

Optical Engines

Data Sheet

# **MicroMux™**

Convert 100GbE ports into 10x 10GbE ports with zero footprint increase

#### **Benefits**

- Support 10GbE on 100GbE ports Convert a 100GbE QSFP28 client port into ten 10GbE ports with just a pluggable QSFP28
- Zero footprint increase MicroMux™ fits existing QSFP28 cages without modification and with unchanged energy efficiency
- Support legacy infrastructure Serve legacy 10GbE links with your newest 100Gbit/s-based infrastructure without additional aggregation devices
- Highest flexibility Single-mode and multi-mode variants; configurable for 100GBase-SR10 or breakout into ten 10GBase-SR
- Save cost and operational complexity Reduce cost, points of failure and operational complexity with less equipment in the network
- 10GbE services on demand Easily increase or decrease the number of 10GbE ports in your 100Gbit/s-based switch, router or optical terminal

#### **Overview**

With massive and ever-increasing traffic growth, network operators are having to upgrade transport network infrastructure to support data rates of 100Gbit/s and above. However, there is still a large demand for lower data rate services. Internet and cloud service providers are struggling to balance current need with future demand. Our MicroMux<sup>™</sup> solves this problem. Our MicroMux™ is an active QSFP28 interface that converts 100 Gigabit Ethernet (GbE) client ports into ten 10GbE ports without compromising power, space or spectral efficiency. By simply adding this small formfactor pluggable, a 100Gbit/s-based device can support 10GbE services. There's no need for additional costly aggregation devices that add operational complexity and consume rack space. Our MicroMux™ also increases flexibility. Service providers can seamlessly mix 10GbE and 100GbE clients into 100Gbit/s-based switches, routers or optical terminals without any footprint increase. Our MicroMux™ module provides highest client port flexibility with minimum operational complexity.

## High-level technical specifications

Parameters	Multi-mode variant	Single-mode variant
Operating wavelengths	840nm to 860nm	1260nm to 1355nm
Optical output power per channel	-7.3dBm to -1dBm	-8.2dBm to 0.5dBm
Extinction ratio	3dB	4dB
Transmitter dispersion penalty	3.9dB	3.2dB
Side-mode suppression ratio	N/A	30dB
Eye mask {X1, X2, X3, Y1, Y2, Y3} Hit ratio of 5e-5 per IEEE	{0.25, 0.4, 0.45, 0.25, 0.28, 0.40}	{0.25, 0.4, 0.45, 0.25, 0.28, 0.40}
Receiver sensitivity per channel (BER 5e-5)	-9.9dBm	-14.4dBm
Maximum receiver input	3.4dBm	1dBm
Clock accuracy	+/-100ppm	+/-100ppm
Maximum link length	150m OM4 for 100GBase-SR10 400m OM4 for 10GBase-SR	10Km
Case temperature range	0°C to 70°C	0°C to 70°C
Power consumption	6W	6W
Optical interface	MPO24 MM	MPO24 SM
Electrical interface	CAUI-4	CAUI-4

### **Applications in your network**

Enable 10Gbit/s client support to 100Gbit/s-based switches, routers or optical terminals



MicroMux<sup>™</sup> converts a 100GbE port into ten 10GbE ports with zero footprint increase



[December] Copyright © 2022 Adtran, Inc. All rights reserved. Adtran believes the information in this publication to be accurate as of publication date, and is not responsible for error. Specifications subject to change without notice. Adtran and the other trademarks listed at www.adtran.com/trademarks are registered trademarks of Adtran, Inc. or its affiliates in various countries. All other trademarks mentioned in this document are the property of their respective owners. Adtran warranty duration and entitlements vary by product and geography. For specific warranty information, visit www.adtran.com/warranty

Adtran products may be subject to U.S. export controls and other trade restrictions. Any export, re-export, or transfer of the products contrary to law is prohibited For more information regarding exportation of Adtran items (e.g. commodities, technology, software), please visit www.adtran.com/exportlicense.



