

Extron® Electronics

INTERFACING, SWITCHING AND DISTRIBUTION

300 MHz (-3dB) video bandwidth

15 – 130 kHz compatibility

Advanced Digital Sync Processing (ADSP™)

Active audio interfacing

Level/peaking control

Horizontal & vertical centering
Simultaneous
RGBS/HV output

RGB output

Female 15-pin HD input

Buffered 15-pin HD local monitor output

Optional mounting kits

International Internal power supply



RGB 164xi

RGB 160xi, 164xi & 168xi UNIVERSAL INTERFACES WITH AUDIO & ADSP™



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DESCRIPTION



RGB 160xi

The Extron RGB 160xi, RGB 164xi, and RGB 168xi are universal, analog computer-video interfaces with 15-pin HD input, 15-130 kHz scanning range, and 300 MHz (-3dB) of RGB bandwidth. All three are compatible with nearly every computer and display signal, including VGA, VXGA, Mac, Sun, and SGI, and they output simultaneous composite and separate horizontal/vertical sync. Sync on green is also available with the flip of a switch. Sync processing is accomplished through Extron's Advanced Digital Sync Processing™ or ADSP™ technology. ADSP provides all-digital processing of sync signals, eliminating compatibility issues encountered when using analog sync processing with digital display devices (DLP, LCD, plasma, etc.).

In addition to these common features, the RGB 164xi adds the convenience of two sets of six BNC outputs, which allows for multiple displays without the need for a distribution amplifier. The RGB 168xi provides Architectural Adapter Plate (AAP) openings which enable compatibility with the many optional Extron AAPs and a clean professional installation. All three interfaces include a female 15-pin HD input and buffered local monitor output. Buffered local monitor output allows for the connection of the computer's local monitor without any reduction of signal quality or integrity. Each model also incorporates active PC audio interfacing, an internal power supply, and image centering features.

Optional mounting kits give these interfaces added flexibility. The under-desk mounting kit allows each interface to be mounted under any flat surface, such as a desk, podium, table, cabinet, etc. The rack mount/through-desk mounting kit makes inputs and centering controls easily accessible, while the power and output cables remain hidden away behind the rack or the mounting surface.



RGB 168xi

FEATURES

- **High performance compatibility** – Provides a 15-130 kHz horizontal frequency range and 300 MHz (-3dB) of RGB video bandwidth.
- **Advanced Digital Sync Processing (ADSP)** – All-digital process ensures flawless operation with any LCD, DLP, plasma, or other digital display device.
- **Horizontal & vertical centering** – Allows the input signal to be shifted on the presentation device for a properly centered image.
- **Level/Peaking** – Three level/peaking modes are available to compensate for fuzzy images and streaking associated with cable resistance and system bandwidth losses.
- **Balanced to unbalanced stereo audio conversion** – Unbalanced computer-generated stereo audio is input via a 3.5 mm mini jack and output as buffered, balanced line-level audio.
- **Simultaneous composite and separate sync output** – Six BNC connectors allow for composite and separate horizontal and vertical sync without switches or other configuration. Sync on green is also available.
- **Termination** – ID bit termination for pins 4 and 11 of its 15-pin HD input, ensuring compatibility with computers which require local monitors to operate.
- **Power & signal detection LEDs** – A two-color LED indicates power and video signal detection, while a second red LED indicates minimum/maximum image shift.
- **International Internal power supply** – Internal, auto-switchable 100-240 VAC 50/60 Hz power supply.
- **Optional mounting kits** – Allow for installation in a rack as well as under and through flat surfaces.
- **Dual Output** – The RGB 164xi offers two RGBS/HV outputs
- **Optional Architectural Adapter Plates (AAP)** – The RGB 168xi has two double space AAPs for signal pass-through connectors.
- **Unswitched AC outlet** – The RGB 168xi offers this outlet to power to power a laptop or other peripheral.

