

Bottom switch has 80 ports in a 2U chassis with 40 CATx and 40 fiber ports. Top switch has 40 CATx ports in a 1U chassis. Two ports in the middle are for management. Not shown here are other sizes such as an 8-port 1U switch or 160-port 4U switch.

Features and Benefits

- A compact 1U, 2U, or 4U chassis with 8 to 160 ports and CATx, fiber, or both interfaces
- Each port becomes an input or output by connecting a transmitter or receiver unit for distances up to 100 m on CATx or 10 km on fiber
- Transmitters send source computer video, USB, audio, or other data on standard CATx/fiber media connected to Orion's link port
- Receivers convert Orion CATx or fiber signals into data for video displays and USB devices, such as keyboards and mice, making a user console
- Visually lossless video for a variety of formats, including HDMI and DisplayPort up to 4K60 resolution, and VGA and DVI up to 1080p
- Intuitive OSD with hot-key selection at each user console for ease of use and simplified switching
- Instant switching of devices with same resolution for efficient and reliable operation
- IP management via 2x RJ45 gigabit Ethernet control ports, with a comprehensive API
- 10G Matrix Grid feature for adding more ports by interconnecting Orion switches together
- Java based tool for configuration and management of switch and connected devices
- Redundant power supply is standard
- Advanced features include redundant channel, SNMPv3, and LDAPS

Product Overview

The Orion FX KVM Switch is a comprehensive product family for controlling access to computing resources. Orion XTender transmitter and receiver units connect to the FX switch. They are required to convert the native video, audio, and USB signals to CATx or fiber.

Switch ports are very flexible since they can be input or output. A port becomes an input by attaching a transmitter or an output by attaching a receiver.

The transmitter encodes computer video with a visually lossless and low latency algorithm. The video, USB, or other signals are packetized and sent on CATx or fiber media to the destination port as selected by the on-screen display or other means. The receiver then decodes the signal into its video, audio, and USB components to displays and peripherals.

DisplayPort and HDMI up to 4K60, and DVI and VGA up to 1080p deliver excellent video quality. USB devices such as keyboard, mouse, and touchscreen, USB 2.0 devices, serial RS232/RS422, and analog, digital or balanced audio are supported.

Orion FX units can be cascaded together using the Matrix Grid feature. You can distribute the switches for expansion and reduced and simplified wiring.

Read further to discover the extensive range of features that makes the Orion FX the premier product for professional KVM applications.

Applications The Orion FX is suitable for any application requiring centralized digital KVM matrix operation with either single head or varied video formats, and the integration of different peripheral devices.

Common applications include industrial control desks, broadcast studios, factory floor automation, AV distribution, outdoor broadcast vans, concert and theatre venues, medical imaging, military applications, and many others.

System description The Orion FX matrix switching system with its compact 1, 2, or 4RU size and up to 160 Flex-Ports is designed to support small to midsize applications as well as larger enterprise systems. Supporting both 2K60 and 4K60 video, the Orion FX can employ either 1G or 3G link speed within a chassis, using CATx and fiber interfaces for host and peripheral device connections. For fiber 3G speeds, single-mode fiber cabling must be used.

Several chassis designs allow for both CATx and fiber links in the same switch, to support both intermediate and longer extension distances.

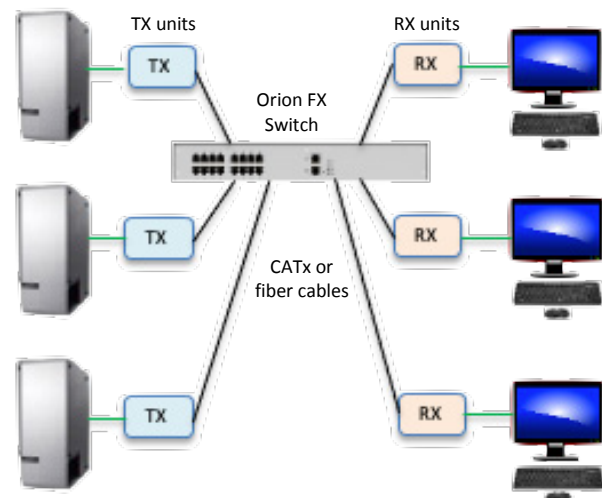
Automatic setup When an Orion XT transmitter or receiver is connected to an Orion FX switch, the internal control software recognizes and automatically configures the connection port as either a CPU or console device. This Flex-Port technology frees system installers from pre-configuring ports as inputs or outputs. The system also supports instant and artifact free switching between sources with the same resolution, reducing eye strain caused by the video tearing found in other systems.

Compatibility The Orion FX is compatible with all Orion XT extenders when they are connected to switch ports with the appropriate link speed. Multiple simultaneous video formats are supported on the same link speed (1G or 3G), including DVI-D, DVI-I, DisplayPort and HDMI. Some video formats can be mixed, for example, DVI-in and HDMI-out.

