

EYEMAX® 4X AND 12X CABLE ASSEMBLIES

for Infiniband®, 10G Fibre Channel, 10G Base-CX4, and SFF-8470 High-Speed Serial Links

DESCRIPTION

The EyeMax® 4X and 12x cable assembly offering from FCI provides high-speed, serial copper links for industry-standard applications. This copper solution offers a low cost alternative to fiber optics for linking servers, storage and other data network or communication devices. The EyeMax® link solution is designed to provide a continuous flow of serial data and eliminate data traffic congestion, which can occur among hardware devices that use a parallel bus structure.

FCI's EyeMax® cable assembly technology enables high-speed data transfers at >2.5 Gb/s per link/channel for cable lengths up to 10 meters. (4X > combined 10Gb/s bi-directional data rate.) In addition, the EyeMax® cable technology offers <4% cross-talk performance, greater bandwidth, and exceptional overall electrical performance to support switched fabric link capabilities and scalability within and between system hardware applications.

The mating interface used in EyeMax® cable and connector products has been selected as the external I/O copper link for the following industry standards: Infiniband®, 10G Fibre Channel, 10G Base-CX4 Ethernet, and SFF-8470 for Serial ATA or Serial-Attached SCSI (SAS).



FEATURES & BENEFITS

- Die-cast shells for enhanced EMI shielding performance
- Blind-mate keying features standardized
- High-speed data rates of >2.5 Gb/s per link/channel
- Custom paddle-card design for improved crosstalk performance
- Standardized 26 + 28 AWG cable offering (special options available with 30 AWG)
- Impedance-controlled paddle card with capability to upgrade for equalization
- Cable assembly offering available with various high-speed raw cable sources
- Competitively-priced product
- RoHS compliant

TARGET MARKETS / APPLICATIONS

- Data
 - Servers
 - Server clusters
 - Storage systems
 - HPC and data centers
- Communications
 - Switches
 - Routers
- Industry standards
 - Infiniband architecture
 - Infiniband DDR
 - 10G Fibre Channel
 - 10G Base-CX4 Ethernet (IEEE 802.3ak)
 - SFF-8470 for SATA or SAS



MATERIALS

- Contacts: Copper alloy
- Contact finish:
 - Mating area: Au over Ni
 - Solder area: Sn over Ni
- Connector housing: High-temperature thermoplastic, UL94V-0
- Backshell: Die-cast zinc
- Strain relief: Thermoplastic
- Latch & pull tab – Thermoplastic & stainless steel
- PCB – FR4 Fiberglass
- Cable – LSZH (Low Smoke Zero Halogen) fully shielded, differential pairs

ELECTRICAL PERFORMANCE

- Differential impedance: $100 \pm 10\Omega$ @ 100psec
- Insertion loss: 10.0 dB max @ 1.25Ghz
- Pair-to-pair skew: 50 psec max./meter
- Near-end crosstalk: <4% at 100psec
- EMI effectiveness: 40 dB min.
- Jitter: 0.25 unit intervals (100 psec)
- Eye pattern opening: 300 psec width min. 316 mV height min. @ 2.5Gbps

MECHANICAL PERFORMANCE

- Durability: 250 cycles
- Insertion Force:
 - 30N (6.6 lbs.) max. for 4X
 - 60N (13.2 lbs.) max. for 12X
- Withdrawal Force:
 - 15N (3.3 lbs.) min. for 4X
 - 20N (4.4 lbs.) min. for 12X
- Retention Force: 75N (16.9 lbs.) min.
- Minimum Bend: 4 inch or less at 90° bend

PART NUMBERS

Consult your FCI Sales Engineer

ENVIRONMENTAL

- Temperature range: -10°C to 60°C
- Thermal shock: 10 cycles, -55° to 85°C
- Temperature life: 456 hours @ 90°C

SPECIFICATIONS

- Industry
 - Infiniband architecture
 - Infiniband DDR
 - 10G Fibre Channel
 - 10G Base-CX4 Ethernet (IEEE 802.3ak)
 - SFF-8470 for SATA or SAS
- FCI
 - GS-12-216 EyeMax™ Cable Assembly Product Specification

APPROVALS AND CERTIFICATIONS

- UL and CSA approval pending

Additional information can be found at www.fciconnect.com/eyemax