



Gigabit Ethernet /  
Fiber Channel Applications  
3.3 to 5V, 1310nm, 1x9 – 1.25 / 1.0625 GBaud,  
Power Budget 11 dBm

### Key Features & Benefits

- Industry Standard 1x9 Footprint
- Link Distance Up to 10Km with 9/125um SMF
- 1310nm Fabry-Perot Laser
- PECL Differential Data Inputs and Outputs
- TTL Signal Detect
- Compliant with IEEE 802.3z GbE Specification
- 3.3 to 5V Power Supply
- Class 1 Laser Product
- AC/AC TTL Interface
- RoHS Compliance

### Applications

- Switch to Switch Interface
- Mass Storage Systems
- Gigabit Ethernet
- Point to Point Link

### Ordering Information

QDX-19-4-2M-T-x

### QDX Family (all options):

QDX - 19 - 4 - xx - T - x

| Code | Light Source | Mode | Symbol | Power Budget |
|------|--------------|------|--------|--------------|
| 1    | 850nm VCSEL  | MM   | SX     | 9dBm         |
| 1M   | 1310nm FP    | MM   | MLX    | 11dBm        |
| 2M   | 1310nm FP    | SM   | LX     | 11dBm        |
| 2L   | 1310nm DFB   | SM   | LHX    | 20dBm        |
| 3    | 1550nm DFB   | SM   | XD     | 18dBm        |
| 3L   | 1550nm DFB   | SM   | ZD     | 23dBm        |

| Code  | Housing Clip |
|-------|--------------|
| N     | None         |
| F     | Forward      |
| Blank | Backward     |

# Stratos

## QDX-19-4-2M-T-x Optical Transceiver

Connectivity for  
Business-Critical Continuity™

### Transmitters

| Parameter                           | Symbol                     | MIN  | Typical | MAX  | Unit  |
|-------------------------------------|----------------------------|------|---------|------|-------|
| Optical Transmit Power <sup>1</sup> | P <sub>O</sub>             | -9   |         | -3   | dBm   |
| Extinction Ratio (P1/P0)            | ER                         | 9    |         |      | dB    |
| Center Wavelength                   | $\lambda_c$                | 1280 | 1310    | 1355 | nm    |
| Spectral Width (RMS)                | $\Delta\lambda$            |      |         | 4    | nm    |
| Optical Rise Time <sup>2</sup>      | t <sub>R</sub>             |      |         | 260  | ps    |
| Optical Fall Time <sup>2</sup>      | t <sub>F</sub>             |      |         | 260  | ps    |
| Relative Intensity Noise            | RIN                        |      |         | -120 | dB/Hz |
| Total Jitter                        | T <sub>j</sub>             |      |         | 227  | ps    |
| Eye Diagram                         | Compliant with IEEE 802.3z |      |         |      |       |
| Power Supply Current                |                            |      | 100     | 140  | mA    |

1. Output power is power coupled into a 9/125 um single mode fiber

2. Without filter 20% - 80% Values

### Receivers

| Parameter                                                | Symbol                         | MIN  | Typical | MAX  | Unit |
|----------------------------------------------------------|--------------------------------|------|---------|------|------|
| Optical Input Power – Maximum <sup>1</sup>               | P <sub>IN</sub>                | -3   |         |      | dBm  |
| Optical Input Power – Minimum (Sensitivity) <sup>1</sup> | P <sub>IN</sub>                |      |         | -20  | dBm  |
| Operating Center Wavelength                              | $\lambda_c$                    | 1260 |         | 1610 | nm   |
| Optical Return Loss                                      | ORL                            | 12   |         |      | dB   |
| Receiver Electrical 3dB Upper Cutoff Frequency           |                                |      |         | 1500 | MHz  |
| Signal Detect – Asserted                                 | P <sub>A</sub>                 |      |         | -20  | dBm  |
| Signal Detect – Deasserted                               | P <sub>D</sub>                 | -32  |         |      | dBm  |
| Signal Detect – Hysteresis                               | P <sub>A</sub> -P <sub>D</sub> | 1    |         | 6    | dB   |
| Power Supply Current                                     | I <sub>CC</sub>                |      | 120     | 140  | mA   |
| Signal Detect Voltage – Low                              | V <sub>OL</sub>                |      |         | 0.8  | V    |
| Signal Detect Voltage – High                             | V <sub>OH</sub>                | 2    |         |      | V    |

1. BER < 10<sup>-12</sup>

*For more information on this product consult the QDX-19-4-2M-T-x product data sheet.*

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