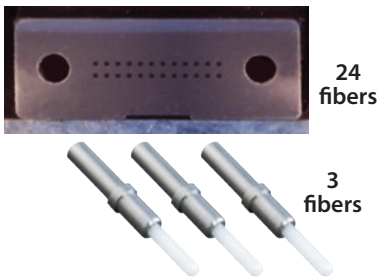
About PRIZM MT® and MT Elite® high-density fiber optic ferrule technology

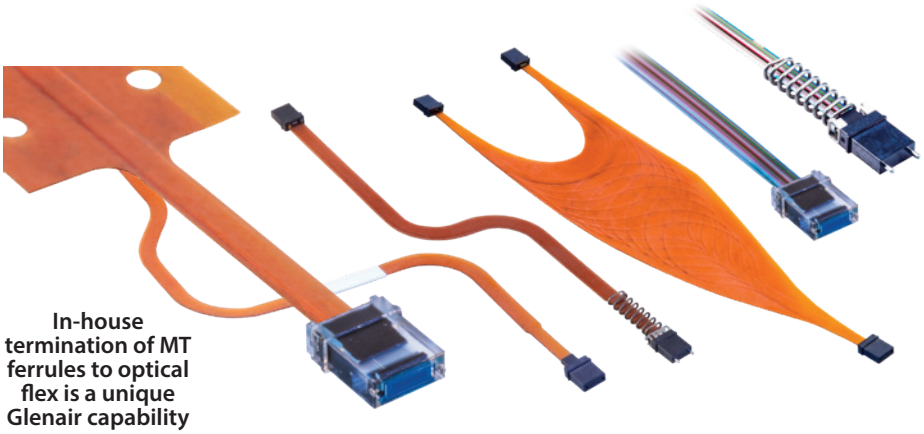
Glenair US and UK are qualified by US Conec to terminate 1 and 2 row PRIZM MT ferrules for ribbon and round cable fiber

PRIZM MT and MT Elite are ultra-high-density multi-line fiber optic ferrule designs that far surpass standard butt-joint ST type systems for both optical performance and package size in high-speed data transmission applications.

MT FERRULE AND CONVENTIONAL FIBER TERMINI SIZE COMPARISON



MT Elite supports up to 24 fibers in a single compact, lightweight ferrule. PRIZM MT supports up to 32 channels in the same package.



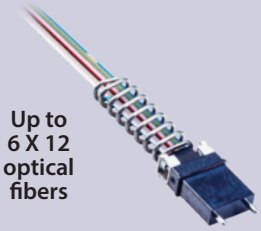
In-house termination of MT ferrules to optical flex is a unique Glenair capability

OPTICAL FLEX

Glenair's unique implementation of the MT ferrule—in both ribbonized cables as well as optical flex—delivers precise, rugged alignment and optical performance of these otherwise commercial-grade fiber optic solutions, bringing outstanding size and weight reduction to mil-aero fiber optic systems.

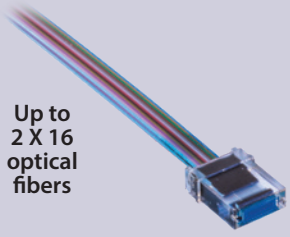
MT ELITE VS. PRIZM MT

Physical contact or butt-joint MT ferrules are branded by US Conec as their MT Elite product. PRIZM MT is the company's expanded beam solution. Both designs provide precise alignment of optical fibers for low insertion and return loss performance. MT Elite supports a higher total fiber line density, while PRIZM MT is designed for optimal performance in harsh application environments.



MT ELITE

- Stainless steel guide pins
- Singlemode and multimode
- 12-fiber arrays (up to 6 X 12)



PRIZM MT

- Molded "hole and post" alignment
- Multimode only
- 16-fiber arrays (up to 2 X 16)

Ruggedized, expanded beam and PC MT ferrules in Glenair signature harsh-environment cable assemblies and connectors

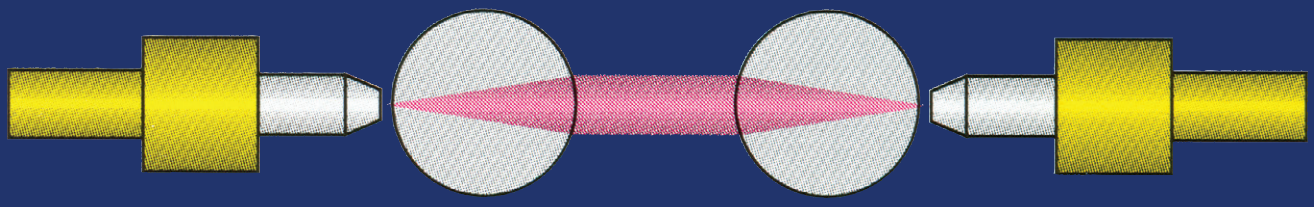
PRIZM MT FEATURES AND BENEFITS

- Fits interchangably with MT Elite in all Glenair connectors
- Supports 850 nm and 1310 nm applications
- Consistent end-face geometry
- Reliable, repeatable optical performance
- Outstanding stability under shock and vibration conditions
- High mating cycle durability
- Higher tolerance to debris contamination
- Low insertion loss and return loss vs. conventional expanded beam systems (typically 2X butt joint)
- PRIZM insertion loss ~0.3 dB increase vs. butt joint

EXECUTIVE SUMMARY

PRIZM MT is an easy-to-use fiber optic interconnection technology with a consistent end-face geometry for reliable, repeatable optical performance and improved stability under shock and vibration conditions. The expanded beam design delivers higher mating cycle durability and improved tolerance to debris contamination. Compared to conventional expanded-beam fiber optics with loss values 2X those of butt-joint fiber systems, PRIZM MT delivers a performance penalty on the order of just 0.2 dB insertion loss (typically) over butt-joint fiber optics. PRIZM MT is supplied by Glenair in factory-terminated cables assemblies only.

EXPANDED BEAM TECHNOLOGY



Expanded Beam connectors utilize a sealed lens to expand the emitting beam of light from the fiber media making connections less sensitive to alignment and contaminants. The expanded beam enters an air gap between connectors and is then refocused back into the fiber of the mating half. Sealed expanded beam assemblies are ideally suited for environmental applications where optical connectors are subject to repeated mating and unmating cycles. Easy to clean, terminate, and insensitive to contamination.

US CONEC PRIZM MT LENSED MULTI-FIBER FERRULES

From the maker: "…the novel, molded-in, hermaphroditic post and hole alignment feature eliminates the need for costly stainless steel guide pins. Complex, costly end face geometry and polishing associated with physical contact array connectors are eliminated with the no-polish, free-space, expanded beam PRIZM® MT ferrule—all while greatly reducing sensitivity to debris. Reduction in the necessary ferrule spring force makes this optical component ideal for applications requiring mass mating of multiple ferrules in high density trunk cables and optical backplanes."