

SCORPION-X18 PDF Versione 2019 (New)

Media Processing Platform Multiframe with Onboard 80x80 12G Crosspoint

The SCORPION-X18 Media Processing Platform is a high density signal conversion, routing, aggregation and transport platform capable of simultaneously transporting video, audio, Ethernet and data over traditional dark fiber and/or Ethernet networks.

Using SCORPION Mini I/O Modules the SCORPION-X18 is highly flexible and can accommodate 12G/6G/3G/HD/SD-SDI, DVB-ASI, 10/100/1000MbE, 10GbE, analog/AES/MADI audio, HDMI, Intercom, serial data and Telco

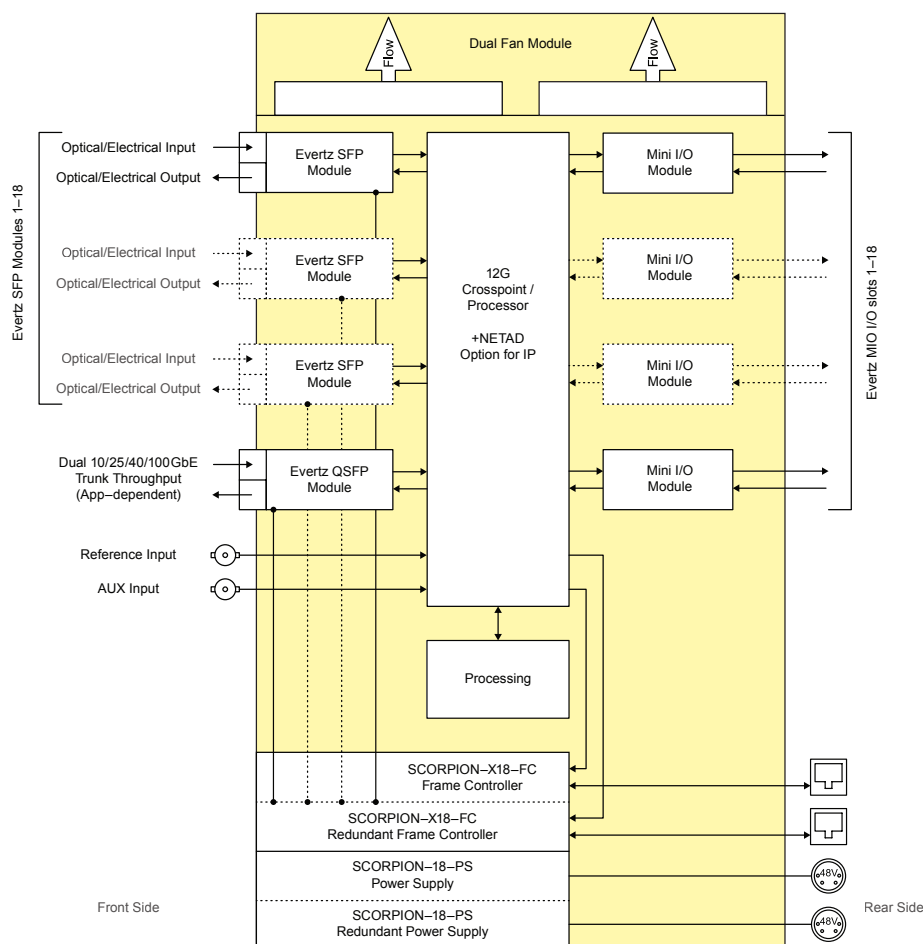
interfaces. An onboard 12G crosspoint allows uncompressed routing internal to the chassis.

Up to 18x front-facing fiber or electrical SFPs allow for signal conversion, or additional signal I/O to and from the chassis. Optional media conversion to IP is available through a network adapter module. When multiple frames are combined, the transport platform becomes ultra-scalable, enabling the sharing of content across IP or fiber networks.



