

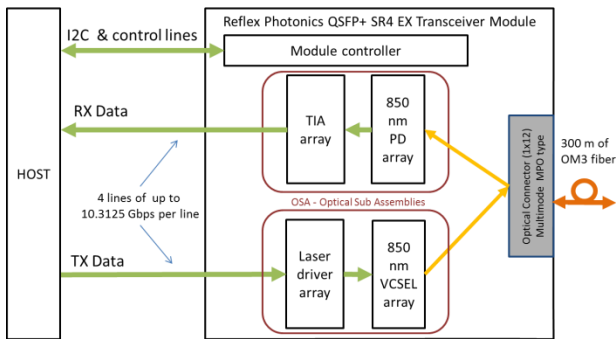
**QE-X04-C01801-02 QSFP+ eSR4 EX Range**

**Product Summary**

The Quad Small Form-Factor Pluggable (QSFP+) transceiver is a highly integrated 4-channel optical module that provides increased port density and lower system cost. The QSFP+ full-duplex optical modules offer 4 independent transmit and 4 receive channels, each capable of up to 10.3 Gbps operation for an aggregate bandwidth of 41.25 Gbps over 300 meters of optical fiber\*.

The QSFP+ transceiver modules offer low BER and many features, accessible via a two-wire serial interface.

\* Actual link distance depends on fiber type and data rate



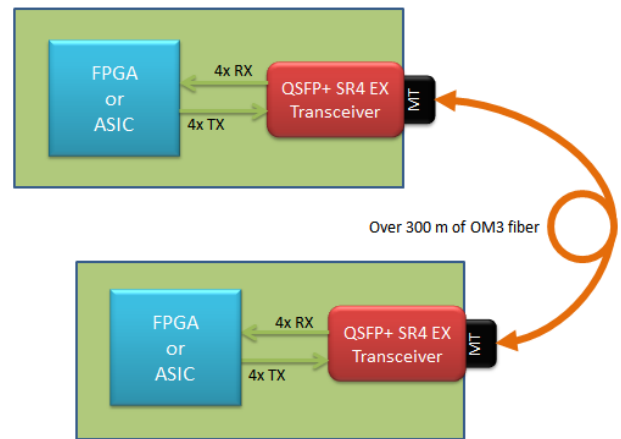
**QSFP+ eSR4 EX Range Transceiver Block Diagram**

**Specifications and Features Highlights**

- **Aggregate Bandwidth of 41.25 Gbps**
- **Up to 10.3125 Gbps per channel bandwidth**
- **4 Independent full-duplex channels**
- **MTP/MPO optical connector**
- **Single +3.3V power supply**
- **CML compatible electrical I/O**
- **50µm multi-mode ribbon fibers supported**
- **Over 300 meter transmission on OM3 MMF**
- **Operating case temperature: 0 to 70°C**
- **Digital diagnostic capabilities**
- **Low power level (max 1.5 W)**
- **QSFP+ MSA compliant**

**Applications**

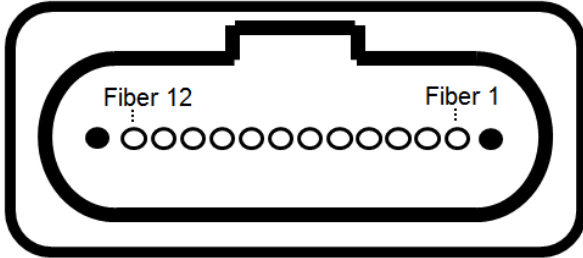
- **High-performance computing clusters**
- **Data center backbone**
- **Ethernet switches**
- **High-speed servers**
- **SAN, Routers, hubs, load balancer**



**QSFP+ eSR4 EX Range Transceiver Application example**

**Optical Interface Lanes**

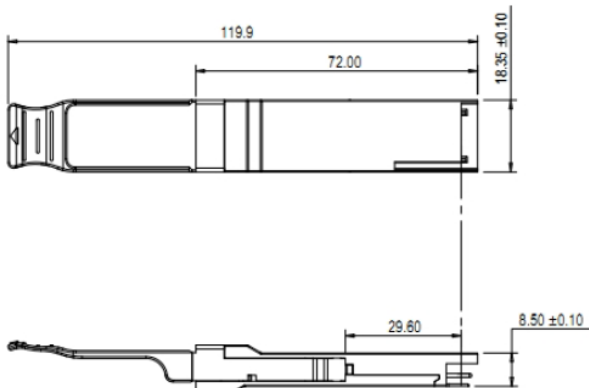
The figure and table below show the orientation of the multi-mode fiber facets of the optical connector and the lane assignment respectively.



Outside view of the QSFP+ eSR4 module MPO receptacle

MPO Fiber #	Lane Assignment	MPO Fiber #	Lane Assignment
1	RX0	7	Unused
2	RX1	8	Unused
3	RX2	9	TX3
4	RX3	10	TX2
5	Unused	11	TX1
6	Unused	12	TX0

**Mechanical Considerations**



**Compliance**

Description	Specification
Safety	Laser Class 1 product EN 60825-1: 2007
EMC	EN 55022: 2010 EN:55024:2010
RoHS	2002/95/EC
General information only; details are in data spec	

**Ordering information**

Part Number	Description
QE-X04-C01801-02	40G Ethernet, QSFP+ eSR4 Extended Distance Range up to 300 m Fiber Optic Transceiver Module (10.3 Gbps per channel/RX and TX).

For more information on this or other products:  
 Contact sales at  
**1-514-842-5179 or 1-408-715-1781**  
 or by email at [sales@reflexphotonics.com](mailto:sales@reflexphotonics.com)

© Copyright 2017, Reflex Photonics, Inc.

This document including pictures and drawings contains information about a new product during its early phase of development. The information contained herein is given to describe certain components and shall not be considered as a guarantee of characteristics. Reflex Photonics reserves the right to change the design or specifications of the product at any time without notice. The material is provided as is and without any warranties, including but not limited to warranties of non-infringement, description and fitness for a particular purpose.

*Disclaimer: Information furnished by Reflex Photonics is believed to be accurate and reliable. However, no responsibility is assumed for its use. Reflex Photonics makes no representation that the interconnection of its circuits as described herein will not infringe on existing patent rights.*

*Note: Document revision history is present in separate document.*