MXC® Connectors

The MXC® connector platform is a versatile, cost effective, next generation connectivity solution optimized for direct interface to equipment densely populated with mid-board mounted, multimode or singlemode optical modules. Supporting a varied selection of link designs, the MXC® package is optimized for expanded beam PRIZM® MT ferrules providing for a more robust and debris insensitive interface compared to traditional physical contact solutions. The unique, streamlined external plug recesses the multi-fiber ferrule protecting the lensed interface while providing maximum port density. Designed specifically for intra-rack and inter-rack point to point links, the MXC® solution combines the bulkhead adapter and on-card plug into a single component, minimizing PCB space consumption on the inside of the equipment.

The MXC® connector platform also supports blind-mating of the optical fiber demarcation point for true optical backplane or mid-plane architectures. Utilizing the same external cable plugs for front panel and backplane applications, novel X, Y and Z floating mechanisms allow for generous mismatch between the card mounted and rack mounted connector components.

Features:

- Optimized for point to point, equipment card interface applications
- Debris insensitive resulting in high reliability
- Supports a wide variety of link designs in both multimode and singlemode
- Reduced complexity of connector components
- Fewer components with traditional adapter eliminated
- Optimized for US Conec’s expanded beam PRIZM® MT ferrule technology
MXC® Connector Platform

Applications
- Bulkhead fiber demarcation point for embedded single-mode and multimode Tx/Rx architectures
- Front panel and backplane multi-fiber point to point links
  - High performance computing
  - Switching/routing fabrics
  - Switch to server interconnects
  - Switch to switch interconnects

MXC® Interface
Smaller MXC® format accommodates ruggedized strain relief on the external cable only whereas MTP® cables accommodate ruggedized strain relief on internal and external plugs.

Space savings with MXC® compared to MPO-style connectors for bulkhead applications:
- 59% PCB area
- 40% Faceplate area
- 132 MXC® receptacles fit into a 19-inch 1U panel
MXC® Connector and Blind Mate Hardware

MXC® Plug

- Cable Boot
- Crimp Ring
- Spring Push (2-Piece Set)
- PRIZM® MT Ferrule
- Housing
- Dust Cap

MXC® Receptacle

- Optional Heatshrink Attachment
- PRIZM® MT Ferrule
- Receptacle
- Dust Plug

MXC® Blind Mate Hardware

- MXC® Plug w/ Push-Pull Tab
- 6 Port MXC® Plug Carrier
- Back Plane
- 6 Port MXC® Internal Blind Mate Assembly
- MXC® Plug, Internal
- 6 Port MXC® Hybrid Blind Mate Adapter
- Mounting Bracket
US Conec’s novel PRIZM® MT expanded beam ferrule technology has revolutionized high density point-to-point interconnects by merging low cost multi-fiber ferrule component design with no-polish fiber termination processing. The PRIZM® MT ferrule combines US Conec’s industry leading high-precision fiber alignment capabilities with state-of-the-art molded optical component technology. The end result is a monolithic optical connector ferrule with fiber microholes, lenses, and mechanical alignment features offering robust and repeatable connections in challenging environments with little to no cleaning or inspection.

Features:
- Monolithic ferrule design
- Collimating lenses
- No physical contact
- No polish, low cost termination process
- Up to 64 fibers per ferrule
- ≤16 fibers per row
- ≤4 rows per ferrule
- Low insertion force
- Debris insensitivity
- GR-1435 compliant
- Optional AR coating
- Compatible with MXC® connectors and other MT based connector embodiments

Performance Specifications

<table>
<thead>
<tr>
<th>Ferrule Grade</th>
<th>Random Mated Attenuation IL (≥ 97%)</th>
<th>Typical IL</th>
<th>Return Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multimode PRIZM® MT Elite</td>
<td>≤0.6dB</td>
<td>0.3dB</td>
<td>≥28dB</td>
</tr>
<tr>
<td>Multimode</td>
<td>≤1.2dB</td>
<td>0.9dB</td>
<td>≥25dB</td>
</tr>
<tr>
<td>Multimode + AR Coating</td>
<td>≤0.8dB</td>
<td>0.5dB</td>
<td>≥28dB</td>
</tr>
</tbody>
</table>

Actual empirical data on multiple selected lots to represent worst case ferrules with uncharacterized fiber.