Video interfaces supported The Orion FX provides its switching and management function by receiving and transmitting digitized signals between the connected transmitter and receiver devices. Video signals supported by Orion FX include the following:

- VGA up to 1920×1200@60Hz (via DVI-I)
- DVI-D single-link up to 1920×1200@60Hz, and 2048×1152@60Hz
- HDMI video with embedded audio up to 1920×1200@60Hz, and 2048×1152@60Hz
- HDMI 2.0 video with embedded audio up to 4096×2160@60Hz
- DisplayPort 1.1 single-head or dual-head video with embedded audio up to 4096×2160@30Hz
- DisplayPort 1.2 video with embedded audio up to 4096×2160@60Hz

For more information, consult the Orion XTender data sheet for details of the transmitter and receiver interfaces available.



Standard Orion FX configuration

Peripheral interfaces supported The following peripheral device signals are supported and switched through the Orion FX.

- USB-HID for keyboard, mouse, touchscreen, and other pointing devices
- USB 2.0 devices up to 480Mbps
- Digital or balanced audio
- Analog audio
- Serial RS-232 and RS-422 up to 115,200 baud

Models available The Orion FX switch is available in a range of 1U, 2U and 4U chassis, each with a fixed number of ports. The number and type of ports varies with the switch model, but all ports on a switch have the same link speed, either 1G or 3G. There are four types of Orion FX chassis:

Orion FX CATx, 1G or 3G

8(1G only), 16, 24, 32, 40, 48, 64, 80, 120, 128, 144, 160 ports

Orion FX Fiber, 1G or 3G

8, 16, 24, 32, 40, 48, 64, 80, 120, 128, 144, 160 ports

Orion FX Hybrid (mixed CATx/Fiber), 1G or 3G

40, 64, 80, 120, 160 ports

Orion FX with Matrix Grid, CATx/Fiber 1G

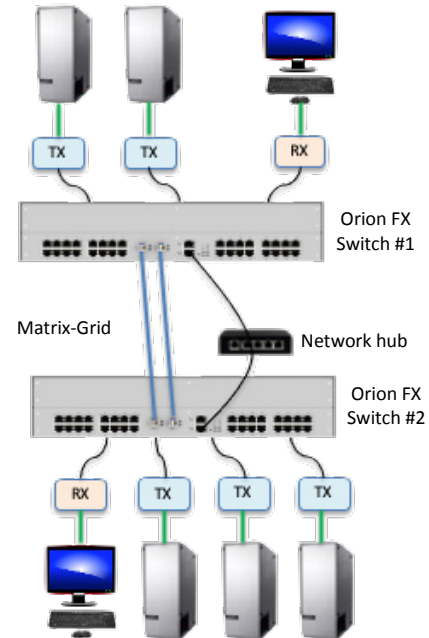
32 ports

Switch ports can have 1G or 3G CATx ports with RJ45 connectors, or 1G or 3G fiber ports with LC fiber connectors.

Each chassis has two RJ45 gigabit Ethernet ports available for switch management via the Java GUI tool. When the system is configured for Matrix Grid operation, these ports are used to share the network configuration details between switches.

Each chassis includes a redundant internal power supply with two IEC power connectors except for the 8-port chassis which has one IEC power connector and a 5VDC barrel jack using an external power adapter (not supplied).

Matrix Grid connectivity Using the 10G Matrix Grid option, multiple Orion FX switches can be interconnected in a decentralized KVM matrix system using Matrix Grid technology. The grid lines support multiple simultaneous user connections across the grid network. The Matrix Grid can be configured using either the OSD or the Java tool.



Structure of a Matrix Grid network

Operation, management, and control There are several industry standard methods for managing and controlling the Orion FX switch. Keyboard hot-key switching is the standard access method and an intuitive OSD (on-screen display) can be viewed from any workstation console. The Java GUI tool is used for configuration, security settings, and system maintenance. The Orion FX switch can also be controlled through an external media controller using the Orion API and the gigabit Ethernet network port.

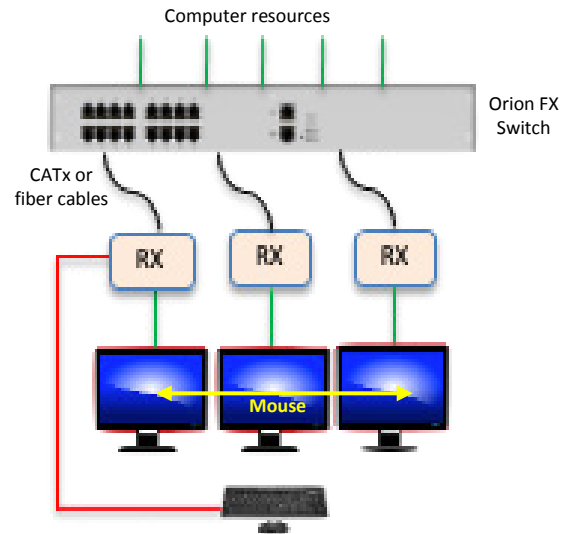
SNMP and Syslog monitoring is provided as a standard feature of the Orion FX switch family.

Methods of operation The Orion FX can be configured as a single head KVM matrix switch with up to 160 I/O ports. As the I/O ports are self-configuring, the user has total flexibility over the number of computers, video sources and users connected to the switch. Non-blocking access is provided for all users to all connected computers. The management software facilitates setting access rights and priorities. Users can be assigned full access, video access or no access to computers. Video sharing between users is also an option.

