# Mighty Mouse High-Speed and Ultra-Twinax: high-speed performance and signal integrity in an ultraminiature package

Glenair has expanded the Mighty Mouse line to include contacts and connectors optimized for high-speed digital applications. A wide range of interconnect technologies are available, including

- *High-Speed* series 80 with DuPont™ Teflon® insulators for superior electrical performance in protocol-specific applications like eSATA and USB 2.0/3.0. These connectors are ideally suited for use with Ethernet, USB and other protocol-specific wire types presented in this chapter.
- Mighty Mouse *Ultra-Twinax* connectors utilizing size #12 Twinax contacts for differential pair applications such as LVDS and CML, and 963-001 100 Ohm differential parallel pair data cable
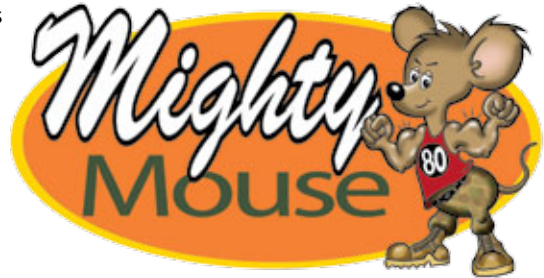
MIGHTY MOUSE *HIGH-SPEED*

Series 80 Mighty Mouse *High Speed* Connectors with DuPont™ Teflon® PFA Insulators

- ■ **For use with high-speed protocol wire including eSATA, 10GBASE-T, USB 2.0 / 3.0**
- ■ **DuPont™ Teflon® PFA insulators for superior insertion loss and balanced impedance**
- ■ **Series 801 double-start ACME thread and Series 804 push-pull quick disconnect connectors available**
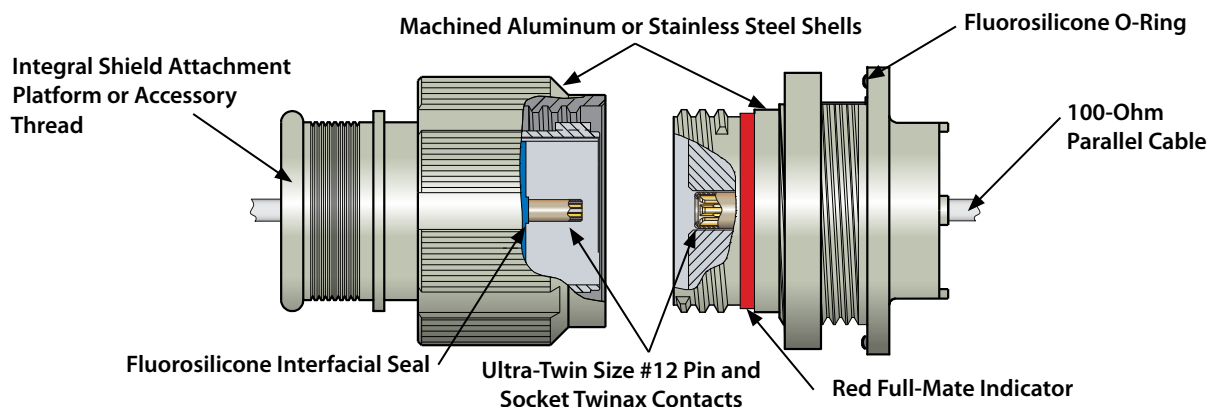- ■ **Discrete components or overmolded cordsets**

MIGHTY MOUSE *ULTRA-TWINAX*

- ■ **For ultra high-speed differential pair applications such as LVDS, CML and 963-001 100 Ohm differential parallel pair data cable**
- ■ **Size #12 Twinax and hybrid contact arrangements**
- ■ **Series 801 double-start ACME thread connectors**
- ■ **Discrete components or overmolded cordsets**

Series 80 Mighty Mouse *Ultra-Twinax* Connectors with Size #12 Twinax contacts

Mighty Mouse *ultra-twinax* plug and receptacle cutaway

Machined Aluminum or Stainless Steel Shells

Fluorosilicone O-Ring

Integral Shield Attachment Platform or Accessory Thread

100-Ohm Parallel Cable

Fluorosilicone Interfacial Seal

Ultra-Twin Size #12 Pin and Socket Twinax Contacts

Red Full-Mate Indicator

U.S. CAGE Code 06324

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Protocol Specific Cables
For USB, Ethernet, HDMI and Others
Compatible Connectors

