Optical engines

Data sheet

MicroMux™ Quattro

4x 100GbE support in 400GbE slots without additional rack space

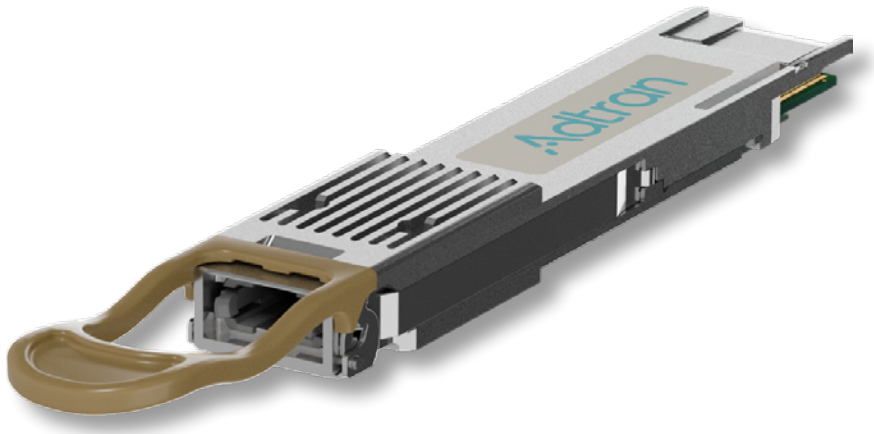
Benefits

- **Support 100GbE on 400GbE ports**
  Converts a 400GbE QSFP-DD port into four independent 100GbE ports
- **Save cost and operational complexity**
  Eliminates the need for costly aggregation devices that also increase rack space and points of failure
- **Four times higher density of 100GbE ports**
  By transforming each 400GbE port into four 100GbE ports, MicroMux™ Quattro offers higher port density than standard 100GbE pre-aggregation devices
- **Standard-compliant plug-and-play QSFP-DD**
  Electrically and mechanical compliant to QSFP-DD standard cages; CMIS-Rev 4.0 compliant
- **FEC termination/creation**
  KP-FEC for 100GAUI-2 electrical interfaces, KR-FEC for SR4/CWDM4 and FEC free for LR4 optical interfaces

Overview

The growth of bandwidth demand has prompted network operators to introduce 400Gbit/s Ethernet-based connectivity. The next-generation equipment that is being deployed to support this demand, however, is mainly equipped with 400Gbit/s ports and offers limited options for efficient legacy 100Gbit/s services.

Built as a standard-compliant QSFP-DD form factor. Our MicroMux™ Quattro offers a simple and innovative solution to support 100GbE services where the deployed infrastructure is designed for 400GbE only. It packs the functionality of four independent 100GBase-SR4, CWDM4 or LR4 interfaces into a single QSFP-DD housing. Since there's no need for other expensive aggregation devices, MicroMux™ Quattro saves cost, rack space and power consumption. What's more, with less equipment and interconnecting points in the network, MicroMux™ Quattro significantly reduces operational complexity. Whether in data center, enterprise or service provider applications, our MicroMux™ Quattro helps you maximize the use of your existing hardware.



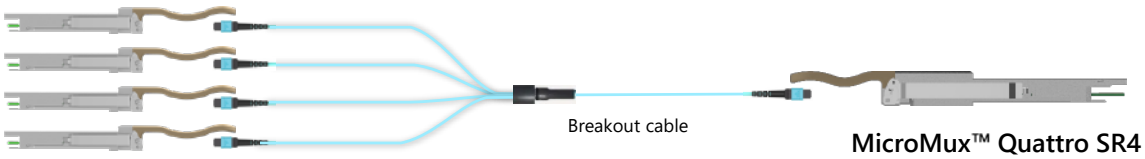
MICROMUX™ QUATTRO

High-level technical specifications

Parameter	MicroMux Quattro™ SR4	MicroMux Quattro™ CWDM4	MicroMux Quattro™ LR4
Nominal wavelengths	850nm	1271nm 1291nm 1311nm 1331nm	1295nm 1300nm 1304nm 1309nm
Optical output power per channel	-8.4dBm to 2.4dBm	-6.5dBm to 2.5dBm	-4.3dBm to 4.5dBm
Extinction ratio	2dB	3.5dB	4dB min
Transmitter dispersion penalty	4.4dB	3dB	2.2dBm max
Optical return loss tolerance	12dB	20dB	20dBm min
Eye mask {X1, X2, X3, Y1, Y2, Y3} Hit ratio of 5e-5 per IEEE	{0.3, 0.38, 0.45, 0.35, 0.41, 0.5}	{0.31, 0.4, 0.45, 0.34, 0.38, 0.4}	{0.25, 0.4, 0.45, 0.25, 0.28, 0.4}
Receiver sensitivity per channel (BER 5e-5) (dBm)	-10dBm [@BER 5e-5]	-10dBm [@BER 5e-5]	-10.6dBm [4x25G, @1e-12]
Received optical power range per channel (dBm)	-10.3dBm to 2.4dBm	-11.5dBm to 2.5dBm	-11.1dBm to 4.5dBm [4x25G, @1e-12]
Clock accuracy	+/-100ppm	+/-100ppm	+/-100ppm
Case temperature range	0°C to 70°C	0°C to 70°C	0°C to 70°C
Power consumption	12W	20W	18W
Optical interface	MPO32	Quad SN	Quad SN
Hardware Specification	QSFP-DD Rev 4.0	QSFP-DD Rev 4.0	QSFP-DD Rev 4.0
Managemnet interface	CMIS 4.0	CMIS 4.0	CMIS 4.0

Applications in your network

Enables 100GbE services in the latest 400GbE equipment by interconnecting to already deployed interface (i.e. SR4/ CWDM4/LR4) with just a hot swappable QSFP-DD plug



MicroMux™ Quattro converts a 400GbE port into four 100GbE ports with zero footprint increase

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