SPECIFICATIONS

Video

Gain	(0.7V p-p) Unity, (0.725V p-p) 50% peaking, (0.75V p-p) 100% peaking
Bandwidth.....	300 MHz (-3dB)

Video input

Number/signal type.....	1 analog RGBHV, RGBS, RGsB, RsGsBs
Connectors	1 15-pin HD female
Minimum/maximum levels ..	Analog— 0.3V to 1.5V p-p with no offset at unity gain
Impedance.....	RGB 160xi, RGB 164xi: 75 ohms RGB 168xi: 75 ohms or Hi Z, switchable (The default is Hi Z.)
Horizontal frequency.....	Autoscan 15 kHz to 130 kHz
Vertical frequency	Autoscan 30 Hz to 120 Hz
Return loss.....	-30dB @ 5 MHz
Maximum DC offset	4.0V

Video output

Number/signal type.....	RGB 160xi, RGB 168xi: 1 analog RGBHV, RGBS, RGsB RGB 164xi: 2 analog RGBHV, RGBS, RGsB
Connectors	RGB 160xi, RGB 168xi: 6 BNC female 1 15-pin HD female local monitor buffered output RGB 164xi: 2 x 6 BNC female 1 15-pin HD female local monitor buffered output
Minimum/maximum levels ..	Analog— 0.7V to 0.75V p-p with 0.70V p-p input
Impedance.....	75 ohms
Return loss.....	-30dB @ 5 MHz

Sync

Input type	RGBHV TTL (±), RGBS TTL (±), RGsB 0.3V (-), RsGsBs 1.3V (-)
Output type.....	RGBHV (±), RGBS(±), RGsB (-)
Input level	2V to 5.5V p-p with ±0.2VDC offset (max.)
Output level	4V to 5V p-p
Input impedance	10 kohms
Output impedance	75 ohms
Max. propagation delay	48 nS
Max. rise/fall time	3.5 nS
Polarity	RGBHV: when RGBHV is input, polarity follows input; otherwise negative RGBS, RGsB: negative

Audio

Gain	Unbalanced 0dB, balanced +6dB
Frequency response	20 Hz to 20 kHz, ±0.05dB
THD + Noise	0.03% @ 1 kHz, 0.3% @ 20 kHz at rated maximum output drive
S/N	>90dB, at the rated maximum output (14dBu), balanced
Stereo channel separation.....	>95dB @ 1 kHz to 20 kHz

Audio input

Number/signal type.....	1 PC level stereo, unbalanced
Connectors	1 3.5 mm stereo jack, 2 channel; tip (L), ring (R), sleeve (ground)
Impedance.....	>10 kohms, DC coupled
Maximum level	+8.5dBu, (unbalanced) at stated %THD+N

Audio output

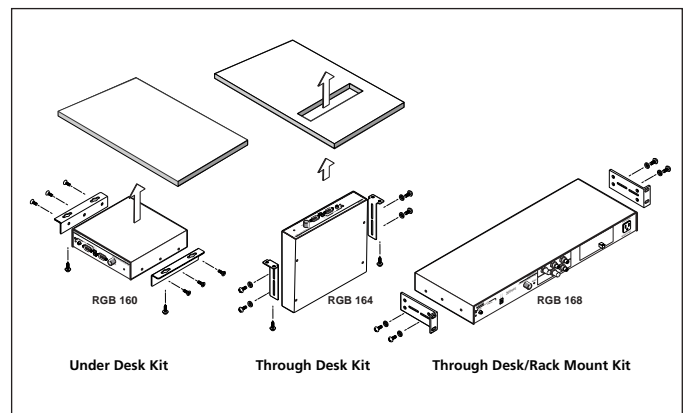
Number/signal type.....	1 stereo (2 channel), balanced/unbalanced
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Connectors	1 3.5 mm captive screw connector, 5 pole
Impedance.....	50 ohms unbalanced, 100 ohms balanced
Gain error	±0.1dB channel to channel
Maximum level (600 ohm) ..	>+14dBm, balanced at stated %THD+N

General

Power.....	100VAC to 240VAC, 50/60 Hz, 15 watts, internal, auto-switchable
MBC power jack	9.0VDC, 150 mA
RGB 160xi, RGB 164xi ..	Operating +32° to +104°F (0° to +40°C) / 10% to 90%, non-condensing
RGB 168xi	Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
Rack mount.....	RGB 160xi, RGB 164xi : Yes, with optional rack shelf #60-190-01 RGB 168xi: Yes, with included kit #70-077-03
Furniture mount	RGB 160xi, RGB 164xi, RGB 168xi: Yes, with optional kit #70-077-01 (under desk) or included kit #70-077-03 (through desk)
Enclosure type	Metal
Enclosure dimensions	
RGB 160xi	1.75" H x 6.4" W x 6.0" D 4.4 cm H x 16.3 cm W x 15.2 cm D (Depth excludes connectors and knobs.)
RGB 164xi	1.75" H x 8.75" W x 6.0" D (1U high, half rack width) 4.4 cm H x 22.2 cm W x 15.2 cm D (Depth excludes connectors and knobs.)
RGB 168xi	1.75" H x 17.5" W x 6.1" D (1U high, full rack width) 4.4 cm H x 44.5 cm W x 15.5 cm D (Depth excludes connectors and knobs. Width excludes rack ears.)
Product weight	RGB 164xi: 1.7 lbs (0.8 kg) RGB 160xi: 1.4 lbs (0.6 kg) RGB 168xi: 3.5 lbs (1.6 kg)
Shipping weight.....	RGB 160xi: 3 lbs (1.4 kg) RGB 164xi: 4 lbs (1.8 kg) RGB 168xi: 7 lbs (3.2 kg)
Listings	UL
Compliances	CE, FCC Class A
Warranty	3 years parts and labor

