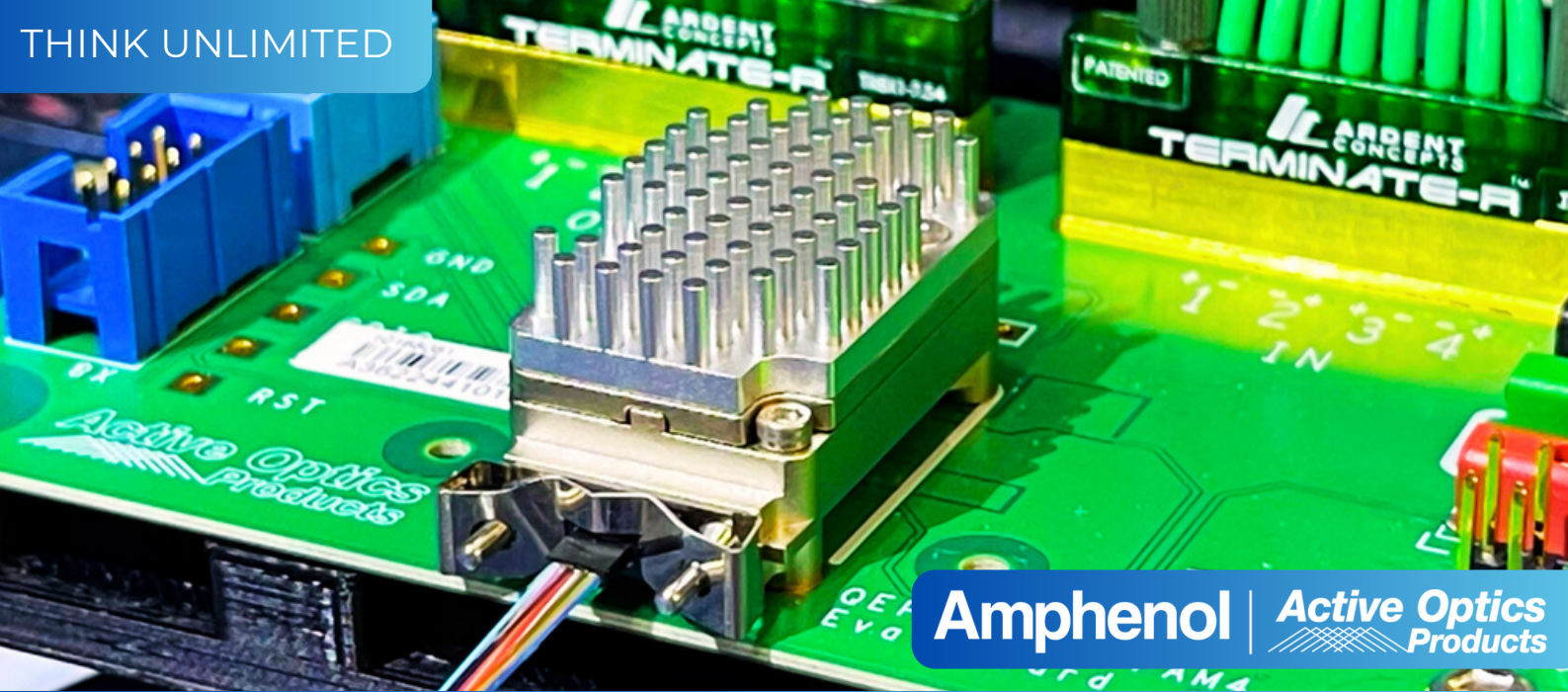


THINK UNLIMITED



Amphenol | **Active Optics Products**

QEPT® On-Board Transceiver

100Gbps High-Speed 4-TRX Optical Module

Amphenol AOP 100Gbps QEPT® High-Speed 4-TRX Optical Module - Quad Embedded Pluggable Transceiver - rugged, it is designed for extended temperatures and highly challenging applications where both reliability and performance are critical. Aggregates 100 Gbps over its 4 channels (25Gbps/channel), hot-pluggable and quick to install, a versatile product with an easy path to PAM4 .