The parallel stacking utilizes two Orion FX switches linked via the network RJ45 ports. Switching commands issued on the primary switch are replicated and the second Orion switches in tandem. The parallel operation can also be used as a redundant path for user access to all resources. For all configurations, the switching command mode is activated by keyboard hot keys to provide direct OSD access at any user monitor.

System software The Orion FX switch includes full software for switch management, switching control, CPU and user naming, password and access control and a matrix view showing all available connections. Monitoring tools like SNMPv3 and Syslog are also included. Operation of the Orion FX switch is primarily through the OSD windows at each user station. The Java tool can also be used to switch computers. For additional software such as API for integration with external media controllers, please contact Rose Electronics.

Multi-screen control This feature enables a single USB keyboard and mouse to switch between up to 8 connected computers. Groups of monitors can be positioned together in dual-head or quad-head configuration or set up as a control desk display area and controlled by a single mouse and/or keyboard.



By moving the mouse beyond the edge of the current display to an adjacent display, switching to the computer connected to the adjacent display is activated. The displays can be arranged side-by-side, in a grid pattern, or completely freely.

Specifications

Dimensions W × D × H

Ports	Size	inch	mm
8	1U	8.7×7.2×1.7	221×182×44
16/24/32/40	1U	17.7×17.4×1.7	449×442×44
48/64/80	2U	17.7×17.4×3.5	449×442×90
120/128/144/160	4U	17.7×17.4×7.0	449×442×177

Estimated net weight (Varies by model)

Ports	Size	lb	kg
8	1U	4.0	1.9
16/24/32/40	1U	17.0	7.7
48/64/80	2U	24.3	11
120/128/144/160	4U	41.9	19

Signals supported

Video	DisplayPort, HDMI, DVI-D, DVI-I, VGA
USB	USB 2.0, USB-HID
Serial	RS232, RS422
Audio	Embedded with video, analog, digital, or balanced
<i>For more information consult the Orion Xtender datasheet</i>	

Connectors

CATx signals	Up to 160× RJ45 jack
Fiber signals	Up to 160× LC Fiber receptacle
Management	2× RJ-45 gigabit Ethernet
AC power	2× IEC-320 receptacle (8-port has 1×)
DC power	1× 5VDC 2.5 mm barrel jack (8-port only)

Control methods

At workstation	OSD (On screen display) with hot keys
Network port	SNMP, Syslog, Java menu, Orion API, LDAPs

LEDs

CATx 1G each port	1× Orange/Green LED
CATx 3G each port	1× Orange LED and 1× Green LED
Fiber 1G/3G each port	1× Green LED and 1× Red LED
Net LEDs each port	1× Orange LED and 1× Green LED
LEDs above show valid link and data active status	
Status	2× RGB LEDs boot progress
Power LEDs	2× green LEDs power good

Link Bandwidth and Distance

Port type	Bandwidth
CATx 1G / Fiber 1G	1.25 Gbit/s (1000BASE-T)
CATx 3G / Fiber 3G	3.125 Gbit/s (2.5GBASE-T)
Port type	Distance
CATx 1G ^{1 2}	460 ft (140 m)
CATx 3G ^{1 2}	328 ft (100 m)
Fiber 1G SM module ³	SM OS1/OS2: 32,808 ft (10 km) MM OM3: 984 ft (300 m) Estimated
Fiber 1G MM module ⁴	MM OM1: 721 ft (220 m) MM OM3: 1,804 ft (550 m)
Fiber 3G SM module	SM OS1/OS2: 16,404 ft (5 km)

Notes:

- (1) CAT5e cabling is rated for 1000BASE-T and can also handle 2.5GBASE-T over shorter runs. Consider using CAT6 cable for longer runs..
- (2) When using AWG26/28 CATx stranded wire patch cables, the maximum extension distance is decreased by an estimated 50%.
- (3) Fiber 1G single-mode SFP module supplied is type LX 1310nm which supports both single-mode and multi-mode OM3 or higher. Increased multi-mode distance can be achieved with a mode conditioning cable. Test with multi-mode before installation.
- (4) Fiber 1G multi-mode SFP module supplied is type SX 850nm which supports legacy OM1 cable and longer distance with OM3 than single-mode SFP module. No mode conditioning cable is required.
- (5) There are further unspecified options for the fiber SFP modules such as long haul, bidirectional, or CWDM. Please contact the Rose sales department for more information.

Environmental

Operating Temperature	41°F to 113°F (5°C to 45°C)
Storage Temperature	-13°F to 140°F (-25°C to 60°C)
Relative Humidity	Maximum 80% non-condensing
Operating Altitude	Maximum 8,200 ft (2.5 km)

Approvals

Safety	2014/35/EU
FCC	Part 15 Class A
CE EMC Directive	2014/30/EU
CE Low Voltage Directive	EN 62368-1:2020 + A11:2020
RoHS	2011/65/EU (RoHS 2 Recast)
WEEE	2012/19/EU
REACH	Regulation (EC) No 1907/2006

Specifications

Power DC voltage = 5V DC

Port Count	Media Type	Maximum Current	Typical Watts
8	All models	5A	13W
<i>Note: The 8-port switch is the only member of the family that uses 5VDC for redundant power.</i>			

