

Orion DisplayPort Xtender

Extend DP/USB over CATx or Fiber



Photo showing dual redundant CATx DisplayPort chassis

Orion DisplayPort Xtender - Product Introduction

The **Orion DisplayPort Xtender** is a Transmitter/Receiver Kit available with either CATx or Single Mode Fiber link interface. The Transmitter (or CPU) unit connects directly to a PC/Server or host device with a DisplayPort video output. USB keyboard and mouse operation is included with the standard kit.

At the remote user end of the link, connect a USB keyboard and mouse and a DisplayPort monitor directly to the Receiver unit. High quality DisplayPort video and digital audio signals will transmit end-to-end over a single CATx or duplex fiber cable link.

Orion DisplayPort Xtender

- The standard product includes a single head DisplayPort and USB-HID for keyboard and mouse. Additional card modules can be added to the chassis as required, including USB-HID, USB2.0, analog and digital audio, PS2 and serial.
- Modular chassis available include, 2-card, 4-card, 6-card and 21-card chassis with redundant PSU if required.
- By default, the Transmitter unit sends the default DDC information to the host CPU/Server, on power-up. If required, the DDC data from the remote monitor can be downloaded to the Transmitter unit.
- Command Mode which is operated via the USB keyboard, can be used to change the default "hot-key" settings.
- USB-HID ghosting enables keyboard and mouse descriptors to be stored in the Orion Xtender. This prevents the repeated enumeration of keyboard and mouse by the host computer system.
- The Configuration File, containing device and video information, can be accessed via the Mini-USB service port.
- The parallel redundancy option enables two remote users to access the same host CPU/Server.

- Extend DisplayPort over CATx (400ft/140m) or Fiber (10,000ft/10km) with no loss of video quality.
- USB keyboard and mouse is included as standard with this high performance KVM extender.
- Brilliantly clear real-time video quality including 1920x1200, full HD and 2K/4K resolutions.
- Digital audio quality via DisplayPort transmission.
- DDC data provided from the internal table, or downloadable from the connected monitor.
- Many options, including transparent USB2.0, analog and digital audio, serial, touchscreen.

Orion DisplayPort Xtender - Product Features

High Performance Digital Video Quality

The **Orion DisplayPort Xtender** provides high quality, near lossless DisplayPort single-link and dual-link digital video and audio clarity. Video resolutions up to 1920x1200@60Hz, HD video to 1080p, 3D and 2K/4K-HD video to 4096x2160 are all supported. The single-link data rate is limited to 165MPixels/s at 24-bit. The Dual-link data rate is limited to 330MPixels/s at 24 bit and resolutions of 2560x2048/60Hz, or 4096x2160/30Hz

USB Support

The **Orion DisplayPort Xtender** includes support for up to two USB-HID devices. A USB Hub can be added, but the maximum number of simultaneously supported USB-HID devices is two. The Xtender is compatible with most 2-button, 3-button and scroll mice, and also most USB keyboards are supported. For higher USB speeds, use one of the two USB2.0 option cards. USB2.0 (480Mbps) supports all USB2.0 devices and requires one additional link cable. Embedded USB2.0 (12Mbps) is transmitted over the included link cable.

Interconnect Link Cable

The interconnect cable can be either CATx or Fiber cable with LC-type connectors. CATx cable is the same as specified for Gigabit Ethernet (1000Base-T), 24AWG, solid core. CAT5e or better cable is recommended. Fiber cable can be Single-Mode or Multi-Mode with LC connectors. The interconnect link cable cannot be routed across an active network.



TX - DisplayPort Extender
Fiber Link with USB-HID











RX - DisplayPort Extender
Fiber Link with USB-HID

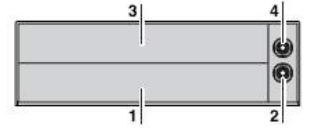
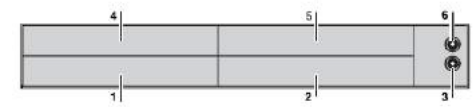

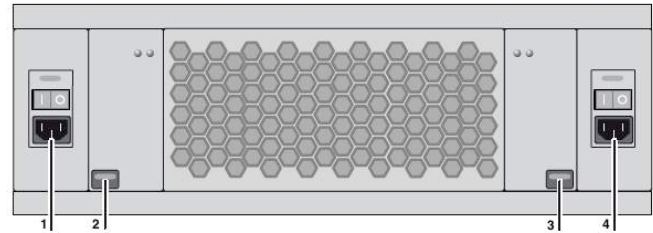
Parallel User Operation.

There is an optional Transmitter unit with redundant (dual) CATx and Fiber connectors. It is possible to configure two Receiver units to compete for control of the redundant Transmitter unit.

