

# RGB 203 Rxi & RGB 203 Rxi VTG

UNIVERSAL, THREE INPUT, COMPUTER-VIDEO  
INTERFACE WITH AUDIO AND ADSP™

- 300 MHz (-3dB) RGB video bandwidth
- 15-150 kHz compatibility
- Advanced Digital Sync Processing (ADSP™)
- Digital Sync Validation Processing (DSVP™) via RS-232
- Compatible with VGA—UXGA, Mac, Sun, and SGI computer signals
- Three inputs with switched buffered local monitor output
- Active PC Audio interfacing balanced audio (mono or stereo) output
- Level and peaking control
- Horizontal and vertical centering
- 30 input centering memories for easy setup
- Available with built-in video test generator



The Extron RGB 203 Rxi is a universal, three input, analog computer-video interface with audio. It allows nearly every computer and video signal type to be converted for output to display devices such as monitors, projectors, and plasma display panels. The RGB 203 Rxi VTG also includes a built-in video test generator to aid with system set-up. The RGB 203 Rxi and RGB 203 Rxi VTG are ideal for classrooms, auditoriums, and conference rooms.



## Extron® Electronics

[www.extron.com](http://www.extron.com)

## DESCRIPTION

The Extron **RGB 203 Rxi** computer-video interface includes three female 15-pin HD input connectors and a 15-pin HD buffered local monitor output that can be fixed to input one or shared between all three by switch selection. The Extron **RGB 203 Rxi VTG** also includes a built-in, mini video test generator (VTG). Audio is available on two of the three inputs on 3.5 mm stereo audio jacks. Input selection can be autoswitched or controlled through the front panel, RS-232, or contact closure. Resolution/frequency signal settings can be recalled during switching or for new computer interfacing utilizing 30 memory locations. The RGB 203 Rxi is able to convert computer-generated, unbalanced audio to stereo or mono balanced line-level audio. It is also equipped with Extron's Advanced Digital Sync Processing (ADSP™) to ensure compatibility with digital displays (DLP, LCD, plasma). A Digital Display Sync Processing (DDSP™) DIP switch is also included to bypass sync processing and horizontal and vertical centering.

With a 15-150 kHz scanning range and 300 MHz (-3dB) RGB video bandwidth, the RGB 203 Rxi is compatible with nearly every computer and video signal type, including VGA—UXGA, Mac, Sun, and SGI. Optional adapters for MAC to VGA and SUN/SGI to VGA connection are available. It is housed in a compact, 1U high, half rack width metal enclosure and can be rack or under-desk mounted.

The Extron **RGB 203 Rxi VTG Kit** is designed for interfacing a variety of computers, from laptops to high-end workstations. It is ideal for rental and staging applications that need an interface for computer-video and audio signal processing, as well as projector or monitor set-up. The RGB 203 Rxi VTG Kit features an Extron RGB 203 Rxi VTG interface with a built-in video test generator (VTG) and also includes:

- SRI 200 Scan Rate Indicator – Displays horizontal and vertical scan frequencies on an LCD readout when held up to the glass of the computer's monitor (No input cable required, battery included)
- Two VGAM 6' MHRA input cables included
- MAC Adapter 15-HDM Kit with Audio included
- 13W3 Adapter 15-HDM Kit with Audio included
- 25' BNC-5 Mini HR Cable included
- RGB 203 VTG Kit Case—A briefcase-size carrying case with durable foam cut-outs for all kit components
- Extron "Tweaker" alignment tool
- Extron flashlight