Power AC voltage = 100 VAC – 240 VAC 50/60 Hz

Port Count	Media Type	Maximum Current	Typical Power
8	All models	0.7A	13W
16	16 CATx 1G	3.9A	53.7W
	16 CATx 3G	5.3A	72.9W
	16 Fiber 1G/3G	3.9A	72.9W
24	24 CATx 1G	5.1A	69.3W
	24 CATx 3G	7.2A	98.1W
	24 Fiber 1G/3G	5.1A	98.1W
32	32 CATx 1G	6.2A	85.0W
	32 CATx 3G	9.0A	123.4W
	32 Fiber 1G/3G	6.2A	123.4W
40	40 CATx 1G	7.3A	100.6W
	40 CATx 3G	10.8A	148.6W
	40 Fiber 1G/3G	7.3A	148.6W
	24 CATx 1G + 16 Fiber 1G	7.3A	100.6W
	24 CATx 1G + 16 Fiber 3G	9.4A	129.4W
48	48 CATx 1G	9.6A	126.6W
	48 CATx 3G	13.8A	182.0W
	48 Fiber 1G/3G	9.6A	182.0W
64	64 CATx 1G	11.9A	157.4W
	64 CATx 3G	17.5A	185.1W
	64 Fiber 1G/3G	11.9A	157.4W
	24 CATx + 40 Fiber 1G	11.9A	157.4W
	24 CATx + 40 Fiber 3G	14.0A	185.1W
	40 CATx + 24 Fiber 1G	11.9A	157.4W
	40 CATx + 24 Fiber 3G	17.4A	229.9W
80	80 CATx 1G	14.3A	188.1W
	80 CATx 3G	21.3A	280.4W
	80 Fiber 1G/3G	14.3A	280.4W
	40 CATx + 40 Fiber 1G	14.3A	188.1W
	40 CATx + 40 Fiber 3G	17.8A	234.3W

Port Count	Media Type	Maximum Current	Typical Watts
120	120 CATx 1G	21.9A	279.6W
	120 CATx 3G	32.4A	413.6W
	120 Fiber 1G/3G	21.9A	413.6W
	80 CATx + 40 Fiber 1G	21.9A	279.6W
	80 CATx + 40 Fiber 3G	28.1A	358.3W
128	128 CATx 1G	23.1A	294.5W
	128 CATx 3G	34.3A	437.4W
	128 Fiber 1G/3G	23.1A	437.4W
144	144 CATx 1G	25.4A	324.3W
	144 CATx 3G	38.0A	485.1W
	144 Fiber 1G/3G	25.4A	485.1W
160	160 CATx 1G	27.8A	354.0W
	160 CATx 3G	41.8A	532.8W
	160 Fiber 1G/3G	27.8A	532.8W
	80 CATx + 80 Fiber 1G	27.8A	354.0W
	80 CATx + 80 Fiber 3G	33.1A	422.1W
	120 CATx + 40 Fiber 1G	27.8A	354.0W
	120 CATx + 40 Fiber 3G	37.4A	477.4W

