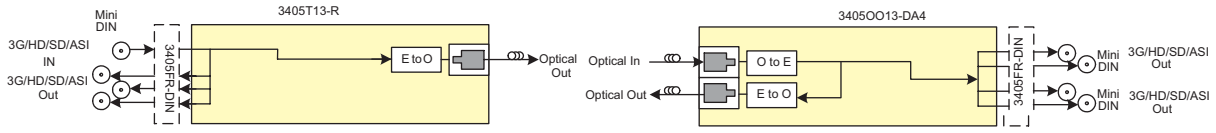
# 3405FR-DIN

*Fiber Optic SFP DIN Frame*

## 3405FR-DIN

## SFP Options




The Evertz® 3405FR-DIN SFP frame is the ideal solution for today's low cost, high density fiber optic distribution needs. The 3405FR-DIN provides the flexibility to handle the high-speed requirements of 3G and HDTV as well as SD-SDI, SDTi, and DVB-ASI.

All components are hot swappable through the front of the frame including SFPs, frame controllers and power converters. This ensures the unit can be fully serviceable in the field without having to be de-cabled or removed from the customer's rack.

The 3405FR-DIN is a 1RU frame designed to house up to 16 Evertz® SFP modules. This provides up to 16EO or 16OE in a single rack unit of space. The frame can be configured for a mixture of modules. See SFP options above.

The 3405FR-DIN can be powered by external power bricks or with the 3405PS-6. The 3405PS-6 can power up to 6 x 3405FR-DIN frames with primary & secondary power.

The 3405FR-DIN is VistaLINK® -capable with support for primary and secondary frame controller.

The 3405FR-DIN frame comes with a 3405FAN fan module and 2 x 3405PT power trays. SFPs, frame controllers and power supply modules must be ordered separately. Please see ordering information.

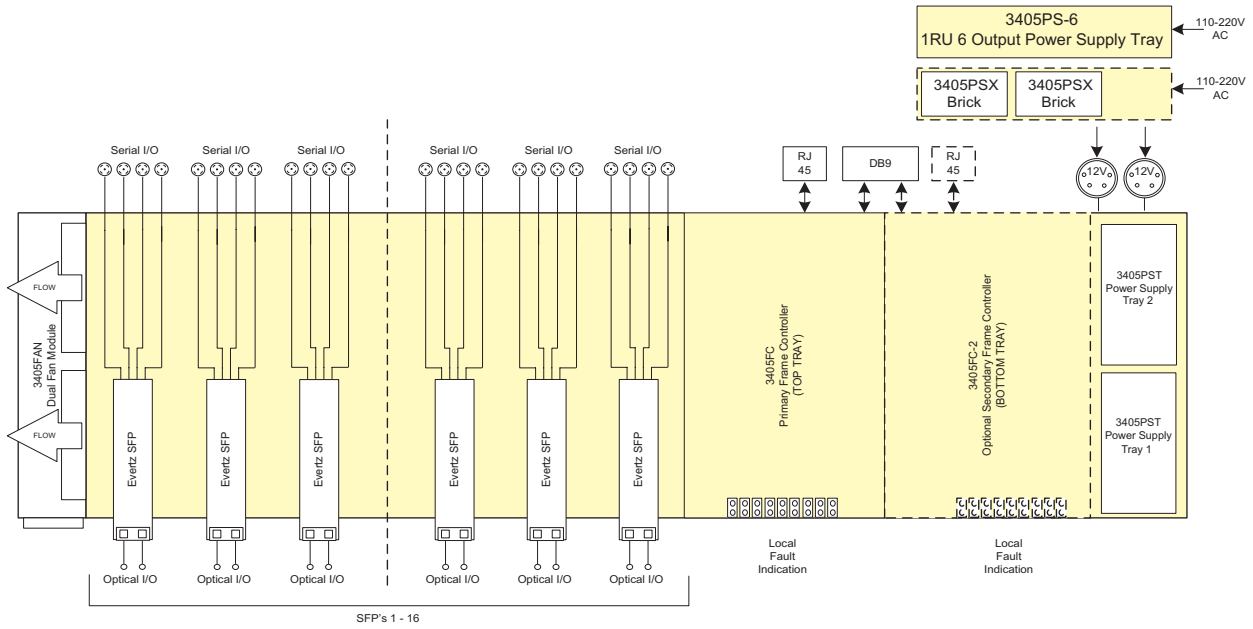
### Features & Benefits

- Dual Power supplies (primary and redundant) and conversion trays (front extractable)
- Houses up to 16 front loading Evertz® SFP modules
- Each slot can be used as an input or output based on SFP type
- Dual primary & secondary 3405FC Frame Controllers for full VistaLINK® SNMP control and monitoring
- No electrical re-cabling required when hot swapping SFP modules
- Power options include external 12V power supply bricks or 1RU power supply tray which will power up to 6 x 3405FR-DIN units redundancy