OPTIONAL MOUNTING BRACKETS



PART NUMBERS

Interfaces:

RGB 160xi	60-378-01
RGB 164xi	60-485-01
RGB 168xi	60-379-01

Mounting kits:

Under-desk mounting kit	70-077-01
Through-desk mounting kit	70-077-02
1U rack shelf	60-190-01

Signal input cables

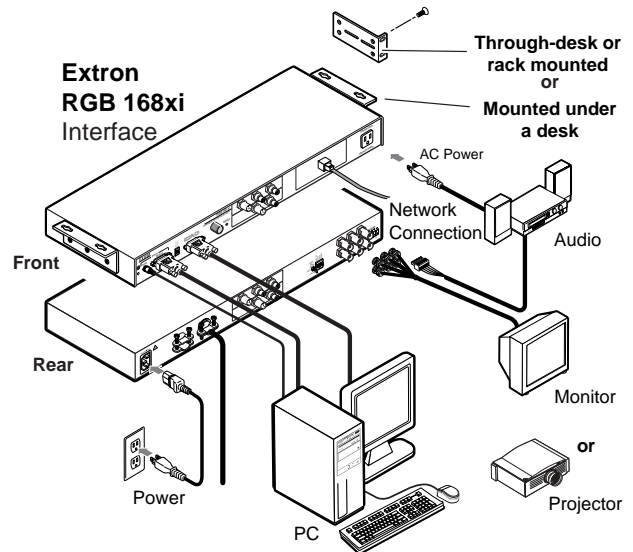
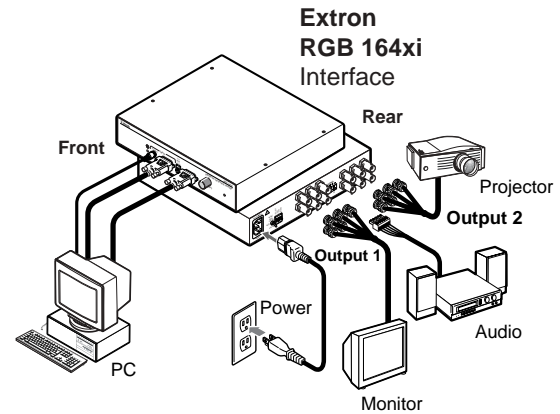
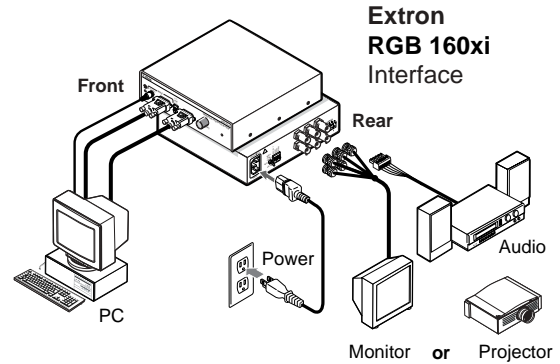
VGAM 6' MHR	26-238-01
VGAM 3' MHRA	26-490-01
VGAM 6' MHRA	26-490-02
VGAM 12' MHRA	26-490-03
VGAM 90 MHRA 6'	26-510-02
Mac 15-pin HD F Adapter kit with Audio	70-156-01
13W3 15-pin HD F Adapter kit with Audio	70-157-01

Architectural Adapter Plates:

A wide variety of cable pass-through Architectural Adapter Plates are available. Contact Extron for a complete list of these plates.

Single space blank	70-090-01
Double space blank	70-090-02

APPLICATION DIAGRAMS



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