Orion FX CATx 1G/3G models

1U Height



Fig.1 – 8 port



Fig.2 – 16 port



Fig.3 – 24 port



Fig.4 – 32 port



Fig.5 – 40 port

2U Height



Fig.6 – 48 port



Fig.7 – 64 port



Fig.8 – 80 port

4U Height

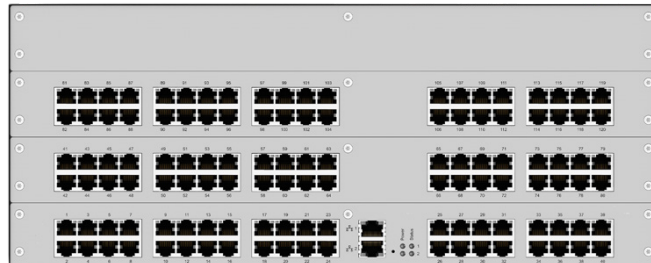


Fig.9 – 120 port

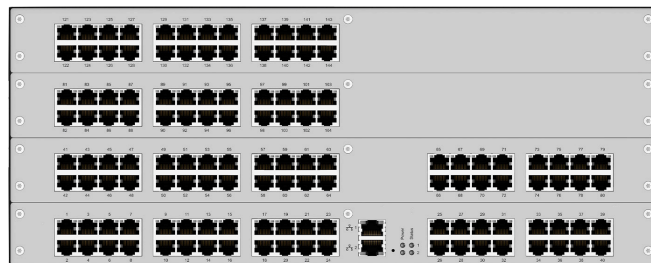


Fig.10 – 128 port

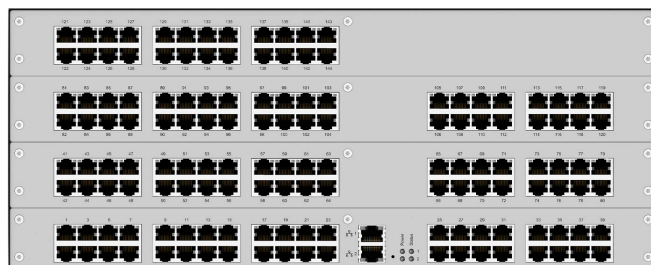


Fig.11 – 144 port

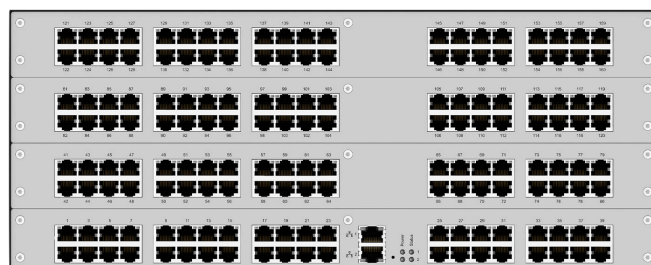


Fig.12 – 160 port

Orion FX Fiber 1G/3G models

1U Height



Fig.13 – 8 port



Fig.14 – 16 port



Fig.15 – 24 port



Fig.16 – 32 port



Fig.17 – 40 port

2U Height

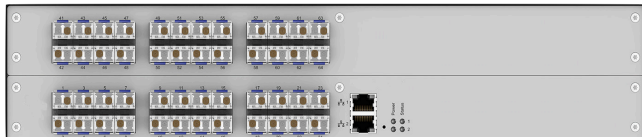


Fig.18 – 48 port

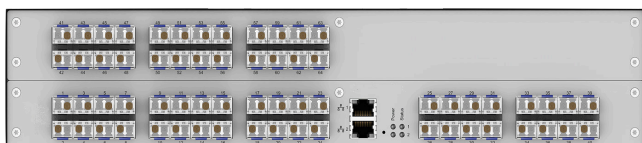


Fig.19 – 64 port

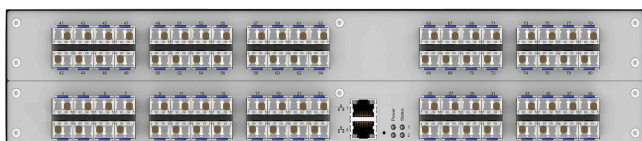


Fig.20 – 80 port

4U Height

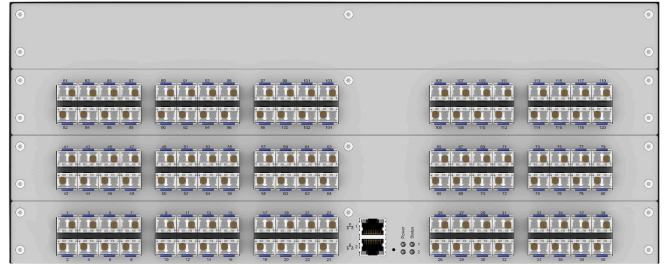


Fig.21 – 120 port

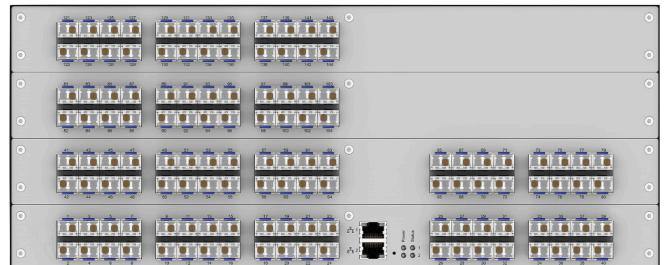


Fig.22 – 128 port

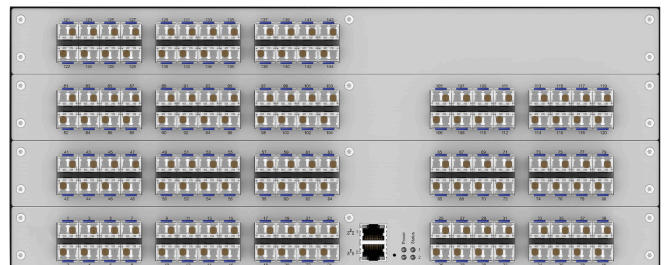


Fig.23 – 144 port

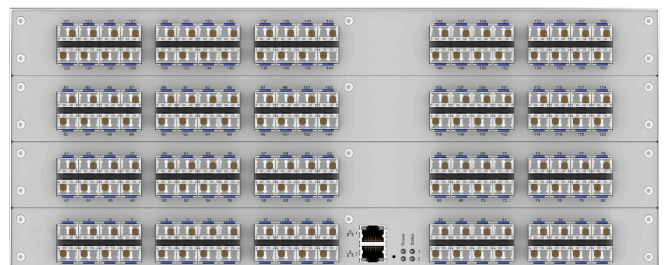


Fig.24 – 160 port

Orion FX Hybrid (Mixed CATx and Fiber) 1G/3G models



Fig.23 – 40 port, 1U

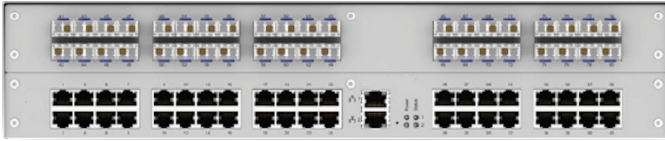


Fig.24 – 80 port, 2U

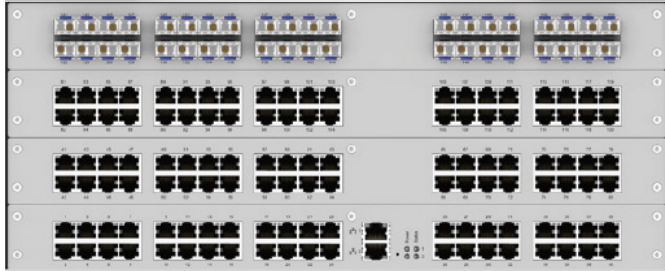


Fig.25 – 160 port, 4U

MATRIX GRID with CATx and fiber port versions



Fig.26 – 32 port, CATx Matrix Grid, 2U



Fig.27 – 32 port, Fiber Matrix Grid, 2U

Custom design versions

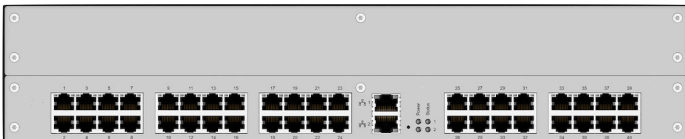


Fig.28 – 40 port, Custom Design 1G/3G 2U

Call us for other possible Hybrid, Matrix Grid, and custom design chassis configurations

Part numbers

Orion FX switch – CATx ports 1G		
OXS-FX008-TP	Fig. 1	Orion FX, 8 port matrix switch, redundant DC power, CATx, 1G, 1U, half-width
OXS-FX016-TP	Fig. 2	Orion FX, 16 port matrix switch, redundant PSU, CATx, 1G, 1U