*The Complete Solution Provider*

# 3405FR-DIN

*Fiber Optic SFP DIN Frame*




## Specifications

**System:**

| | |
|---|---|
| Density: | Up to 16 EO, OE, OO or mixture in a 1RU unit |
| Impedance: | 75Ω |
| Connector: | 1.0/2.3 Female connector |

**Communication and Control:**

| | |
|---|---|
| Serial: | RS-232 - single Female 9-pin D connector |
| Ethernet: | SNMP over IEEE 802.3/U (10/100 BaseTx) RJ45 connector |
| Control: | VistaLINK® |

**Optical Output:**

| | |
|---|---|
| Number of Outputs: | 1 per SFP |
| Connector: | LC/UPC |
| Rise/Fall Time: | <270ps |
| Optical Power: | +1dBm ±1dBm |
| Wavelength: | 1310nm |

**Optical Input:**

| | |
|---|---|
| Number of Inputs: | 1 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<br>-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: | MiniDIN |
| Equalization: | Automatic to 80m @ 3 Gb/s 100m@ 1.5Gb/s<br>250m @ 270Mb/s (with Belden 1694A or equivalent) |
| Return Loss: | > 15dB up to 1.5GHz<br>> 10dB up to 3GHz |

**Electrical Outputs:**

| | |
|---|---|
| Connector: | MiniDIN |
| Impedance: | 75Ω (nominal) |
| Signal Level: | 800mV (nominal) |
| DC Offset: | 0V +/-0.5V |
| Rise and Fall Time: | < 135ps (HD/3G)<br>< 900ps (SD) |
| Overshoot: | < 10% of amplitude |
| Return Loss: | >15dB to 1.5GHz<br>>10dB to 3GHz |
| Alignment Jitter: | < 0.2UI (Reclocked) to 1.485Gb/s<br>< 0.3UI (Reclocked) to 2.97Gb/s |

**3405PSX External Power Supply Brick:**

| | |
|---|---|
| AC Mains Input: | Auto ranging, 100 - 240 VAC, 50/60 Hz |
| Number of Outputs: | 1 |
| Output Voltage: | 12VDC |
| Output Connector: | 4 PIN XLR |
| Max Power Dissipation: | 120 W |
| Status Indicators: | Green OK LED |

**3405PS-6:**

| | |
|---|---|
| AC Mains Input: | Auto ranging, 100 - 240 VAC, 50/60 Hz |
| Number of Outputs: | 12 (6 primary, 6 secondary) |
| Output Voltage: | 12VDC |
| Output Connector: | 4 PIN XLR |
| Max Power Dissipation: | 250 W (primary)<br>250 W (secondary) |
| Status Indicators: | Green OK LED<br>Red Fault LED |

**Connector:**

| | |
|---|---|
| Power: | 4 PIN XLR (12V DC) |
| Status Indicators: | PSU status LEDs (each per power supply tray) |
| Fuses: | 5 amp, time delay- 1 per power supply tray |

**Physical:**

| | |
|---|---|
| Dimensions: | 1.8"H x 19"W x 4.16"D |
| Module Capacity: | 16 Evertz® SFP modules. Dual TX or Dual RX |
| Operating Temperature | 0-50°C (with 3405FAN installed)<br>0-30°C (with 3405FAN-Q installed) |

**Electrical:**

| | |
|---|---|
| Power Supply Configuration: | Dual external supplies (primary/secondary 3405PSX)<br>1RU Power Supply Tray (3405PS-6) |
| Voltage: | DC Input 12V DC (external power supplies required for 110-220V) |
| Max Power Consumption: | 40W (fully loaded frame with all accessories) Note - power consumption Dependent on SFP type |

**Compliance:**

| | |
|---|---|
| Safety: | CSA Listed, Complies with EU Safety Directive |
| EMC: | Complies with FCC part 15, Class A<br>Complies with EU EMC Directives |

## Ordering Information

| | |
|---|---|
| **3405FR-DIN** | Fiber Optic SFP DIN frame<br>(does not include power supplies, SFPs, or frame controllers) |

*Note: Order one of the power supply options from below*

**Ordering Options:**

| | |
|---|---|
| ***+Q*** | *3405FAN-Q Dual quiet fan option* |

**Power Supplies**:

| | |
|---|---|
| **3405PSX** | External power supply brick |
| **3405PS-6** | 1RU 6 output power supply tray for 3405FR-DIN (powers up to 6 units - primary & secondary) |

**Accessories:**

| | |
|---|---|
| **3405FC** | 3405 Frame controller |
| **3405FC-2** | Redundant Frame controller |
| **3405PST** | Power supply tray |
| **3405FAN** | 3405FR-DIN dual FAN module |
| **3405FAN-Q** | 3405FR-BNC dual quiet FAN module |

**Evertz SFP modules:**

| | |
|---|---|
| **3405T13-R** | 3G/HD/SD Reclocked SFP transmitter. Three reclocked loop output |
| **3405OO13-DA4** | 3G/HD/SD Reclocked SFP receiver. Reclocked optical loop output + four reclocked electrical outputs |