



MicroMux Quattro[™]

100GbE and 200GbE support in 400GbE slots without additional rack space

The growth of bandwidth demand has prompted network operators to introduce 400Gbit/s Ethernetbased connectivity. But this next-generation equipment offers little or no support for 100Gbit/s services. 100GbE services require additional costly equipment that also adds complexity, footprint and power consumption to the node. Our MicroMux[™] Quattro plug solves this problem by transforming each 400GbE port into four 100GbE ports or two 200GbE ports with zero footprint increase.

Built as a standard-compliant QSFP-DD form factor, our MicroMux[™] Quattro offers a simple and innovative solution to support 100GbE or 200GbE services where the deployed infrastructure is designed for 400GbE only. It packs the functionality of four independent 100GBase-SR4 or CWDM4 interfaces or two independent 200GBase-SR8 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.

Your benefits

- Support 100GbE on 400GbE ports
 - Converts a 400GbE QSFP-DD port into four independent 100GbE or two 200GbE ports

✓ Flexible, software configurable

Enables four 100GBase-SR4/CWDM4, two 200GBase -SR8 or one 400GBase-SR16 from a single 400GbE QSFP-DD slot

Save cost and operational complexity Eliminates the need for costly aggregation devices that also increase rack space and points of failure

Sour 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 3.0 compliant

FEC termination/creation

KP2 FEC for 100GAUI-2 electrical interfaces and KR4 FEC for SR4 optical interfaces

High-level technical specifications

| Parameter | MicroMux Quattro™ SR4 | MicroMux Quattro™ CWDM variant |
|---|------------------------------------|--|
| Operating wavelengths | 840nm (min.) to 860nm (max.) | 1264.5nm (min.) to 1277.5nm (max.) 1284.5nm (min.) to 1297.5nm (max.) 1304.5nm (min.) to 1317.5nm (max.) 1324.5nm (min.) to 1337.5nm (max.) |
| Optical output power per channel | -8.4dBm (min.) to 2.4dBm (max.) | -6.5dBm (min.) to 2.5dBm (max.) |
| Extinction ratio | 2dB | 3.5dB |
| Transmitter dispersion penalty | 4.4dB | 3dB |
| Side-mode suppression ratio | N/A | 30dB |
| Optical return loss tolerance | 12dB | 20dB |
| 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} |
| Receiver sensitivity per channel (BER 5e-5) (dBm) | -10dBm | -10dBm |
| Received optical power range per channel (dBm) | -10.3dBm (min.) to 2.4dBm (max.) | 11.5dBm (min.) to 2.5dBm (max.) |
| Clock accuracy | +/-100ppm | +/-100ppm |
| Case temperature range | 0°C to 70°C | 0°C to 70°C |
| Power consumption | 14W | 17W |
| Optical interface | MPO32 | MPO12 |
| Electrical interface | Standard-compliant QSFP-DD | Standard-compliant QSFP-DD |

Applications in your network

Enables 100GbE and 200GbE ports in latest 400GbE devices with just a hot-swappable QSFP-DD plug



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