Standard Card Configurations (Check with Rose Electronics for a full listing of all Orion-DisplayPort card options).

Transmitter Unit	Receiver Unit
 CATx, USB-B, DisplayPort	 CATx, USB-A (2), DisplayPort
 Fiber, USB-B, DisplayPort	 Fiber, USB-A (2), DisplayPort
 Dual CATx, USB-B, DisplayPort	 Dual CATx, USB-A (2), DisplayPort
 Dual Fiber, USB-B, DisplayPort	 Dual Fiber, USB-A (2), DisplayPort

Standard Chassis Configurations

	1/3 = card slots, 2 = +5VDC, 4 = Redundant +5VDC
	1/2/4/5 = card slots. 3 = +5VDC. 6 = Redundant +5VDC
	1/2/3/6/7/8 = card slots. 4 = IEC. 5 = +5VDC.
	1/4 = IEC power. 2/3 = Locking for power

Specifications

Physical Dimensions (Chassis size) W x D x H	2-card. 145 x 147 x 41 mm (5.7" x 5.8" x 1.7") 4-card. 293 x 147 x 41 mm (11.5" x 5.8" x 1.7") 6-card. 442 x 147 x 41 mm (17.4" x 5.8" x 1.7") 21-card. 482 x 462 x 176 mm (19" x 18.2" x 6.9")	
Weight	2-6 card chassis. 0.9 - 3.1lbs (0.4 - 1.4Kg) 21-card chassis. 22.1lbs (10.0Kg)	
Connectors:	Transmitter	Receiver
Video Interface	DisplayPort x1	DisplayPort x 1
USB Interface	USB-B x1	USB-A (HID x 2)
Service Port	Mini USB	Mini USB
Interconnect Port	RJ45 or dual Fiber-LC	RJ45 or dual Fiber -LC
Optional Cards:	Transmitter	Receiver
Dual Port Link Cable	RJ45 x2 or Fiber x2	RJ45 x2 or Fiber x2
Analog Audio/Serial	3.5mm x2 + DB9(F)	3.5mm x2 + DB9(M)
Digital Audio	RCA, Mini-XLR, Toslink	RCA, Mini-XLR, Toslink
USB2.0	USB-B x1	USB-A x2
PS2	PS2 x2 or 2xIN/2xOut	PS2 x2
Video Resolutions	1920 x 1200/60Hz, (HD) 1080p, 2K (2048x1152) 2560x2048/60Hz, 4096x2160/30Hz	
Pixel Clock Speed	Single Link: 165 MPixels/sec and 24-bit Dual Link: 330MPixels/sec and 24 bit	
LED Status	Link failure, Link Status, Video, USB	
USB	<ul style="list-style-type: none"> - HID Output 100mA each - embedded Output 500mA each, full speed 30Mbps - USB2.0 Output 500mA each, high speed 480Mbps 	
CATx cable length	400ft (140 meters), CAT5e or better, 1000BASE-T, 24-AWG, EIA/TIA-568-B	
Fiber cable length (Duplex LC Type)	Utilizes Gigabyte SFP's with LC connector Multi-mode 62.5µm 650ft (200m) Multi-mode 50µm 1300ft (400m) Multi-mode 50µm OM3 3280ft (1000m) Single-mode 9µm 32800ft (10km)	
Analog Audio	2x 3.5mm stereo audio jacks, line level	
Digital Audio	Unidirectional, RCS, Mini-XLR, Toslink	
Serial (DB9M)	115,200bps, TX/RX, RTS/CTS/DTR/DSR RS422	
Power	<ul style="list-style-type: none"> - 2 card 100-240VAC, 50/60Hz, +5V/5A - 4 card 100-240VAC, 50/60Hz, +5V/5A - 6 card 100-240VAC, 47/63Hz, +5V/8A - 21 card 100-240VAC, 50/60Hz (x 2) 	
Operating Temps	41°F to 113°F (5 °C to 45 °C)	
Rel. Humidity	80% non-condensing	
Product Approvals	FCC-15 Class A, CE, WEEE, RoHS/RoHS-2	

Part Numbers (contact Rose for full part number listing)

OT2-SLDTXUDP1	CATx Transmitter, DisplayPort, USB-HID
OR2-SRDTXUDP1	CATx Receiver, DisplayPort, USB-HID
OT2-SLDFSUDP1	SM Fiber Transmitter, DisplayPort, USB-HID
OR2-SRDFSUDP1	SM Fiber Receiver, DisplayPort, USB-HID
/1T	Add USB2.0 (480Mbps) to part number
/1E	Add embedded USB2.0 (12Mbps)
/1AS	Add Analog Audio/Serial to part number
RM-BR3DV4/19	Rackmount shelf. 19" mount, 1U