OXS-FX024-TP	Fig. 3	Orion FX, 24 port matrix switch, redundant PSU, CATx, 1G, 1U
OXS-FX032-TP	Fig. 4	Orion FX, 32 port matrix switch, redundant PSU, CATx, 1G, 1U
OXS-FX040-TP	Fig. 5	Orion FX, 40 port matrix switch, redundant PSU, CATx, 1G, 1U
OXS-FX048-TP	Fig. 6	Orion FX, 48 port matrix switch, redundant PSU, CATx, 1G, 2U
OXS-FX064-TP	Fig. 7	Orion FX, 64 port matrix switch, redundant PSU, CATx, 1G, 2U
OXS-FX080-TP	Fig. 8	Orion FX, 80 port matrix switch, redundant PSU, CATx, 1G, 2U
OXS-FX0120-TP	Fig. 9	Orion FX, 120 port matrix switch, redundant PSU, CATx, 1G, 4U
OXS-FX0128-TP	Fig. 10	Orion FX, 128 port matrix switch, redundant PSU, CATx, 1G, 4U
OXS-FX0144-TP	Fig. 11	Orion FX, 144 port matrix switch, redundant PSU, CATx, 1G, 4U
OXS-FX0160-TP	Fig. 12	Orion FX, 160 port matrix switch, redundant PSU, CATx, 1G, 4U

Orion FX switch – CATx ports 3G		
OXS-FX016-T3	Fig. 2	Orion FX, 16 port matrix switch, redundant PSU, CATx, 3G, 1U
OXS-FX024-T3	Fig. 3	Orion FX, 24 port matrix switch, redundant PSU, CATx, 3G, 1U
OXS-FX032-T3	Fig. 4	Orion FX, 32 port matrix switch, redundant PSU, CATx, 3G, 1U
OXS-FX040-T3	Fig. 5	Orion FX, 40 port matrix switch, redundant PSU, CATx, 3G, 1U
OXS-FX048-T3	Fig. 6	Orion FX, 48 port matrix switch, redundant PSU, CATx, 3G, 2U
OXS-FX064-T3	Fig. 7	Orion FX, 64 port matrix switch, redundant PSU, CATx, 3G, 2U
OXS-FX080-T3	Fig. 8	Orion FX, 80 port matrix switch, redundant PSU, CATx, 3G, 2U
OXS-FX0120-T3	Fig. 9	Orion FX, 120 port matrix switch, redundant PSU, CATx, 3G, 4U
OXS-FX0128-T3	Fig. 10	Orion FX, 128 port matrix switch, redundant PSU, CATx, 3G, 4U
OXS-FX0144-T3	Fig. 11	Orion FX, 144 port matrix switch, redundant PSU, CATx, 3G, 4U
OXS-FX0160-T3	Fig. 12	Orion FX, 160 port matrix switch, redundant PSU, CATx, 3G, 4U