RGB 203 Rxi Kit

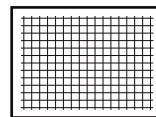
## FEATURES

- **High performance specifications** – A 15-150 kHz horizontal frequency range and 300 MHz of RGB video bandwidth.
- **Buffered local monitor output** – Enables local viewing of the display, maintains signal integrity.
- **Built-in Advanced Digital Sync Processing (ADSP)** – All digital process ensures flawless operation with any LCD, DLP, plasma, or other digital display device.
- **Digital Sync Validation Processing (DSVP)** – Confirms input source is active by scanning sync input for an active signal via RS-232.
- **Horizontal & vertical centering** – Allows the input signal to be shifted on the presentation device for a properly centered image.
- **Level and peaking control** – Variable level/peaking is available to compensate for fuzzy images and streaking associated with cable resistance and system bandwidth losses.
- **Input Memories** – 30 memory locations per input store picture position settings for each new resolution/frequency and can be easily recalled for quick setup.
- **Active PC audio interfacing** – Unbalanced computer-generated audio is input via a 3.5 mm mini jack and output as balanced line-level audio (stereo or mono).
- **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 (DIP switch-selectable).
- **Control** – Switching can be controlled through autoswitching, contact closure, front panel, and RS-232.
- **LCD display** – Indicates signal frequency and resolution for easy troubleshooting.
- **Internal international power supply** – Internal, autoswitchable 100-240 VAC 50/60 Hz power supply with worldwide compatibility.
- **Optional mounting kits** – Allow for installation in a rack as well as under and through flat surfaces.

## Video Test Generator

### (RGB 203 Rxi VTG & RGB 203 Rxi VTG Kit)

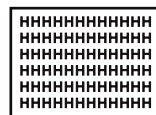
- Built-in video test generator with 16-position rotary switch for selecting VTG output resolution and pattern.
- Four video test patterns (cross-hatch, H-pattern, grayscale, and color bars) for each of the four (VGA, SVGA, XGA, and SGI) resolutions.



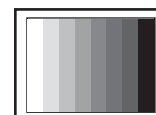
1  
Cross-hatch 24 x 32  
Static, Dynamic, and  
Point Convergence



2  
8 Level Split Grayscale  
Video Level Tracking (Color)  
Video Gain Linearity (Mono)



