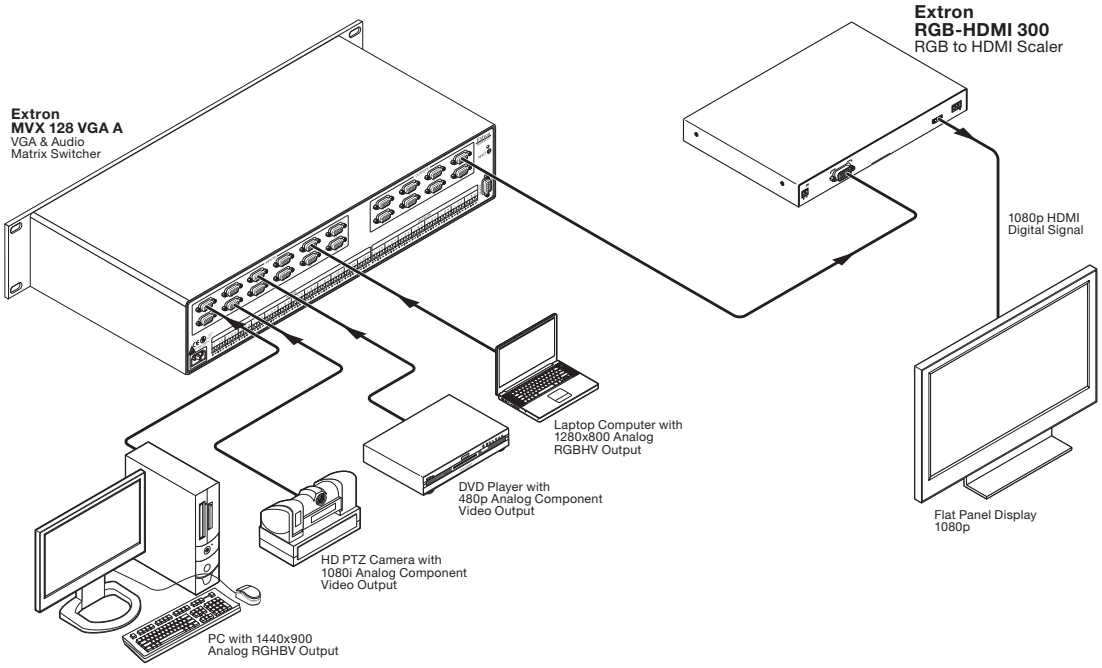
Optional Accessories

HDMI M-M Series High Performance HDMI Male to Male Cables

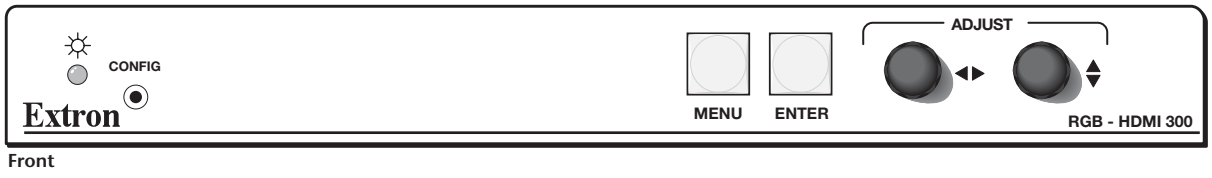
HDMI M-M/3	3' (90 cm)	26-650-03
HDMI M-M/6	6' (1.8 m)	26-650-06
HDMI M-M/12	12' (3.6 m)	26-650-12
MBU 125	Under-Desk Mount Kit	70-077-01

HDMI M-M/12

APPLICATION DIAGRAM



PANEL DRAWING



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