

Orion XR Cross Repeater

Converts and extends CATx/Fiber cables



- Provides extension and format conversion for digital signals on CATx and Fiber cable
- Cross converts between CATx and Fiber cables
- Bi-directional dataports are auto-configurable as either input or output ports
- Use as a digital signal repeater to double the maximum allowable cable length
- Use to create a fiber bridge between two buildings, each with CATx cabling systems
- No configuration required, plug-and-play

XR Cross Repeater - Product Features

The **Orion XR Cross Repeater** is a versatile signal transmission product that can be used to extend the distance of a digital CATx or Fiber cable, or to cross convert between CATx and Fiber, or vice-versa.

When used as a KVM cable extender, the product functions as a repeater to double the installed CATx or Fiber cable distance.

For cross connection between CATx and Fiber cables, the **Orion XR Cross Repeater** features bi-directional dataports, individually configurable as either inputs or outputs. No additional configuration of the product is required. Electrical and optical conversion is assured.

- CATx only and Fiber only models available
- Mixed CATx and Fiber models available
- Single port and dual port models available
- Each card installs into an Orion extender chassis, with 2, 4 and 6 card options available – there is also a 21 card option for high density cross repeater applications
- Bi-directional dataports, configurable as either input or output ports
- High quality signal processing and amplification ensures no signal degradation or transmission artifacts



CATx-to-Fiber converter card

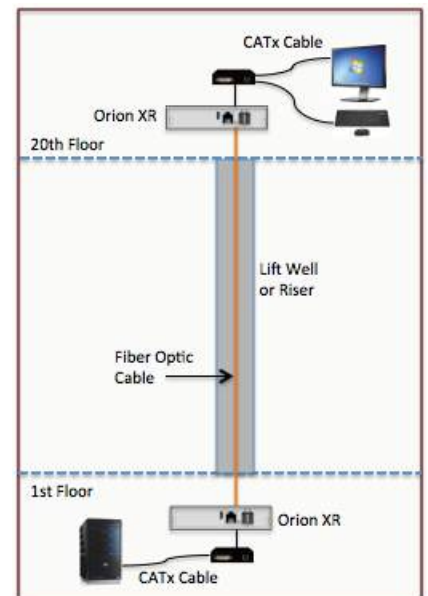
XR Cross Repeater - Product Introduction

All KVM extension and KVM switch products have a maximum recommended cable length beyond which the transmission signal either begins to degrade, or else fails intermittently.

In situations where an enterprise system or a system expansion requires products in adjacent buildings to be interconnected, standard CATx cabling cannot be used to bridge the gap, however, the properties of fiber optic cable make it ideal for inter-building cable connections.

In both cases, the **Orion XR Cross Repeater** can be used to resolve these CATx and Fiber cabling challenges.

The inter-changeability between CATx and Fiber cable, and the use of bi-directional dataports with single and dual port options makes the **Orion XR Cross Repeater** an invaluable accessory product for digital cabling applications. No matter what data is being transmitted via the cable, whether it's video, USB, audio, or serial, the **Orion XR Cross Repeater** provides a full electrical and optical conversion solution.



The Fiber modules are Gigabit SFP SingleMode with LC connectors. The Fiber cable can be either SingleMode or Multimode, but the connected fiber optic hardware must have SingleMode SFP's.

Orion XR Cross Repeater Modules

Each card occupies 1-card slot in a chassis. For example, a 2-card chassis with 2 dual-port CATx cards provides a total of 4 CATx repeater or cross repeater connections. The following card modules are available.