3  
H Pattern Black on White  
Resolution/High Frequency  
Response  
Bandwidth Response

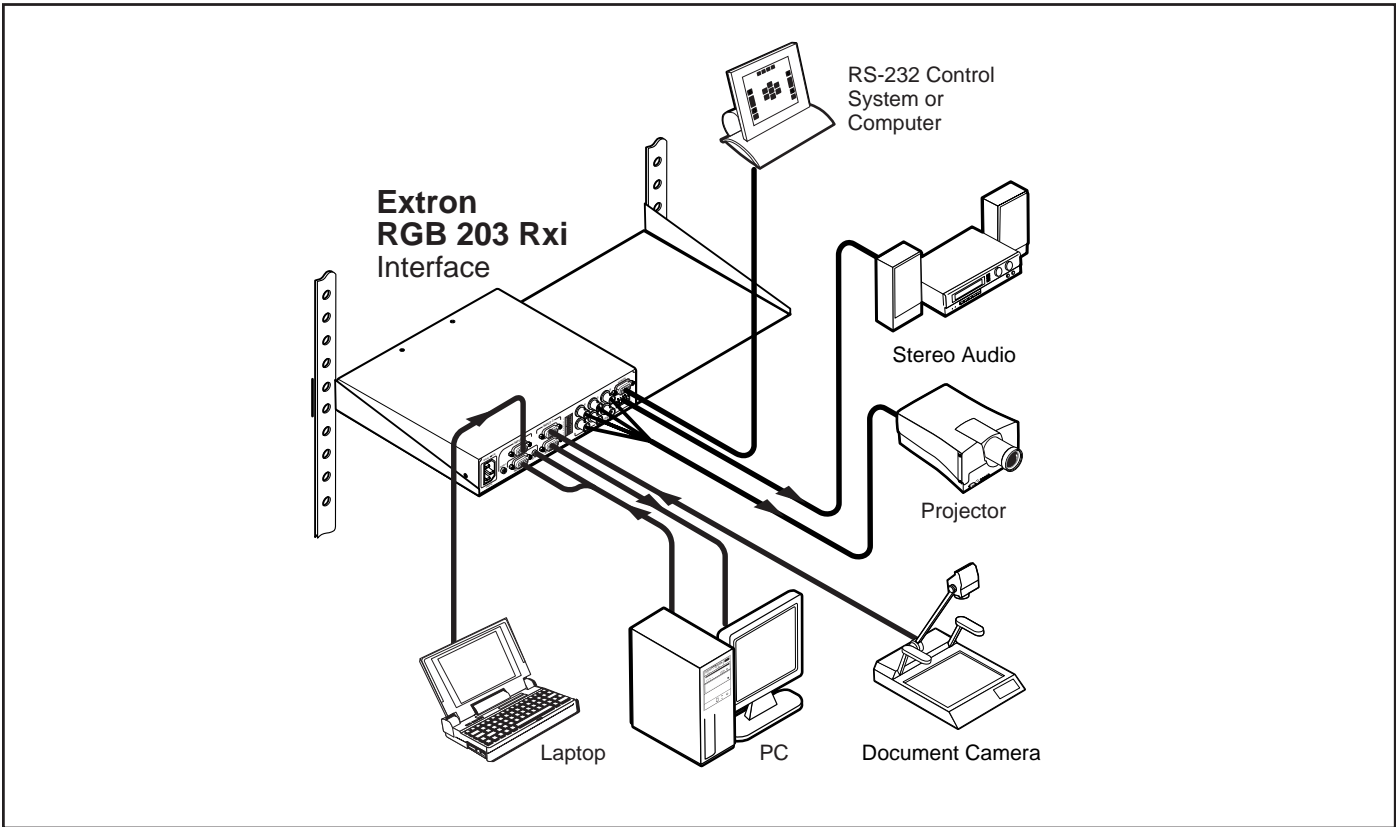


4  
8 Color Bar  
Color Check, Verify Red,  
Green, and Blue Signals

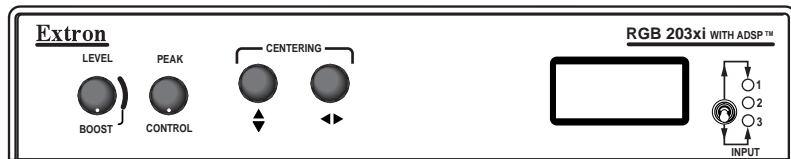
VIDEO	
Routing .....	3 x 1 switcher
Gain .....	0.5V to 1.45V p-p
Bandwidth .....	300 MHz (-3dB)
Rise time .....	1.5 ns
VIDEO INPUT	
Number/signal type.....	3 analog—RGBHV, RGBS, RGsB, RsGsBs
Connectors .....	3 15-pin HD female
Minimum/maximum levels .....	Analog—0.3V to 1.45V p-p with no offset at unity gain
Impedance.....	75 ohms
Horizontal frequency .....	15 kHz to 150 kHz
Vertical frequency .....	40 Hz to 140 Hz
Return loss .....	-30dB @ 5 MHz
Maximum DC offset .....	4V
VIDEO SIGNAL CHARACTERISTICS — RGB 203 RXI VTG ONLY	
Dot clock .....	VGA 25.18 MHz, Mac 30.04 MHz, SVGA 65.04 MHz, SGI 107.4 MHz
Pixel clock accuracy .....	> 99.02%
Scan rate accuracy .....	> 99.03%
Frequency range .....	VGA: 31.475 kHz x 60 Hz, SVGA: 37.879 kHz x 60 Hz, XGA: 48.392 kHz x 60 Hz, SGI: 63.928 kHz x 60 Hz
Rise/fall time .....	2.5 ns / 2.0 ns, measured
VIDEO OUTPUT	
Number/signal type.....	1 analog RGBHV, RGBS, RGsB
Connectors .....	6 BNC female
Minimum/maximum levels .....	0.3V to 1.30V p-p with 0.7V p-p nominal input level
Impedance.....	75 ohms
Return loss .....	-30dB @ 5 MHz
DC offset .....	±5mV maximum with input at 0 offset
SYNC	
Input type .....	RGBHV, RGBS, RGsB, RsGsBs
Output type.....	RGBHV, RGBS, RGsB
Input level .....	2V to 5.5V p-p with ±0.2VDC offset max.
Output level.....	TTL: 4V to 5V p-p
Input impedance .....	510 ohms
Output impedance .....	75 ohms
Max. propagation delay.....	85 ns
Max. rise/fall time .....	2 ns
Polarity .....	RGBHV: tracks polarity (or force negative sync via internal jumper) RGBS, RGsB: negative
AUDIO	
Routing .....	2 x 1 stereo router
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 rated maximum output drive (17dBu), balanced
Crosstalk .....	<-90dB @ 1 kHz, fully loaded
Stereo channel separation .....	>90dB @ 1 kHz to 20 kHz