Orion FX switch – Fiber single-mode ports 1G, support multi-mode at limited distance		
OXS-FX008-FS	Fig. 13	Orion FX, 8 port matrix switch, redundant DC Power, Fiber SM, 1G, 1U, half-width
OXS-FX016-FS	Fig. 14	Orion FX, 16 port matrix switch, redundant PSU, Fiber SM, 1G, 1U
OXS-FX024-FS	Fig. 15	Orion FX, 24 port matrix switch, redundant PSU, Fiber SM, 1G, 1U
OXS-FX032-FS	Fig. 16	Orion FX, 32 port matrix switch, redundant PSU, Fiber SM, 1G, 1U
OXS-FX040-FS	Fig. 17	Orion FX, 40 port matrix switch, redundant PSU, Fiber SM, 1G, 1U
OXS-FX048-FS	Fig. 18	Orion FX, 48 port matrix switch, redundant PSU, Fiber SM, 1G, 2U
OXS-FX064-FS	Fig. 19	Orion FX, 64 port matrix switch, redundant PSU, Fiber SM, 1G, 2U
OXS-FX080-FS	Fig. 20	Orion FX, 80 port matrix switch, redundant PSU, Fiber SM, 1G, 2U
OXS-FX0120-FS	Fig. 21	Orion FX, 120 port matrix switch, redundant PSU, Fiber SM, 1G, 4U
OXS-FX0128-FS	Fig. 22	Orion FX, 128 port matrix switch, redundant PSU, Fiber SM, 1G, 4U
OXS-FX0144-FS	Fig. 23	Orion FX, 144 port matrix switch, redundant PSU, Fiber SM, 1G, 4U
OXS-FX0160-FS	Fig. 24	Orion FX, 160 port matrix switch, redundant PSU, Fiber SM, 1G, 4U

Orion FX switch – Fiber multi-mode ports 1G		
OXS-FX008-FM	Fig. 13	Orion FX, 8 port matrix switch, redundant DC Power, Fiber MM, 1G, 1U, half-width
OXS-FX016-FM	Fig. 14	Orion FX, 16 port matrix switch, redundant PSU, Fiber MM, 1G, 1U
OXS-FX024-FM	Fig. 15	Orion FX, 24 port matrix switch, redundant PSU, Fiber MM, 1G, 1U
OXS-FX032-FM	Fig. 16	Orion FX, 32 port matrix switch, redundant PSU, Fiber MM, 1G, 1U
OXS-FX040-FM	Fig. 17	Orion FX, 40 port matrix switch, redundant PSU, Fiber MM, 1G, 1U
OXS-FX048-FM	Fig. 18	Orion FX, 48 port matrix switch, redundant PSU, Fiber MM, 1G, 2U
OXS-FX064-FM	Fig. 19	Orion FX, 64 port matrix switch, redundant PSU, Fiber MM, 1G, 2U
OXS-FX080-FM	Fig. 20	Orion FX, 80 port matrix switch, redundant PSU, Fiber MM, 1G, 2U
OXS-FX0120-FM	Fig. 21	Orion FX, 120 port matrix switch, redundant PSU, Fiber MM, 1G, 4U
OXS-FX0128-FM	Fig. 22	Orion FX, 128 port matrix switch, redundant PSU, Fiber MM, 1G, 4U
OXS-FX0144-FM	Fig. 23	Orion FX, 144 port matrix switch, redundant PSU, Fiber MM, 1G, 4U
OXS-FX0160-FM	Fig. 24	Orion FX, 160 port matrix switch, redundant PSU, Fiber MM, 1G, 4U

Orion FX switch – Fiber single-mode ports 3G		
OXS-FX008-F3	Fig. 13	Orion FX, 8 port matrix switch, redundant DC Power, Fiber SM, 3G, 1U, half-width
OXS-FX016-F3	Fig. 14	Orion FX, 16 port matrix switch, redundant PSU, Fiber SM, 3G, 1U
OXS-FX024-F3	Fig. 15	Orion FX, 24 port matrix switch, redundant PSU, Fiber SM, 3G, 1U
OXS-FX032-F3	Fig. 16	Orion FX, 32 port matrix switch, redundant PSU, Fiber SM, 3G, 1U
OXS-FX040-F3	Fig. 17	Orion FX, 40 port matrix switch, redundant PSU, Fiber SM, 3G, 1U
OXS-FX048-F3	Fig. 18	Orion FX, 48 port matrix switch, redundant PSU, Fiber SM, 3G, 2U
OXS-FX064-F3	Fig. 19	Orion FX, 64 port matrix switch, redundant PSU, Fiber SM, 3G, 2U
OXS-FX080-F3	Fig. 20	Orion FX, 80 port matrix switch, redundant PSU, Fiber SM, 3G, 2U
OXS-FX0120-F3	Fig. 21	Orion FX, 120 port matrix switch, redundant PSU, Fiber SM, 3G, 4U
OXS-FX0128-F3	Fig. 22	Orion FX, 128 port matrix switch, redundant PSU, Fiber SM, 3G, 4U
OXS-FX0144-F3	Fig. 23	Orion FX, 144 port matrix switch, redundant PSU, Fiber SM, 3G, 4U
OXS-FX0160-F3	Fig. 24	Orion FX, 160 port matrix switch, redundant PSU, Fiber SM, 3G, 4U