CATx: Single Port. CATx IN, CATx OUT



CATx: Dual Port. CATx IN, CATx OUT



Fiber: Single Port. Fiber IN, Fiber OUT



Fiber: Dual Port. Fiber IN, Fiber OUT



CATx / Fiber: Single Port. CATx or Fiber IN/OUT



CATx / Fiber: Dual Port. CATx or Fiber IN/OUT

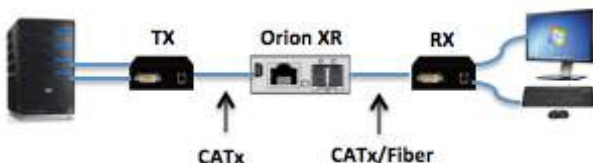


Diagram 1: Cable repeater for KVM extension

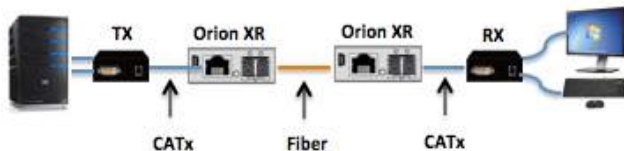


Diagram 2: Fiber long distance extension, CATx to Fiber

Specifications

Chassis Dimensions (with single PSU) (W x D x H)	2-card	5.7x5.8x1.7" (145x147x41 mm)
	4-Card	11.5x5.8x1.7" (221x147x41 mm)
	6-Card	17.4x5.8x1.7" (442x147x41 mm)
Power Required For chassis enclosure - per card, Max 300mA	2-card	100-240V, 50-60Hz, 5V/5A
	4-Card	100-240V, 50-60Hz, 5V/5A
	6-Card	100-240V, 50-60Hz, 5V/8A
Connectors	1 x Mini USB Type B RJ45 (EIA/TIA 568-B, 1000Base-T) Fiber SFP SingleMode Type LC	
Cable Requirements (Interconnect Cable)	CAT5e or better, shielded solid core, AWG 24 EIA/TIA 568-B, 1000Base-T, Use ferrites at each end of the cable	
	Fiber (Connector LC Type) Multimode 50µm, two fibers Multimode 62.5µm, two fibers SingleMode 9µm, two fibers	
Cable Distances	CATx 24 AWG - 400ft (140 meters) CATx 26/28 AWG - 200ft (70 meters) Fiber MM 62.5µm, 650ft (200 meters) Fiber MM 50µm, 1,300ft (400 meters) Fiber MM 50µm (OM3), 3,280ft (1000 meters) Fiber SM 9µm, 32,800ft (10Km)	
LED's	1 + 4: Failure LED (Green) 2 + 5: Status LED (Green) 3: Device Status (Multicolour)	
Operating Temp	41°F to 113°F (5 °C to 45 °C)	
Storage Temp	-13°F to 140°F (-25 °C to 60 °C)	
Relative Humidity	Max 80% non-condensing	
Compliance and Approvals	FCC Part 15 Class A, IEC, EN, UL, CAN/CSA TUV, WEEE, RoHS, RoHS2	

Notes:

- A point-to-point connection is required. Operation with several patch cables is possible but will decrease maximum distance. Routing over an active network component, such as an Ethernet Hub, Router or Matrix, is not allowed.
- Avoid routing CATx cables next to power cables.
- If the site has 3-phase AC power, ensure all connected hardware is on the same phase.

The Orion XR Cross Repeater is fully compatible with Rose Orion KVM Switch, Orion Xtender and Rose CrystalView DVI and Fiber extension products.

Part Numbers (contact Rose for full part number listing)

OX2-CNV-01CC	CATx to CATx, single port, 2-card chassis
OX2-CNV-01SC	CATx to Fiber, single port, 2-card chassis
OX2-CNV-01SS	Fiber to Fiber, single port, 2-card chassis
OX2-CNV-02CC	CATx to CATx, dual port, 2-card chassis
OX2-CNV-02SC	CATx to Fiber, dual port, 2-card chassis
OX2-CNV-02FF	Fiber to Fiber, dual port, 2-card chassis

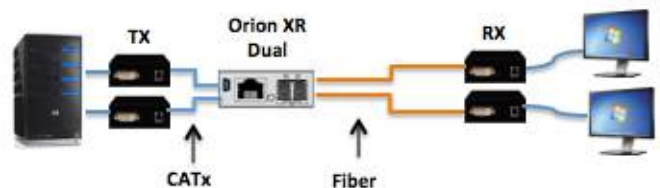


Diagram 3: Dual Video Cross Conversion, CATx to Fiber