AUDIO INPUT	
Number/signal type.....	2 PC level stereo, unbalanced
Connectors .....	2 3.5 mm stereo jacks (female) (2 channel); tip (L), ring (R), sleeve (ground)
Impedance.....	>10 kohms, unbalanced, DC coupled
Maximum level .....	+8.5dBu, (balanced or unbalanced) at stated %THD+N
AUDIO OUTPUT	
Number/signal type.....	1 buffered stereo (2 channel), balanced/unbalanced
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 (Hi-Z) .....	>+14dBu, balanced at stated %THD+N
Maximum level (600 ohm) .....	>+8.5dBm, balanced at stated %THD+N
NOTE: 0dBu = 0.775 volts (RMS).	
CONTROL/REMOTE — INTERFACE	
Serial control port .....	RS-232, 9-pin female D connector (also used for contact closure)
Baud rate and protocol .....	9600, 8-bit, 1 stop bit, no parity
Serial control pin configuration ..	2 = TX, 3 = RX, 5 = GND
Contact closure .....	1 9-pin female D connector (also used for RS-232)
Contact closure pin configuration.....	1 = input #1, 4 = input #2, 6 = input #3 5 = GND
Program control.....	Extron's control program for Windows Extron's Simple Instruction Set™ – SIS™
GENERAL	
Input power.....	100VAC to 240VAC, 50/60 Hz, 18 watts, internal, auto switchable
Rack mount .....	Yes, with an optional rack shelf (part #60-190-01)
Furniture mount .....	Yes, with an optional under-desk mounting kit (part #70-077-01) or through-desk mounting kit (part #70-077-02)
Enclosure type .....	Metal, vented
Enclosure dimensions.....	1.75" H x 8.75" W x 8.0" D (1U high, half rack width) 4.4 cm H x 22.2 cm W x 20.3 cm D with rear BNCs: D = 8.4" (21.3 cm) (Depth excludes knobs.)
Product weight .....	RGB 203 Rxi: 2.2 lbs (1.0 kg) RGB 203 Rxi VTG: 2.3 lbs (1.0 kg)
Shipping weight .....	5 lbs (2.3 kg)
Vibration .....	ISTA/NSTA 1A in carton (International Safe Transit Association)
Listings .....	UL, CUL
Compliances .....	CE, FCC Class A, VCCI, AS/NZS, ICES
<b>Model</b>	<b>Part Number</b>
RGB 203 Rxi.....	60-508-01
RGB 203 Rxi VTG.....	60-509-01
RGB 203 Rxi VTG Kit .....	42-055-01

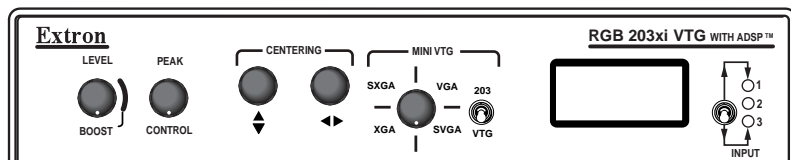
# APPLICATION DIAGRAM



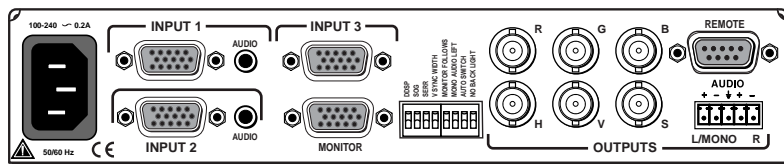
## PANEL DRAWINGS



RGB 203 Rx (Front)



RGB 203 Rx VTG (Front)



Back



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