Orion FX switch – Hybrid ports – mixed CATx and fiber 1G		
OXS-FX24TP16FS	Fig. 25	Orion FX, 40 port hybrid matrix switch, redundant PSU, 24×CATx, 16×FS, 1G, 1U
OXS-FX24TP40FS	Not shown	Orion FX, 64 port hybrid matrix switch, redundant PSU, 24×CATx, 40×FS, 1G, 2U
OXS-FX40TP24FS	Not shown	Orion FX, 64 port hybrid matrix switch, redundant PSU, 40×CATx, 24×FS, 1G, 2U
OXS-FX40TP40FS	Fig. 26	Orion FX, 80 port hybrid matrix switch, redundant PSU, 40×CATx, 40×FS, 1G, 2U
OXS-FX80TP40FS	Not shown	Orion FX, 120 port hybrid matrix switch, redundant PSU, 80×CATx, 40×FS, 1G, 4U
OXS-FX80TP80FS	Not shown	Orion FX, 160 port hybrid matrix switch, redundant PSU, 80×CATx, 80×FS, 1G, 4U
OXS-FX120TP40FS	Fig. 27	Orion FX, 160 port hybrid matrix switch, redundant PSU, 120×CATx, 40×FS, 1G, 4U

Orion FX switch – Hybrid ports – mixed CATx and fiber 3G		
OXS-FX24T316F3	Fig. 25	Orion FX, 40 port hybrid matrix switch, redundant PSU, 24×CATx, 16×FS, 3G, 1U
OXS-FX24T340F3	Not shown	Orion FX, 64 port hybrid matrix switch, redundant PSU, 24×CATx, 40×FS, 3G, 2U
OXS-FX40T324F3	Not shown	Orion FX, 64 port hybrid matrix switch, redundant PSU, 40×CATx, 24×FS, 3G, 2U
OXS-FX40T340F3	Fig. 26	Orion FX, 80 port hybrid matrix switch, redundant PSU, 40×CATx, 40×FS, 3G, 2U
OXS-FX80T340F3	Not shown	Orion FX, 120 port hybrid matrix switch, redundant PSU, 80×CATx, 40×FS, 3G, 4U
OXS-FX80T380F3	Not shown	Orion FX, 160 port hybrid matrix switch, redundant PSU, 80×CATx, 80×FS, 3G, 4U
OXS-FX120T340F3	Fig. 27	Orion FX, 160 port hybrid matrix switch, redundant PSU, 120×CATx, 40×FS, 3G, 4U

Orion FX switch – Matrix Grid version – 1G		
OXS-FX032G-TP	Fig. 28	Orion FX, 32 port matrix switch, redundant PSU, 32×CATx + Matrix Grid, 1G, 1U
OXS-FX032G-FS	Fig. 29	Orion FX, 32 port matrix switch, redundant PSU, 32×Fiber + Matrix Grid, 1G, 1U

Orion FX switch – Custom design version – with expansion capability in a 2U chassis, 1G and 3G		
OXS-FX040-TP-2U	Fig. 30	Orion FX, 40 port matrix switch, redundant PSU, 40×CATx, 1G, 2U
OXS-FX040-FS-2U	Not shown	Orion FX, 40 port matrix switch, redundant PSU, 40×Fiber, 1G, 2U
OXS-FX040-T3-2U	Fig. 30	Orion FX, 40 port matrix switch, redundant PSU, 40×CATx, 3G, 2U
OXS-FX040-F3-2U	Not shown	Orion FX, 40 port matrix switch, redundant PSU, 40×Fiber, 3G, 2U
OXS-FX24TP16FS-2U	Not shown	Orion FX, 40 port matrix switch, redundant PSU, 40×CATx, 16×FS, 1G, 2U
OXS-FX24T316F3-2U	Not shown	Orion FX, 40 port matrix switch, redundant PSU, 40×CATx, 16×FS, 3G, 2U
OXS-FX032G-TP-2U	Fig. 28	Orion FX, 32 port matrix switch, redundant PSU, 32×CATx + Matrix Grid, 1G, 2U
OXS-FX032G-FS-2U	Fig. 29	Orion FX, 32 port matrix switch, redundant PSU, 32×Fiber + Matrix Grid, 1G, 2U

Orion FX switch – Custom design version – with expansion capability in a 4U chassis, 1G and 3G		
OXS-FX040-TP-4U	Not shown	Orion FX, 40 port matrix switch, redundant PSU, 40×CATx, 4U, 1G
OXS-FX040-FS-4U	Not shown	Orion FX, 40 port matrix switch, redundant PSU, 40×Fiber, 4U, 1G
OXS-FX040-T3-4U	Not shown	Orion FX, 40 port matrix switch, redundant PSU, 40×CATx, 4U, 3G
OXS-FX040-F3-4U	Not shown	Orion FX, 40 port matrix switch, redundant PSU, 40×Fiber, 4U, 3G
OXS-FX24TP16FS-4U	Not shown	Orion FX, 40 port matrix switch, redundant PSU, 40×CATx, 16×FS, 4U, 1G
OXS-FX24T316F3-4U	Not shown	Orion FX, 40 port matrix switch, redundant PSU, 40×CATx, 16×FS, 4U, 1G
OXS-FX032G-TP-4U	Not shown	Orion FX, 32 port matrix switch, redundant PSU, 32×CATx + Matrix Grid, 4U, 1G
OXS-FX032G-FS-4U	Not shown	Orion FX, 32 port matrix switch, redundant PSU, 32×Fiber + Matrix Grid, 4U, 1G

Transformer for 8-port Orion FX switch		
TFR-05D500FSUB/2.5F	Not shown	5A, 5V Transformer for redundant power on Orion FX 8-port switches, ordered separately

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