► Features & Benefits

- High density fully modular 1RU form factor
- All-in-one platform handles all signal conversion, routing and transport needs
- Up to 18x front-facing SFP+ ports for fiber or electrical I/O
- 18x mini I/O module slots for additional I/O and signal types
- 12G-SDI cross-point to facilitate maximum flexibility of all I/O
- Dual 10/25/40/100GbE throughput (QSFP trunk ports)
- +NETAD network adapter module supporting SMPTE ST 2110
- Simultaneous IP and dark fiber transport
- Supports MSA SFP transceivers as well as dual transmitter, dual receiver SFP configurations
- Diverse signal types such as 12G/6G/3G/HD/SD-SDI, DVB-ASI, 10/100/1000/10G Ethernet, Analog/AES/MADI audio, HDMI, Intercom, serial data and Telco interfaces
- Main and redundant power modules and external power supply
- -48V DC option available
- Multiple control options including SNMP, web access and control panels



► Specifications

System				
Density:	18x front-facing SFPs 18x rear-facing SCORPION mini I/O module slots	Impedance:	Dependant on SCORPION mini I/O module (see appropriate specifications)	Maximum Power Consumption: 280W
Impedance:	Dual 10/25/40/100GbE trunk ports Dependant on SCORPION mini I/O module (see appropriate specifications)	Reference	Number of Inputs: 1 looping Connector: BNC IEC 61169.8 Annex A Reference Inputs: Analog 625 or 525, Tri-Level HD Impedance: 75Ω	Connectors: 4-pin male XLR Status Indicators: SCORPION-X18-PS status LEDs (each per power supply tray)
Connector:	Dependant on SCORPION mini I/O module (see appropriate specifications)	Physical	Dimensions: 1.8"H x 19"W x 13.875"D Module Capacity: 18x Evertz SFP modules 18x SCORPION mini I/O modules	Compliance Safety: CSA listed, complies with EU safety directive Complies with FCC part 15, Class A Complies with EU EMC directives
Communication and Control		Electrical	Power Supply Configuration: Dual External Supplies (primary/secondary) DC Input 48V DC (external power supplies requires 110–220V AC, 50/60Hz)	SCORPION-X18-PSX External Power Supply Brick AC Mains Input: Auto ranging, 100–240V AC, 0/60Hz
Ethernet:	SNMP over IEEE 802.3/U (10/100/1000 BaseTx) RJ-45 connector	Operating Temp.: 0–50°C		Number of Outputs: 1 Output Voltage: 48V DC Output Connector: 4-pin XLR Max Power Dissipation: 280W Status Indicators: Green OK LED
Control:	SNMP, web access and control panels			
Electrical Inputs/Outputs				
Connector:	Dependant on SCORPION mini I/O module (see appropriate specifications)	Voltage:		

► Ordering Information

SCORPION-X18	Media Processing Platform Multiframe with onboard 80x80 12G crosspoint — frame controller not included	Application Modes:	
SCORPION-X18-NPSX	Media Processing Platform Multiframe with onboard 80x80 12G crosspoint — frame controller and power supply not included	SCORPION-X18-APP-IPG12G	SCORPION-X18 APP supporting 8x8 12G-SDI over 8x 25G trunk interfaces with SMPTE ST 2110 support
Accessories:		SCORPION-X18-APP-IPG3G	SCORPION-X18 APP supporting 8x8 3G-SDI over 2x 25G trunk interfaces with SMPTE ST 2110 support
SCORPION-X18-FC	Frame controller for SCORPION-X18 (not included with chassis)	SCORPION-X18-APP-J2K-8E2D	SCORPION-X18 APP supporting 8x encodes and 2x decodes of JPEG2000 over 2x 25G trunk interfaces with SMPTE ST 2110 support (JPEG2000 licenses sold separately)
SCORPION-18-PSX	External power supply for SCORPION-X18 (order 1 additionally for redundant operation)	SCORPION-X18-APP-J2K-12E	SCORPION-X18 APP supporting 12x encodes from SDI to JPEG2000 (JPEG2000 licenses sold separately)
SCORPION-18-PS	Internal power module for SCORPION-X18 (order 1 additionally for redundant operation)	JPEG2000 Licenses (to complement JPEG2000 applications):	
SCORPION-18-PS3	SCORPION-X18 1RU power supply tray for 3x SCORPION-X18 frames	SCORPION-X18-CK-J2KP60	3G/HD/SD JPEG2000 encoder or decoder license for SCORPION-X18
SCORPION-18-PS6	SCORPION-X18 1RU power supply tray for 6x SCORPION-X18 frames	SCORPION-X18-CK-12J2KP60	Bulk 12x channels of 3G/HD/SD JPEG2000 encoder or decoder licenses for SCORPION-X18
SCORPION-18-FAN	Replacement fan module for SCORPION-X18	SFPs/QSFPs:	See separate Evertz compatible SFPs specifications
WA-XLR4-1FT	XLR power cable, connects SCORPION-X18 to PS6 power tray, 1 ft	Mini I/O Modules:	See separate Mini I/O Module specifications
WA-XLR4-3FT	XLR power cable, connects SCORPION-X18 to PS6 power tray, 3 ft		
WA-XLR4-6FT	XLR power cable, connects SCORPION-X18 to PS6 power tray, 6 ft		
Ordering Options:			
+NETAD	Optional network adapter module (required for trunk connectivity/to run applications)		

