AMP HEWLETT PACKARD USCONEC

SIECOR NTT Fujikura

Dear IEEE-1394b Members:

In October, the IEEE-1394b committee approved the Mini-MT as a candidate for S-800 long haul applications. The Mini-MT product has been improved as a plug/jack interface, MT-RJ. Anyone who has ever connected a telephone can mate an MT-RJ connector since the MT-RJ is modeled after the 8-position modular jack and plug.

The MT-RJ is a small form factor, snag-proof, duplex, fibre optic connector with impressive performance. The MT-RJ connector employs a multi-fiber ferrule technology as the platform for managing and controlling performance for both single-mode and multimode applications. This ferrule technology has been used successfully and is extremely well-distributed as the small form factor, fibre optic connector. It has been field proven for these high bandwidth critical applications for over 5 years globally.

Utilizing the MT technology pioneered by NTT and Fujikura, a team was formed to address emerging needs. From the outset, multi-source was the driver to take the best technologies from industry leaders and merge them together to form an end-to-end solution. The building block was the ferrule which the team and applications formed around.

To ensure full systems' design, the Mini-MT team focused simultaneously on transceiver and connectivity development. Hewlett Packard and AMP Lytel pursued development of reduced footprint transceivers, while AMP, SIECOR, USConec, Fujikura and NTT addressed the connector and cabling aspects. The result is a small form factor system that provides high density on printed circuit boards enabling improved real estate for network electronics making fiber optic implementation comparable with the 8-position modular jack for copper-based systems.

HP and AMP Lytel have developed transceivers using the MT-RJ that fit within the same space as the 8-position modular jack, effectively doubling the board capacity relative to the SC connector . Implementation of a fiber-based system can now be accomplished in half the hub cards previously required. This frees space in the equipment room while maintaining the manageability of the modular plug/jack combination of the 8-position modular jack. Licensing for both the transceiver and connector technology will be available consistent with the requirements of the IEEE.

At its most recent meeting, the TIA TR-41.8.1 committee on premises cabling addressed the next generation connector. TR 41.8.1 overwhelmingly advanced only the MT-RJ, over many other proposals, for consideration as the next generation fibre optic connector for building cabling. This includes both backbone and horizontal applications and paves the way for selection of the MT-RJ for 1394b applications.

The excellent design of the MT-RJ ferrule lends itself to manufacturers' creativity. This building block enables the use of manufacturers' developed tooling for the back end which simplifies

termination procedures through technological advances. The MT-RJ dramatically simplifies the termination process for field applications. The MT-RJ ferrule design is easily adapted to existing quick termination procedures.

Utilizing existing 900 micron fiber, the MT-RJ connector is compatible with existing commercially available cable. The MT-RJ design also accommodates ribbon fiber cable for full duplex design. The MT-RJ connector fully supports the use of standard, commercially available, multimode and single-mode fiber for both the cabling and patch cord assemblies.

The MT-RJ form factor easily allows compatibility with existing faceplates and patch panel cut-outs originally designed for 8-position modular jack implementation. The field-terminated jack fits within a 2" deep single-gang box along with multiple copper connections - a typical service requirement at the workstation. Density in the patch panel is again consistent with that of the 8-position modular jack allowing up to a manageable 24 ports in a 1U high 19" panel.

The pre-polished, epoxyless jack was designed for quick and easy field termination. After cleaving, the fibers are simply "poked home" directly into the back of the jack, individually or jointly. With a 1/4 turn of the actuator, the termination is complete! No longer is additional fiber length required to polish the fiber eliminating the need for fiber storage in the outlet or patch panel. It has become so much like copper that you can terminate the MT-RJ jack loaded in the patch panel, as easily as punching down conductors. Because of return loss requirements for high data rates and as stated in ANSI/TIA/EIA-568-A, only a pre-polished ferrule technology allows for a no-field polish installation.

We look forward to demonstrating the break-through MT-RJ system to you during the meetings in Ft. Lauderdale.

We cordially invite you to visit our hospitality suite and view our field termination demonstrations. This will take place between 5 and 10 PM Monday, December 1 in the Flagler Room of the Marriott North Hotel, Ft. Lauderdale, FL,. Join us for snacks and beverages. See you there!

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