Glenair®

This table compares contact and wire spacing and bandwidth performance in miniaturized interconnect applications. As contact density increases, the performance of the interconnect improves. Note the position of the High-Speed PFA and Size #8 Mighty Mouse compared to standard Mighty Mouse, and the position of the Ultra-Twinax Mighty Mouse with performance up to 10 GHz. The Series 80 Mighty Mouse High Density (HD) connector also performs exceptionally well in bandwidths up to 5 GHz, by virtue of its high-density TwistPin contact insert arrangements.

With appropriate contacts and a generic contact arrangement.

Contact and wire spacing

- M5015
- MIL-DTL-38999
- Series 80 Mighty Mouse
- Series 80 *High-Speed* Mighty Mouse (PFA)
- Series 80 MM Size #8 Quadrax/Twinax
- Series 80 Mighty Mouse High Density (HD)
- MIL-DTL-32139 Nanominiature 30 AWG wire
- Series 80 Mighty Mouse Ultra-Twinax

Bandwidth: 5-10 MHz | 500 MHz | 1.5 GHz | 3 GHz | 3-5 GHz | 5-7 GHz | 10 GHz
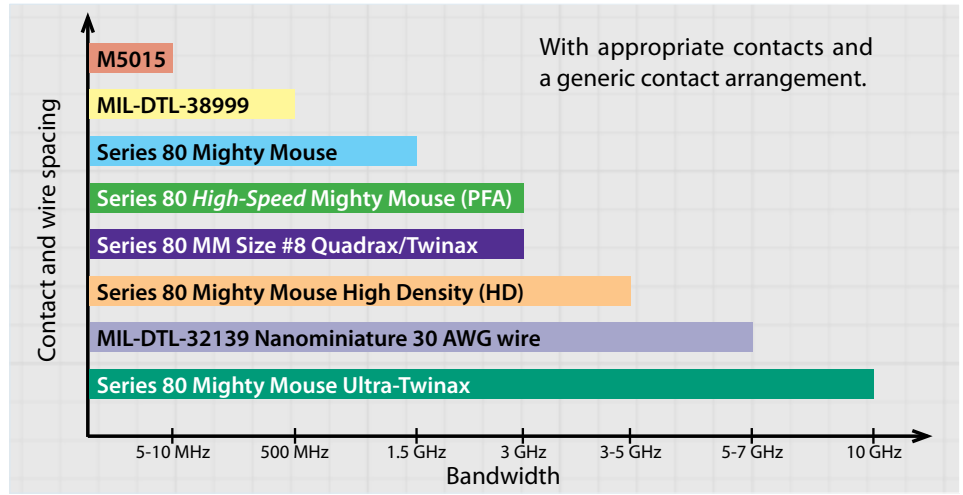
Mighty Mouse *High Speed* Contact Arrangements
Mating Face View of Pin Connector (Socket Connector Numbers are Reversed)

6 - 4	6 - 7	7 - 10	9 - 19	10 - 26
Shell Size 6 4 Size #23 Contacts	Shell Size 6 7 Size #23 Contacts	Shell Size 7 10 Size #23 Contacts	Shell Size 9 19 Size #23 Contacts	Shell Size 10 26 Size #23 Contacts

Mighty Mouse *Ultra Twinax* Size #12 Differential Twinax Contact Arrangements (Mating Face/Pin Connector)

7-1	10-2	16-5	17-7	21-12	10-201	10-200
Shell Size 7 1 Size #12 Twinax Contact	Shell Size 10 2 Size #12 Twinax Contacts	Shell Size 16 5 Size #12 Twinax Contacts	Shell Size 17 7 Size #12 Twinax Contacts	Shell Size 21 12 Size #12 Twinax Contacts	Shell Size 10 2 Size #12 Twinax 4 Size #23 Contacts	Shell Size 10 1 Size #12 Twinax 12 Size #23 Contacts

Glenair SuperSeal™ Ethernet and USB connectors are optimized for use with our Series 963 Ethernet and USB cables

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