► Available Mini I/O Modules * See mini I/O module specification document for more details.

MIO-VB-2-12G	Dual BNC 12G/6G/3G/HD/SD/ASI video access module	MIO-AVR	Analog video/Black Burst receive module
MIO-GE-RJ45	1GbE Ethernet access module	MIO-USB-A	USB-A HID interface
MIO-GE-RJ45-IP	1GbE Ethernet access module with onboard processing	MIO-USB-B	USB-B HID interface
MIO-AES-IP	Dual AES67 encapsulator and de-encapsulator	MIO-HDMI-IN-3G	HDMI input access module
MIO-AES-IN4-IP	Quad AES67 encapsulator	MIO-HDMI-OUT-3G	HDMI output access module
MIO-AES-OUT4-IP	Quad AES67 de-encapsulator	MIO-HDMI-IN-4K	4K SDI or HDMI input module, dual slot
MIO-AES-D4	AES audio de-embedder module	MIO-HDMI-OUT-4K	4K SDI or HDMI output module, dual slot
MIO-MADI-2-IP	Single MADI encapsulator and de-encapsulator	MIO-HDMI-IN1-4K-IP	4K SDI or HDMI input module with onboard processing, dual slot
MIO-DANTE-64	Dante® to TDM bridge module	MIO-HDMI-OUT1-4K-IP	4K SDI or HDMI output module with onboard processing, dual slot
MIO-IT-IP	Intercom transceiver module (2x analog audio in/out, 2x serial data, 4x GPIO), dual slot	MIO-BLADE-Z21	Microservice module
MIO-AVT	Analog video/Black Burst transmit module with loop out		

► Available SFPs * See SCORPION-SFP specification document for more details.

SFPTR-13	SFP optical non-reclocked transceiver, 3GB/s, 1310nm, SMF	SFP3T13-2	SFP dual optical non-reclocked transmitter, 3GB/s, 1310nm, SMF
SFPTR-13-R	SFP optical reclocked transceiver, 3GB/s, 1310nm, SMF	SFP3T13-2-S	SFP dual optical non-reclocked transmitter, 3GB/s, short haul 1310nm, SMF
SFP12G-TR13	SFP optical reclocked transceiver, 12GB/s, 1310nm, SMF	SFP3Txx/yy-2	SFP dual optical non-reclocked transmitter, 3GB/s, CWDM, SMF
SFP3TR-M-DIN	SFP electrical non-reclocked transceiver, 12GB/s, DIN 1.0/2.3	SFP3R-2	SFP dual optical non-reclocked receiver, 3GB/s, standard sensitivity, SMF
SFP3TR-DIN-12G	SFP electrical transceiver, 12GB/s, DIN 1.0/2.3		
SFPTR-M-HDBNC	SFP electrical non-reclocked transceiver, 12GB/s, HD-BNC	SFPTR-RJ45-SGM-AV	Single 10/100/1Gbps RJ-45 SFP module
SFPTR-M-HDBNC-R	SFP electrical reclocked transceiver, 12GB/s, HD-BNC		