Key Features

Removable fiber optical cable connection to set your mind free to design the way you want. Replace the cable only, keep the transceiver.

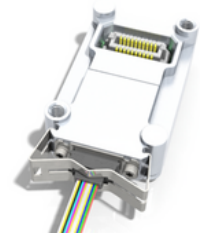
Less than 2 W of power consumption to enable the whole power of the QEPT® at 100Gbps, including CDR, transceiver optimization and monitoring connection discovery, channel diagnostics, and signal status monitoring.

Upgrade to 200 Gbps PAM4 without board design change by using the same footprint connector. A easy swap to the next generation.

Keep your system cool with many options of heat sink that dissipates the hot air upwards, or plenty choices of cold plates to transfer the unwanted heat, also water cooled compatible versions available.

Smallest footprint board area usage in the market. Only takes up 180 sq inch of board space, enabling board routing and component placement underneath.

Hot Pluggable - install cable and transceiver in less than 1 minute - reaches 100Gbps up to 70m, over its 4 channels.



Applications

- Network Systems
- Ground Communication
- Radar
- Industrial Control

MIL-AERO GRADE
STD-883 SHOCK & VIBE

Features

- 4-channel: 25Gbps/channel
- 29x18mm – effective PCB 180 sq mm
- Operating temperature: -40°C to 85°C
- Optically pluggable via standard MT-ferrule
- Mezzanine-type connection
- Screw-locking feature for board mounting
- Two-wire control and diagnostic interface
- Data rate transparent from 1.25 to 28 Gbps
- Flat-top design
- Integrated Clock & Data recovery with bypass mode
- Programmable equalization
- Programmable output amplitude and emphasis

Supported Standards

- 100GBASE-SR4
- EDR InfiniBand
- 8G/16G/32G FiberChannel
- 40GBASE-SR4
- SFF 8636 Management Interface

Electrical Performance

- Power supply voltages: 3.3V and 1.8V
- Bit Error Rate: Below 10⁻¹² @ 25.78125Gbps
- Lanes per device: 4 Transmit / 4 Receive
- Power Consumption: 1.6W (typ.)
- Transmitter Type: 850nm VCSEL
- Receiver Type: PIN Diode

Material

- Electrical mezzanine-type connector
- Optical interface mates with standard MT-ferrule

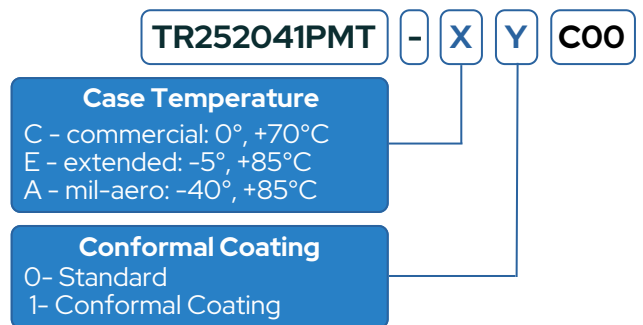
Environmental

- RoHS 6/6 compliance
- Operating case temperature: -40° to 85°C
- Conformal coating option

Benefits

- Half the size of a QSFP28 transceiver
- Enables easy and efficient PCB routing
- Facilitates temperature-challenging system designs
- Replaceable patch cord
- Cost-effective solution
- Easy-to-install
- Interchangeable solution
- Mechanical shock and vibration resistant
- Allows for transceiver optimization and monitoring
- Supports standard and non-standard protocols in this range
- Enables use of heat-sink for better thermal performance
- Water-cooled compatible
- Jitter mitigation (high data rates)
- Low power consumption (low data rates)
- Capable of compensation more than 14dB insertion loss at 14GHz
- Compensates for PCB traces loss for proper signal conditioning

Part Number Selector



Evaluation Kit

Try out the power of the QEPT® through our evaluation kits. Ships together with Application Notes and a Graphical User Interface (GUI) to simulate various scenarios in a very simply and effective way.

Get in touch for more.

