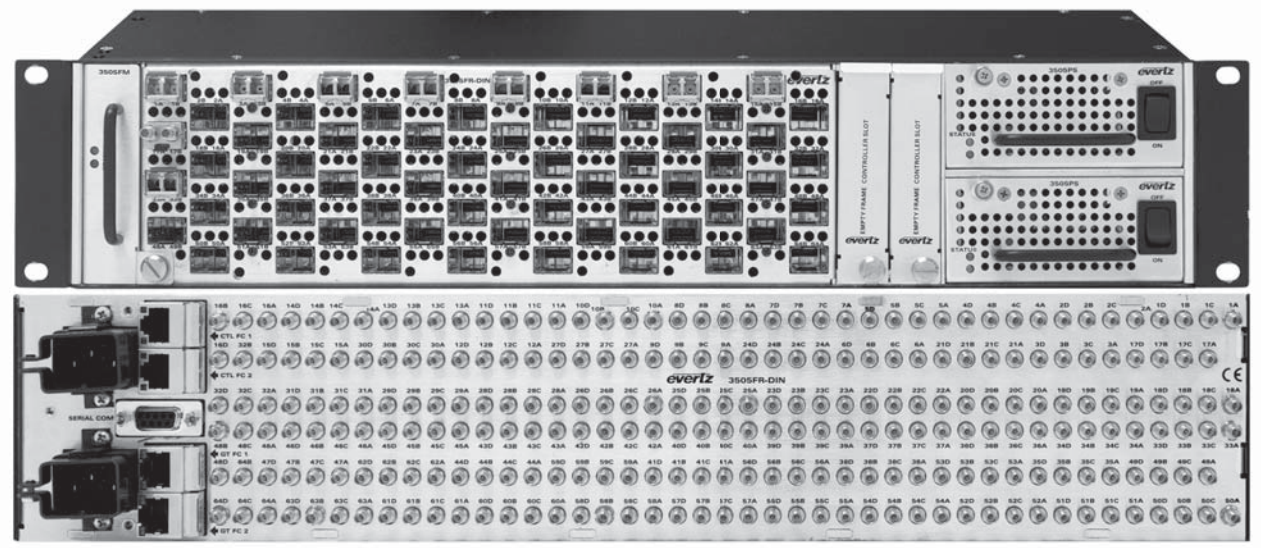
3505FR-DIN

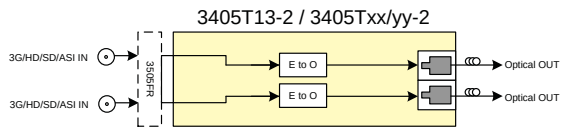
Fiber Optic SFP Din Frame

The Evertz 3505FR-DIN is a high-capacity bulk optical conversion platform. With the ability to accommodate 64 Evertz 3405 series SFP's, up to 128 optical to electrical or electrical to optical conversions may be performed in a single frame. Occupying only 2RU of rack space, the 3505FR-DIN is the industry's highest density optical conversion platform making it ideal for space-limited applications. The 3505FR-DIN can accommodate any 3405 series SFP, allowing the SFP cages to be populated as needed with optical transmit, receive, regenerator or electrical distribution amplifier SFP's. The SFP positions are not limited by function - any combination of 3405SFP types may be used, making countless versatile combinations possible. Benefits of fiber optics for video transport include longer attainable distances, smaller/lighter cabling, reduced cable tray loads and electrical isolation. The 3505FR-DIN provides a low-overhead means for simple electrical/optical conversion for interfacility transport, as well as overcoming the limitations imposed by coaxial cable in intra-facility applications.

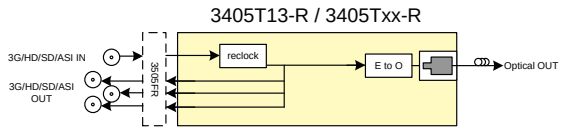
3405 series SFP's are able to handle ASI, SDI, HD-SDI and 3G digital video signals, as well as other signal rates up to 3 Gig on non-reclocked versions (e.g. MADI). The SFP modules are hot-swappable, allowing for quick servicing or easy reconfiguration or expansion at any time. 16 CWDM wavelengths are also available, which when combined with Evertz CWDM products allow up to 16 signals to be multiplexed on to a single fiber, greatly conserving fiber usage.