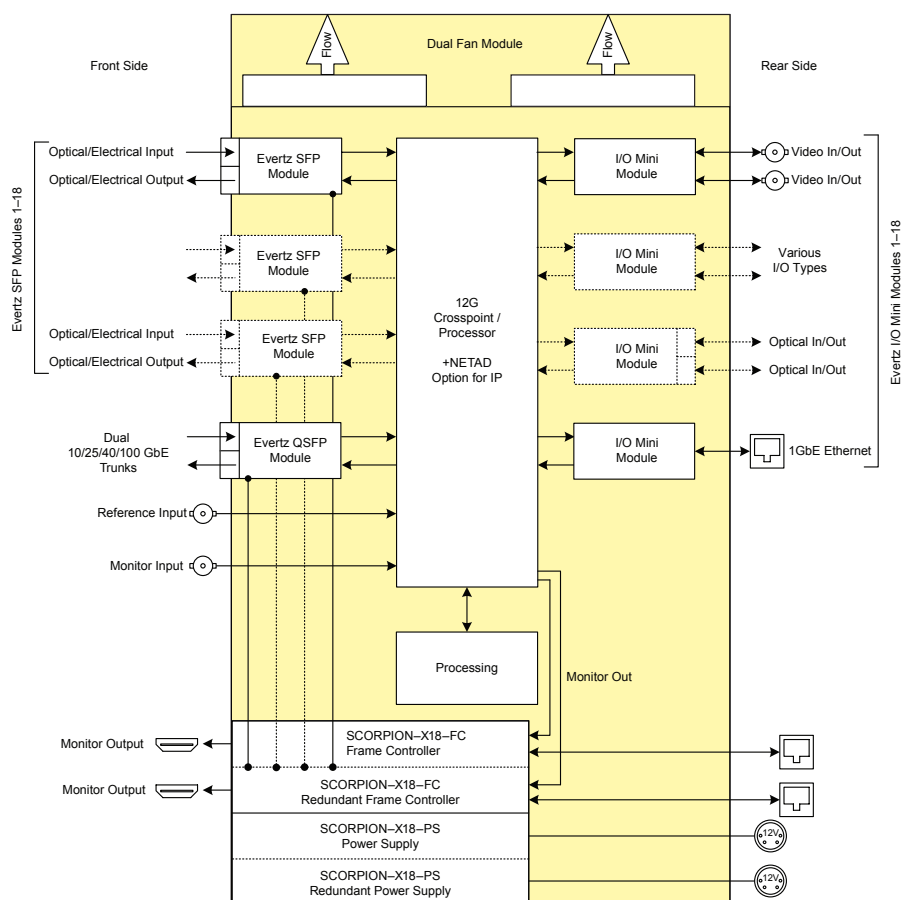
The SCORPION-X18 Media Processing Platform is a high density signal conversion, routing, aggregation and transport platform capable of simultaneously transporting video, audio, Ethernet and data over traditional dark fiber and/or 10/25/40/100GbE networks. Using SCORPION I/O Mini Modules the SCORPION-X18 is highly flexible and can accommodate 12G/6G/3G/HD/SD-SDI, DVB-ASI, 10/100/1000MbE, 10GbE, Analog/AES/MADI audio, HDMI, Intercom, serial data and Telco interfaces. An onboard 12G crosspoint allows uncompressed routing of any input to any output.

Up to 18x front-facing fiber or electrical SFPs allows for signal conversion, routing, aggregation and transport over dual 10/25/40/100GbE trunk ports. Optional media conversion to IP is available through a network adapter module. When multiple 3606 frames are combined, the transport platform becomes ultra-scalable to define point-to-point, ring, and hub-and-spoke configurations enabling the sharing of content across different sites.



