

# Tiger PRO

## 144x144 Fiber Optic Matrix

QuStream's **Tiger PRO** Router System is a high performance, modular fiber optic switch system for either ProAV or Broadcast HD-SDI and 3G-SDI applications. **Tiger PRO** is expandable in sizes from 36X36 up to 144X144 in the same 4RU frame. It is fully compatible with the new QFX Series of fiber media extenders for dual link DVI, HD-SDI, and 3G-SDI. The frame supports redundant power, control, and also provides for a hot-swappable 144X144 Crosspoint matrix. I/O cards allow easy expansion in groups of 36 inputs or 36 outputs per card which simplifies future expansion without the need to replace cards or frames. The frame system is based on the field proven Cheetah line of routers and maintains the same high reliability and integrity always found in the QuStream brand.

The QuStream **Tiger PRO** is a modular design featuring eight I/O slots. Each I/O supports up to 36 fiber optic connections using standard LC-type fiber SFP modules. The I/O fiber cards are based on 1310nm single mode lasers but can be used in multimode applications with reduced performance specifications. Singlemode fiber allows signal transports up to 10Km while multimode is limited to approximately 600m with 50/125 multimode cables.

Taking advantage of a small 4RU footprint, the **Tiger PRO** Router can be configured as a partially loaded frame allowing for easy future field expansion. The system's integrated Matrix Frame Controller monitors the health of the unit and automatically recognizes any new I/O cards. Once the cards are installed, the **Tiger PRO** Router can be easily configured with the 3500PRO or PERC 2000 System Controller software.

The **Tiger PRO** Router can be controlled from the QuStream control system or by any third-party control system such as Crestron® or AMX®. The **Tiger PRO** is compatible with all QuStream RCP panels, and also supports web based control via our ClikControl network software.

To complete the full end-to-end transmission and routing system, the **Tiger PRO** supports all QFX Series fiber extender modules. QuStream's DL-DVI media extenders allow signal conversion from DVI or VGA signals up to 2560 X 1600, while the QuadBox™ media extenders allow for simple, low-cost fiber to coax conversion.

**Tiger PRO's** 3G-SDI Transport allows signal switching up to 3Gbps while offering digital switching capability to support SD-SDI, HD-SDI, and 3G-SDI without the need for external media converters. The frame is designed as a high performance HD Multi-rate video router supporting SMPTE 259M, 292M, 372M and 424M standards. Matching the transport paths of the QFX series media converters to perform within the 3G-SDI transport insures accurate motion video transport without pathological errors or the need to have end-to-end mux/de-mux modules.

### Features

- I/O sizes from 36X36 to 144X144
- Supports digital transports up to 3Gbps (SMPTE 424M)
- Supports SMPTE 259M, 292M, 372M, and 424M
- Full end-to-end solutions for Dual Link DVI or VGA
- Space efficient 4RU frame
- Supports singlemode and multimode I/O
- Modular design allows easy upgrades and expansion
- Hot-swappable cards
- Supports RS-232, RS-422, and Ethernet interfaces
- Supports 3500PRO or PERC2000 QuStream Control Systems
- Dual AC Power Connections
- Front load matrix, power supply, and frame controllers
- Supports QuStream's QFX Series of fiber media converters



# Tiger PRO Series Specifications



## Digital Specifications

### INPUTS/OUTPUTS

|                   |   |
|-------------------|---|
| Fiber Connector   | SFP LC  |
| Module Type       | Dual SFP pluggable  |
| Polarity          | non inverted with respect to input  |
| Signal Operations | polarity all paths non-inverted   |
| SD                | auto reclocking to SMPTE 259M-C   |
| HD                | auto reclocking to SMPTE 292M   |
| 3G                | auto reclocking to SMPTE 424M   |
| Multi-rate        | non-reclocking data rates 270Mbps to 3Gbps  |
| Jitter            | < 0.2 UI, p-p (SMPTE 292M)<br>< 0.3 UI, p-p (SMPTE 424M)<br>compliant with RP-184 |

## Optical Specifications

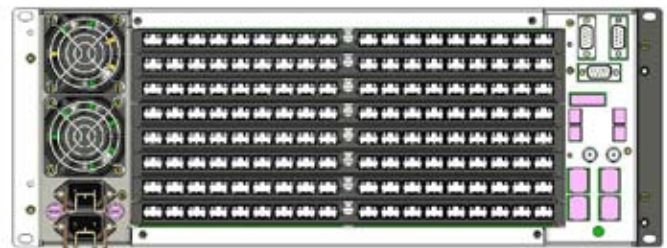
|                      |  |
|----------------------|--|
| Wavelength           | 1310nm   |
| Mode                 | Singlemode (9/125)   |
| Module               | Small form factor pluggable  |
| Compliance           | ITU-T G.957  |
| Optical Output Power | -9dBm min., -3dBm max  |
| Optical Input Power  | -20dBm min, -1dBm max  |
| Data Rates           | 270Mbps to 3.0Gbps   |
| Standard             | SMPTE 297M<br>Serial Digital Fiber Transmission System   |
| Operating Distance   | TX/RX connectors per IEC 61754-20-1<br>9/125u - 10Km (6.25 miles)<br>50/125u - 400m (1200ft)<br>62.5/125u - 200m (600ft) |

NOTE: Operating distances are approximate. Cable loss and other interconnects can affect the total light loss between TX and RX paths.

Each optoelectronic fiber module used in this device is a class 1 laser product compliant with FDA Radiation Performance standards, 21 CFR Subchapter J. Also compliant to class 1 per IEC-60825-1, 1993 +A1:1997, +A2:2001

## Environmental & Miscellaneous Specifications

|                             |  |
|-----------------------------|--|
| Cooling                     | internal cooling fans with auto sensing speed adjustments<br>4RU Frame: 2 fans |
| Controlpanel communications | RS-485 / 3 pin detachable  |
| control communications      | RS-232 / 422 / Ethernet  |
| connector type              | 9 pin D-SUB, RJ-45   |
| control system              | PESA 3500PRO supports 3rd party interfaces                                     |
| <b>Power</b>                |  |
| AC inputs                   | 95VAC to 240VAC, 50-60Hz   |
| Power connections           | IEC connector plug   |
| Maximum watts per frame     | 600 W  |
| Dimensions                  | 19.00W X 7.00H X 21.00D<br>482.6mm X 177.8mm X 533.4mm 4RU                     |
| Operational Temperature     | 0-40 C   |
| Shipping Weight             | TBD  |
| Compliance                  | FCC, UL, CE, RoHS  |
| Warranty                    | 3 years parts and labor  |



## Tiger PRO Frame Configurations

|           | Matrix Size | Frame Size | Cross-Point Granularity | Notes |
|-----------|-------------|------------|-------------------------|-------|
| Tiger PRO | 144x144     | 4RU        | 144x144                 | 1     |

### NOTES

- May be configured for matrix size 36x36 up to 144x144 in blocks of 36 input or output channels.