The 3405FR-DIN supports full remote monitoring and control over SNMP/ VistaLINK® when optional frame controllers are installed. The platform supports a single frame controller, or dual modules may be installed for redundancy. Numerous parameters such as optical power and electrical signal presence and rate can be accessed remotely to monitor system integrity. The 3505FR-DIN was designed to provide carrier-grade reliability with all SFP's, power supplies, frame controllers and the fan module being hot-swappable. There are no active components in the frame itself, a patent-pending feature from Evertz ensuring that the frame and coaxial cabling never need to be removed from the rack for service.

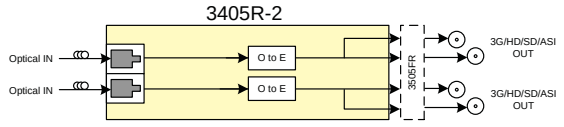




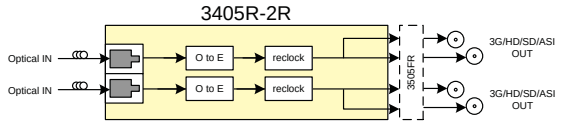
1310nm/CWDM dual transmitter SFP



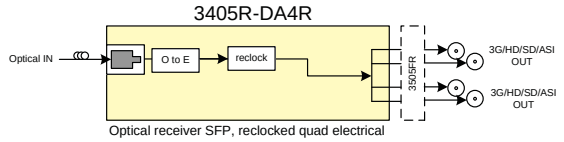
1310nm/CWDM single reclocked transmitter SFP, triple loop out



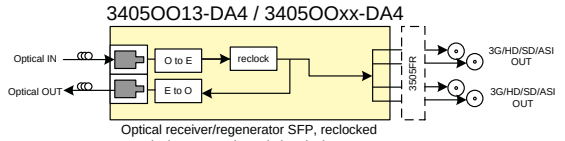
Dual receiver SFP



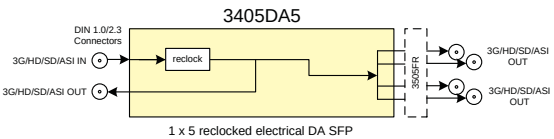
Dual reclocked receiver SFP



Optical receiver SFP, reclocked quad electrical output



Optical receiver/regenerator SFP, reclocked optical output and quad electrical output



1 x 5 reclocked electrical DA SFP

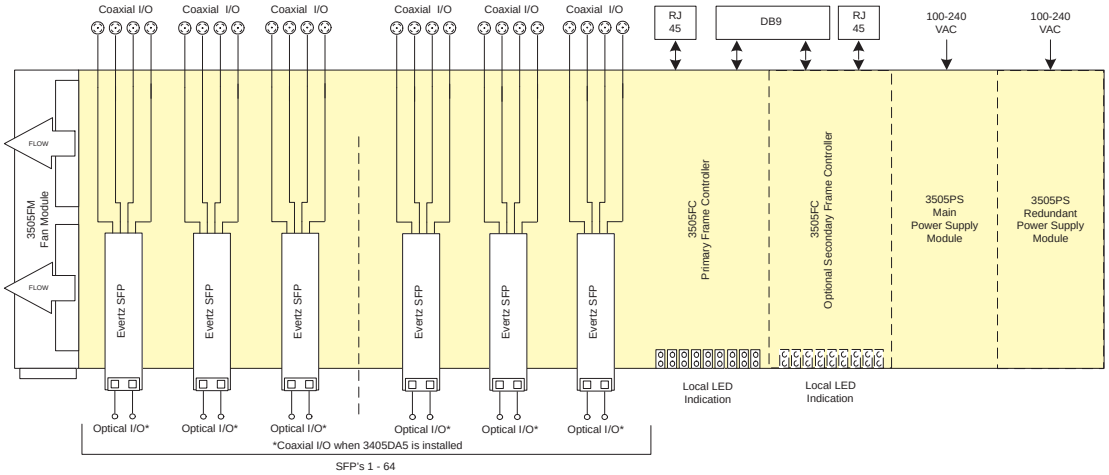
The Complete Solution Provider

3505FR-DIN

Fiber Optic SFP Din Frame

Features & Benefits

- Highest density in the industry – up to 128 conversions in 2RU
- Any combination of 3405SFP types may be installed in any slots, including optical transmit, receive, regenerator and electrical distribution amplifiers
- All active components are hot-swappable
- SFP modules can be hot-swapped without de-cabling coaxial connections
- Temperature controlled fans to minimize audible noise
- Accommodates single or dual redundant frame controllers
- Accommodates redundant power supplies
- Quad electrical connectors per SFP facilitates extra electrical distribution
- Comprehensive signal and card status monitoring via four digit card edge display or remotely through SNMP and VistaLINK® when frame controller(s) are installed