► Features & Benefits

- High density fully modular 1RU form factor
- All-in-one platform to handle all signal conversion, routing and transport needs
- Up to 18x front-facing SFP+ ports for fiber or electrical I/O
- 18x I/O module slots for additional I/O and signal types
- 12G-SDI cross-point to facilitate maximum flexibility of all I/O
- Dual 10/25/40/100GbE front-facing QSFP trunk ports
- +NETAD Network Adapter Module supporting SMPTE ST 2022-6 and will support SMPTE ST 2110
- Simultaneous IP and Dark Fiber Transport into and out of SCORPION-X18
- Supports MSA SFP transceivers as well as dual transmitter, dual receiver SFP configurations
- Diverse Signal Types such as 12G/6G/3G/HD/SD-SDI, DVB-ASI, 10/100/1000/10G Ethernet, Analog/AES/MADI audio, HDMI, Intercom, serial data and Telco interfaces
- Main and Redundant Power Modules and External Power Supply
- -48V DC option available
- Test Signal Generation
- Multiple control options including SNMP, Web Access and Control panels



► Specifications

System Density:	18x front-facing SFPs 18x SCORPION I/O rear-facing Mini Module slots	Impedance:	Dependant on SCORPION I/O Mini Module (see appropriate specifications)	Maximum Power Consumption:	280W
	Dual 10/25/40/100GbE trunk ports	Reference		Connectors:	4-pin Male XLR
Impedance:	Dependant on SCORPION I/O Mini Module (see appropriate specifications)	Number of Inputs:	1	Status Indicators:	SCORPION-X18-PS status LEDs (each per power supply tray)
Connector:	Dependant on SCORPION I/O Mini Module (see appropriate specifications)	Connector:	BNC IEC 61169.8 Annex A	Compliance	
Communication and Control Ethernet:	SNMP over IEEE 802.3/U (10/100/1000 BaseTx) RJ-45 connector	Reference Inputs:	Analog 625 or 525, Tri-Level HD	Safety:	CSA Listed, Complies with EU Safety Directive
	Control: SNMP, Web Access and Control Panels	Impedance:	75Ω	EMC:	Complies with FCC part 15, Class A Complies with EU EMC Directives
Electrical Inputs/Outputs Connector:	Dependant on SCORPION I/O Mini Module (see appropriate specifications)	Physical		3606PSX External Power Supply Brick	
		Dimensions:	1.8"H x 19"W x 13.875"D	AC Mains Input:	Auto ranging, 100–240V AC, 0/60Hz
		Module Capacity:	18x Evertz SFP modules	Number of Outputs:	1
		Operating Temperature:	18x SCORPION I/O Mini Modules 0–50°C	Output Voltage:	48V DC
		Electrical		Output Connector:	4-pin XLR
		Power Supply Configuration:	Dual External Supplies (primary/secondary)	Max Power Dissipation:	280W
		Voltage:	DC Input 48V DC (external power supplies requires 110–220V AC, 50/60Hz)	Status Indicators:	Green OK LED

► Ordering Information

SCORPION-X18	Media Processing Platform Multi-Frame with onboard 80x80 12G crosspoint
SCORPION-X18-48VDC	Media Processing Platform Multi-Frame with onboard 80x80 12G crosspoint, dual 48V DC inlets
SCORPION-X18-FC	Frame Controller for SCORPION-X18

Accessories:

SCORPION-X18-PSX	External power supply for SCORPION-X18
SCORPION-X18-PS	Power module for SCORPION-X18
SCORPION-X18-FAN	Replacement fan module for SCORPION-X18

Ordering Options:

+NETAD	Optional Network Adapter Module (required for IP encapsulation/de-encapsulation)
QSFPTR-13LR	QSFP+ Optical Transceiver, 40Gbs, 1310nm, SMF, 10km
Compatible SFP's	See separate Evertz compatible SFP's specifications
I/O Mini modules	See separate I/O Mini Module specifications

► Available I/O Mini Modules * See I/O Mini Module specification document for more details.

SCORP-VB-2-12G	Dual BNC 12G/6G/3G/HD/SD/ASI Video Access Module
SCORP-GE-RJ45	1 GbE Ethernet Access Module
SCORP-AES-IP	AES Access Module over IP
SCORP-AES-D4	AES Audio De-embedder Module
SCORP-IT-IP	Intercom Transceiver Module (2x Analog Audio In/Out, 2x Serial Data, 4x GPIO), dual slot
SCORP-HDMI-IN-3G	HDMI Input Access Module
SCORP-HDMI-OUT-3G	HDMI Output Access Module
SCORP-HDMI-4KTX	4K SDI and HDMI Transmitter Module, dual slot
SCORP-HDMI-4KRX	4K SDI and HDMI Receiver Module, dual slot

SCORPION Compatible SFPs

1G/3G/12G Electrical and Optical SFPs

The Evertz SCORPION compatible SFPs are used in the SCORPION-X18, -4 and -2 Transport platform. Depending on the model, these SFP's have electrical or optical interfaces supporting up to 12G video.

