

QSFP OverPass™ Assemblies

28G AND 56G DIRECT HIGH SPEED CONNECTION FROM CHIP SITE TO IO PORT

QSFP OverPass™ products remove the high speed signaling from the PCB and create a four channel direct lower loss interconnection from the ASIC site to the external IO port by overpassing the PCB. This helps to enable 28G and 56G hardware system designs. This results in lower over signal loss, less PCB design complexity and reduces PCB costs. Fully compatible with QSFP industry standards and with both high speed and sideband signal requirements.

These cable assemblies lower system costs by eliminating the need for re-timers and expensive low loss PCB laminates. They can be paired with multiple near chip IO solutions –Mini Cool Edge, Flash and SlimSAS™ with cabled sidebands to either the near chip connector, to a separate Minitek® cable connector or press fit terminated at the QSFP connector.

- Lower loss interconnect from chip site to external port
- Enables 28G and 56G hardware system design
- Delivers superior signal integrity performance
- Fully engineered and tested cabling solution with straight forward application and assembly into systems



TARGET MARKETS



FEATURES

- Direct chip to IO port connection; accommodates straight and cross over wiring; custom IO mapping; heat sinks and light pipes
- Direct wire attachment to connector contact & robust shield termination coupled with high performance differential pair cabling
- Full QSFP industry standard compatibility
- Full support of 28G and 56G signaling speeds
- Integrated system solution including assembly aids
- 100% full performance testing and characterization
- Full vertical integration of product components
- Multiple near chip / on package IO connector options
- Flexible sideband signal termination options

BENEFITS

- Significant reduction in signal loss transmission; addresses system thermal and mechanical needs
- Delivers superior signal integrity performance
- Assures proper mating of cables, AOC's and optical modules
- Full signal integrity performance compatibility
- Ease of assembly into hardware systems
- Assures full product functionality
- Connectors and cable supplied, processed, terminated & tested by Amphenol
- Choice of multiple IO solutions to address signal integrity performance and mechanical requirements
- Cabled to either Minitek® cable connector, to the near chip IO connector or press fit terminated at QSFP connector

TECHNICAL INFORMATION

MATERIAL

- Contacts: High performance copper alloy
- Cages: Stainless steel
- Housings: High performance thermoplastics – UV94V-0
- Cable: Silver & tin plated copper wire, aluminized mylar shields, PTFE Insulation

ELECTRICAL PERFORMANCE

- 93Ω characteristic impedance
- Supports Ethernet protocol signaling speeds & performance – 10G, 28G and 56G
- EIA –364 series

MECHANICAL PERFORMANCE

- Durability: 25 cycles

ENVIRONMENTAL

- EIA-364-1000
- Operating Temperature Range: -40°C to +85 °C

APPROVALS AND CERTIFICATIONS

- UL 94V-0

SPECIFICATION

- QSFP OverPass™ product specification
- Mini Cool Edge product specification
- Flash product specification

PACKAGING

- Product Specific: Usually package in antistatic bags or clamshells
- Cable is bulked via either a series of cable wraps or snakeskin jacket
- Protective covers on cable ends for worry free system assembly

TARGET MARKETS/APPLICATIONS



Switches
Routers
Wireless Infrastructure



Servers
Data Centers
Supercomputers

PART NUMBERS

Description	Part Numbers
1x1 QSFP OverPass™ connector and cage to single 38 pos MCIO, right angle exit, sidebands cabled to MCIO	10150418
1x1 QSFP OverPass™ connector and cage to single 38 pos MCIO, right angle exit, sidebands cabled to Minitek®	10150419
1x1 QSFP OverPass™ connector and cage to single 38 pos MCIO, straight cable exit, sidebands cabled to MCIO	10155153
1x1 QSFP OverPass™ connector and cage to single 38 pos MCIO, straight cable exit, sidebands cabled to Minitek®	10155154
1x1 QSFP OverPass™ connector and cage to single 50 pos Flash, straight cable exit, sidebands cabled to Flash	10153972