Specifications

System:

Density:	Up to 128 EO, OE, or mixture of EO and OE in a 2RU unit
Impedance:	75Ω
Communication and Control:	
Serial:	RS-232 - single Female 9-pin D connector
Ethernet:	SNMP over IEEE 802.3/U (10/100 BaseTx) RJ45 connector for M&C
Control:	VistaLINK®/SNMP

Optical Output:

Number of Outputs:	Up to 2 per SFP
Connector:	LC/UPC
Optical Power:	
Standard:	-2dBm +/-1dBm
-S (Short haul):	-7dBm+/-1dBm
CWDM:	+3.5dBm +/-1dBm
Wavelength:	
Standard & -S:	1310nm
CWDM:	1270nm-1610nm ITU-T G.694.2 compliant

Optical Input:

Number of Inputs:	Up to 2 per SFP
Connector:	LC/UPC
Operating Wavelength:	1270nm to 1610nm
Maximum Input Power:	
Standard:	-1dBm
Optical Sensitivity:	
Standard:	-21dBm at 2.97Gb/s pathological Level A -23dBm at 2.97Gb/s color bars

Electrical Inputs:

Reclocked Standard:	SMPTE 424M (3 Gb/s), SMPTE 292M (1.5Gb/s), SMPTE 259M (270Mb/s), DVB-ASI
Connector::	Mini DIN 1.0/2.3
Equalization:	Automatic to 80m @ 3 Gb/s 100m@ 1.5Gb/s 250m @ 270Mb/s (with Belden 1694A or equivalent)
Return Loss:	> 15dB up to 1.5GHz > 10dB up to 3GHz

Electrical Outputs:

Connector:	Mini DIN 1.0/2.3
Impedance:	75W (nominal)
Signal Level:	800mV (nominal)
DC Offset:	0V +/-0.5V

Rise and Fall Time (Reclocked SFP's only):

HD/3G:	<135ps
SD:	< 900ps
Overshoot(Reclocked SFP's only):	< 10% of amplitude
Return Loss:	>15dB to 1.5GHz >10dB to 3GHz
Alignment Jitter(Reclocked SFP's only):	< 0.2UI (Reclocked) to 1.485Gb/s < 0.3UI (Reclocked) to 2.97Gb/s

Electrical:

AC Input:	Auto-ranging, 100-240VAC, 50/60Hz
Power:	200W max
Connector:	IEC 320 - 1 per power supply

Physical:

Dimensions:	3.5"H x 19"W x 5.5"D
Module Capacity:	64 Evertz 3405 or 3505 SFP's

Ordering Information

3505FR-DIN	Fiber OpticSFP DIN frame

**Note: SFP's sold separately, please specify at the time of ordering.*
Multimode applications require a 5dB optical attenuator at the output of all transmitting ports, except when "-S" short haul version transmitter SFP's are used.

Ordering Options

+35PS	Redundant power supply

Accessories

3505FC	SNMP Frame Controller
3505FM	Spare/replacement fan module
J/LC/LC/ATTEN-5DB	5dB optical attenuator. Required for multimode applications
3505PS	Spare/replacement power supply module

Evertz SFP modules

3405T13-2	3G/HD/SD dual 1310nm SFP transmitter, non-reclocking
3405T13-2-S	3G/HD/SD dual 1310nm SFP transmitter, non-reclocking, short-haul
3405Txx/yy-2	3G/HD/SD dual CWDM SFP transmitter, non-reclocking
3405T13-R	3G/HD/SD reclocked 1310nm SFP transmitter, reclocked electrical loop output
3405T13-R-S	3G/HD/SD 1310nm reclocked SFP transmitter, short-haul, reclocked electrical loop output
3405Txx-R	3G/HD/SD reclocked CWDM SFP transmitter, reclocked electrical loop out
3405R-2	3G/HD/SD dual SFP receiver, non-reclocking
3405R-2R	3G/HD/SD dual SFP receiver, reclocked outputs
3405R-DA4R	3G/HD/SD single reclocked SFP receiver
3405OO13-DA4	3G/HD/SD reclocked SFP receiver/regenerator, reclocked 1310nm optical loop output and reclocked electrical outputs
3405OOxx-DA4	3G/HD/SD reclocked SFP receiver/regenerator, reclocked CWDM optical loop output and reclocked electrical outputs
3405DA5	3G/HD/SD distribution amplifier, reclocked

Note: xx/yy versions include the following:
27/29, 31/33, 35/37, 43/45 - Low Band
47/49, 51/53, 55/57, 59/61 - High Band