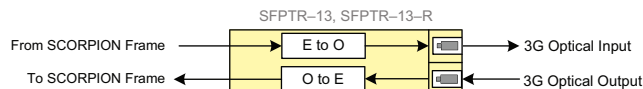
The optical SFP's provide dark fiber transport of Video (12G/4K/3G/HD/SD-SDI/DVB-ASI, HDMI), Audio (Analog Audio, AES Audio, MADI, Intercom), Ethernet (10/100/1000/10G Ethernet) and Data (USB, Serial Data RS-232/422/485). The electrical SFP's provide connections of signals to and from the SCORPION platform.



► Optical SFP's

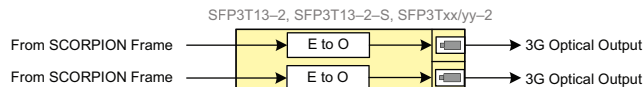
SFPTR-13, SFPTR-13-R

3Gig Optical reclocked or non-reclocked transceiver with standard 1310nm laser.



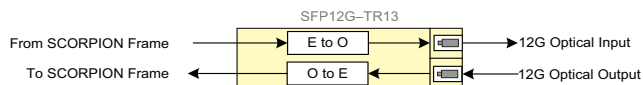
SFP3T13-2, SFP3T13-2-S, SFP3Txx/yy-2

Dual 3Gig Optical non-reclocked transmitter with standard 1310nm, low power 1310nm or CWDM laser.



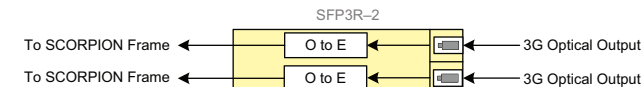
SFP12G-TR13

12Gig Optical reclocked transceiver with standard 1310nm laser.



SFP3R-2

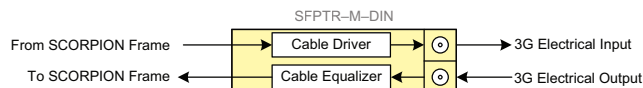
Dual 3Gig Optical non-reclocked receiver with standard sensitivity receiver.



► Electrical SFP's

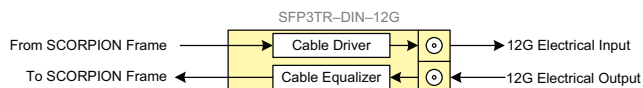
SFPTR-M-DIN

3Gig Electrical non-reclocked transceiver with DIN 1.0/2.3 connectors.



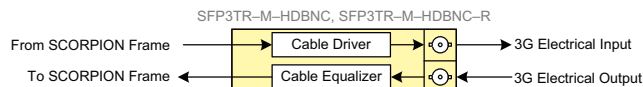
SFP3TR-DIN-12G

12Gig Electrical reclocked transceiver with DIN 1.0/2.3 connectors.



SFP3TR-M-HDBNC, SFP3TR-M-HDBNC-R

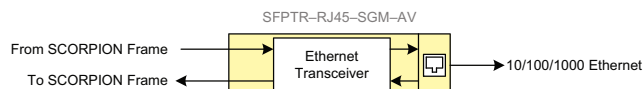
3Gig Electrical reclocked or non-reclocked transceiver with HD-BNC connectors.



► Ethernet SFP's

SFPTR-RJ45-SGM-AV

Single 10/100/1Gbps RJ-45 SFP Module.



