

## Specifications

### Quantum® Ultra Connect 84 and 128

#### TRUE 4K

Max. 4K Capabilities		
Resolution and Refresh Rate	Chroma Sampling	Max. Bit Depth per Color
4096 x 2160 at 30 Hz	4:4:4	8 bit
3840 x 2160 at 30 Hz		
4096 x 2160 at 60 Hz		
3840 x 2160 at 60 Hz		

Frame rate <sup>1</sup> .....	24, 25, 30, 50, or 60 fps
Chroma sampling <sup>1</sup> .....	4:4:4 or 4:2:2
Color bit depth <sup>1</sup> .....	8 or 10 bits per color
Signal type .....	DVI 1.0, HDMI 1.4, and HDCP 1.4
Max. video data rate .....	10.2 Gbps (3.4 per color) per connection

**NOTE:** <sup>1</sup>Subject to the maximum data rate limit. Use our calculator at [www.extron.com/4Kdata rate](http://www.extron.com/4Kdata rate) to determine video parameters supported by this data rate.

**NOTE:** This product requires two or four parallel connections to achieve 4K at 50 or 60 fps.

#### Video input

Number/signal type

Quantum Ultra Connect 84.....	8 HDMI/DVI (HDCP compliant)
Quantum Ultra Connect 128....	12 HDMI/DVI (HDCP compliant)

Connectors

Quantum Ultra Connect 84.....	8 female HDMI
Quantum Ultra Connect 128....	12 female HDMI

Maximum pixel clock..... 165 MHz (connectors 1 and 3)  
300 MHz (connectors 2 and 4)

Horizontal frequency ..... 15 kHz to 100 kHz

Vertical frequency..... 24 Hz to 75 Hz

Resolution range..... 640x480 to 3840x2400\*, 480i, 576i, 480p, 576p, 720p, 1080i, 1080p  
2048x1080, 4096x2160\*

\*4K resolutions are supported up to 30 Hz refresh rate. 4K at 60 Hz is supported using two or four parallel connections.

**NOTE:** Pixel clocks up to 300 MHz are supported on connectors 2 and 4 only.

Formats..... RGB and YCbCr digital video

Standards..... DVI 1.0, HDMI 1.4, HDCP 1.4

#### Video processing

Digital pixel data bit depth..... 8, 10, or 12 bits per channel

Colors..... 1.07 billion (10-bit processing with full 4:4:4 sampling)

## Video output

Number/signal type	
Quantum Ultra Connect 84.....	4 HDMI/DVI (HDCP compliant)
Quantum Ultra Connect 128....	8 HDMI/DVI (HDCP compliant)
Connectors	
Quantum Ultra Connect 84.....	4 female HDMI
Quantum Ultra Connect 128....	8 female HDMI
Peripheral device power.....	250 mA per output
Vertical frequency.....	23.98 Hz, 24 Hz, 25 Hz, 29.97 Hz, 30 Hz, 50 Hz, 59.94 Hz, 60 Hz
Scaled resolutions.....	1024x768, 1280x768, 1280x800, 1280x1024, 1360x768, 1366x768, 1440x900, 1400x1050, 1680x1050, 1600x1200, 1920x1200, 2048x1200, 2048x1536*, 2560x1080*, 2560x1440*, 2560x1600*, 3840x2400*, 4096x2400**, CUSTOM
	720p, 1080p, 2048x1080, 1920x2160, 2048x2160, 3840x2160*, 4096x2160*
	*Supported on connectors 2 and 4 only.
	**Requires 4 parallel connections.
Standards .....	DVI 1.0, HDMI 1.4, HDCP 1.4

## Communication – control

Serial control port.....	1 RS-232 on 3 pole captive screw connector on rear panel
Baud rate and protocol .....	9600, 8-bit, 1 stop bit, no parity (default)
Pin configuration .....	1 = Tx, 2 = Rx, 3 = ground
Ethernet ports .....	2 female RJ-45 connectors
Ethernet data rate .....	10/100/1000Base-T, half/full duplex with autodetect
Ethernet protocols .....	ARP, DHCP, HTTP, ICMP (ping), SMTP, TCP/IP, Telnet
Ethernet default settings .....	Link speed and duplex level = autodetected LAN A IP address = 192.168.254.254 LAN B IP address = 192.168.1.254 Subnet mask = 255.255.255.0 Gateway = 0.0.0.0 DHCP = Off
USB control ports .....	1 female USB mini B on rear panel
Program control.....	Extron Videowall Configuration Software (VCS) Extron Simple Instruction Set (SIS™) Telnet

## Communication – setup

Number/signal type.....	1 HDMI
Connector.....	1 female HDMI
Vertical frequency.....	24 Hz to 60 Hz
Resolutions .....	640x480 to 1920x1200
USB control ports .....	3 USB Type A connectors
USB standards .....	USB 2.0, USB 1.1, USB 1.0 compatible
USB data rates .....	Low speed (1.5 Mbps), full speed (12 Mbps)

## General

Power supply.....	Internal 100-240 VAC, 50-60 Hz
Power consumption.....	TBD
Temperature/humidity .....	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 85%, noncondensing Operating: +35 to +95 °F (5 to +35 °C) / 10% to 85%, noncondensing
Cooling .....	Fans, air flows from right to left (as viewed from the front panel).
Thermal dissipation.....	TBD
Rack mount .....	Yes

## Specifications • Quantum Ultra Connect 84 and 128 (Continued)

Enclosure type .....	Metal
Enclosure dimensions .....	5.25" H x 17.5" W x 19" D (3U high, full rack wide) (133 mm H x 445 mm W x 483 mm D) (Depth excludes connectors. Width excludes built-in rack ears.)
Product weight .....	TBD
Regulatory compliance.....	TBD
Product warranty .....	3 years parts and labor

**NOTE:** All nominal levels are at  $\pm 10\%$ .

**NOTE:** Specifications are subject to change without notice.

**NOTE:** Shipping weights and dimensions are available at [www.extron.com](http://www.extron.com).

4740-D1