Specifications

Optical Outputs: Number of signals: Up to 2x per SFP Connector: LC/UPC Fiber: Single mode Optical Power: 1310nm (3G SFP): -2dBm ± 1dBm 1310nm (12G SFP): -2dBm ± 1dBm -S (Short Haul 1310nm 3G SFP): -7dBm ± 1dBm CWDM (3G SFP): +4dBm ± 1dBm Wavelength: Standard (3G & 12G sfp): 1310nm CWDM (3G SFP): 1270–1610nm ITU-T G.694.2 compliant		Electrical Inputs: Reclocked Standards: SMPTE ST 2081, SMPTE ST 2081 (12G–SDI), SMPTE ST 424M (3Gb/s), SMPTE ST 292M (1.5Gb/s), SMPTE ST 259M (270Mb/s), DVB-ASI Connector: DIN 1.0/2.3 HD–BNC Impedance: 75Ω (nominal) Equalization: Automatic to 80m @3Gb/s, 100m @1.5Gb/s, 250m @270Mb/s (with Belden 1694A or equivalent cable) Return Loss: > 15dB up to 1.5GHz, > 10dB up to 3GHz, > 7dB up to 6GHz, > 4dB up to 12GHz		Overshoot (Reclocked SFPs only): < 10% of amplitude Alignment Jitter (Reclocked SFPs only): < 0.2UI to 1.485Gb/s < 0.3UI to 2.97Gb/s < 0.3UI up to 12Gb/s	
Optical Input: Number of signals: Up to 2 per SFP Connector: LC/UPC Fiber: Single mode Operating Wavelength: 1270–1610nm Max Input Power: Standard (3G & 12G SFP): -1dBm Optical Sensitivity: Standard (3G SFP): -21dBm at 2.97Gbps Pathological Level A -23dBm at 2.97Gbps Color Bars Standard (12G SFP): -16dBm at 12Gbps		Electrical Outputs: Connector: DIN 1.0/2.3 HD–BNC Impedance: 75Ω (nominal) Signal Level: 800mV (nominal) DC Offset: 0V ± 0.5V Rise and Fall Time (Reclocked SFPs only): 12G: < 45ps HD/3G: < 135ps SD: < 900ps		Ethernet Input/Output Standard: IEEE 802.3 (10 BaseT), IEEE 802.3u (100 BaseTX), IEEE 802.3ab (1000BaseTX) Number of Ports: 1 Connector: RJ-45 Cable requirements: 10 BaseT: UTP category 3, 4, or 5 cable up to 328ft/100m 100 Base Tx: UTP category 5 cable up to 328ft/100m 1000Base Tx: UTP category 5 cable up to 164/50m	
				Physical: SFP Form-factor	

Ordering Information

SFPTR-13 SFP Optical Non-reclocked Transceiver, 3Gb/s, 1310nm, SMF SFPTR-13-R SFP Optical Reclocked Transceiver, 3Gb/s, 1310nm, SMF SFP12G-TR13 SFP Optical Reclocked Transceiver, 12Gb/s, 1310nm, SMF SFP3TR-M-DIN SFP Electrical Non-reclocked Transceiver, 12Gb/s, DIN 1.0/2.3 SFP3TR-DIN-12G SFP Electrical Transceiver, 12Gb/s, DIN 1.0/2.3 SFPTR-M-HDBNC SFP Electrical Non-reclocked Transceiver, 12Gb/s, HD–BNC SFPTR-M-HDBNC-R SFP Electrical Reclocked Transceiver, 12Gb/s, HD–BNC SFP3T13-2 SFP Dual Optical Non-reclocked Transmitter, 3Gb/s, 1310nm, SMF SFP3T13-2-S SFP Dual Optical Non-reclocked Transmitter, 3Gb/s, short haul 1310nm, SMF SFP3Tx/yy-2 SFP Dual Optical Non-reclocked Transmitter, 3Gb/s, CWDM, SMF SFP3R-2 SFP Dual Optical Non-reclocked Receiver, 3Gb/s, standard sensitivity, SMF SFPTR-RJ45-SGM-AV Single 10/100/1Gbps RJ-45 SFP Module		Enclosures: SCORPION-X18 Media Processing Platform Multi-Frame with onboard 80x80 crosspoint (holds 18 modules) SCORPION-X18-48VDC Media Processing Platform Multi-Frame with onboard 80x80 crosspoint (holds 18 modules) SCORPION-4 Media Processing Platform — Standalone Frame (holds 4 modules) SCORPION-2 Media Processing Platform — Miniature Frame (holds 2 modules)	
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