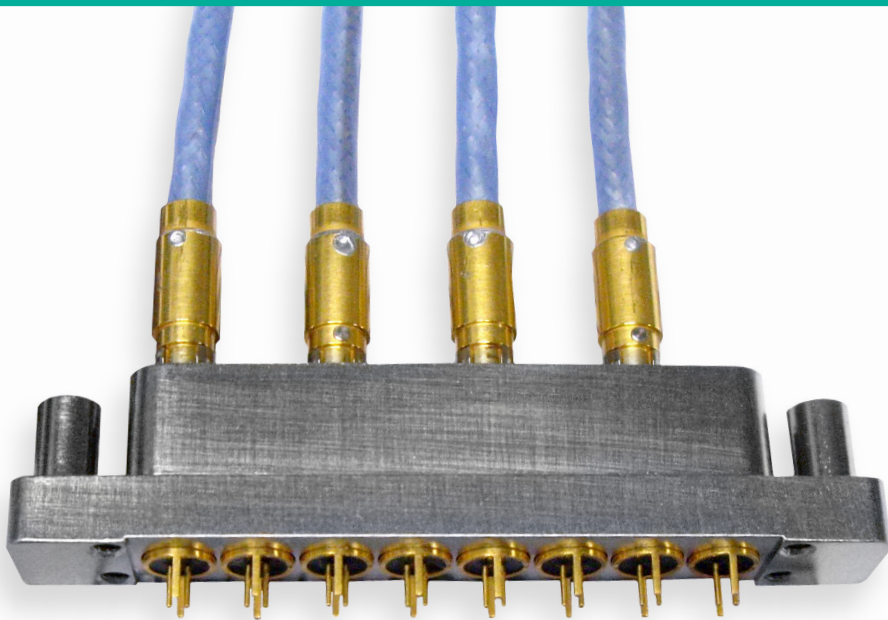


Micro-D Twinax Connectors



Micro-D Twinax



Smiths Interconnect offers a complete line of differential Twinax and Quadrx connectors, contacts and cable assemblies for high speed Ethernet, Firewire, and Fibre Channel applications. Differential pair quadrx and twinax connectors and cable assemblies offer superior performance in high speed matched impedance data-on-demand applications. The signal to signal and signal to shield characteristic impedance is maintained throughout the connector pair. A true twinaxial connector interface ensures signal integrity while minimizing jitter and data rate errors.

Testing Capabilities

Smiths Interconnect Quadrx and Twinax interconnects are characterized for testing eye pattern, jitter, skew, and insertion loss on differential pair 100 Ohm high speed gigabit ethernet applications with a wide variety of testing protocols. We utilize the Agilent E5071C 4 port network analyzer to measure the differential pair TDR impedance between Twinax connectors, cable assemblies, and quad cable Ethernet and Fibre Channel interconnect systems ensuring the most accurate acquired signal for high speed communications testing. The E5071C 4 port network analyzer is capable of highly accurate 100 Ohm differential measurements up to 20 GHz and can measure eye diagrams up to 16 Gbps.

Features

Fibre Channel

Ethernet: 10 Base-T, 100 Base-T, 1000 Base-T

Firewire: IEEE 1394a and 1394b

USB, DVII, HDMI and Infiniband

Specifications

| | |
|--|--|
| Temperature Rating | -55°C to + 125°C |
| Corrosion | MIL-STD-202 Method 101, Test Condition B |
| Shock | MIL-STD-202 Method 213, Test Condition B |
| Vibration | MIL-STD-202 Method 204, Test Condition B |
| Thermal Shock | MIL-STD-202 Method 107, Test Condition B |
| Durability | 500 mate/unmate cycles minimum |
| Dielectric Withstand Voltage | 250 VDC |
| Insulation Resistance | 5.000 MegaOhms min |
| Contact Current Rating | 3.0 Amps D.C. max |
| Bandwidth | Up to 3 GHz |
| Data Rates | Contacts designed to exceed 6 Gbps assembly dependent upon type and length of cable used |
| Differential Pair Cable Impedance | 100 Ohm \pm 10 Ohm |
| Signal to Shield Cable Impedance | 5 Ohm + 7 Ohm |

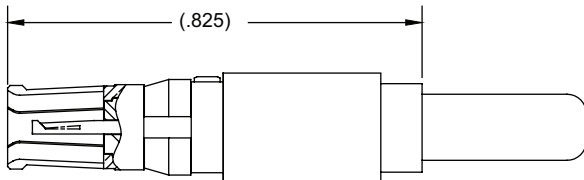
Materials and Finishes

| | |
|--|--|
| Shells & Inner Contacts | Brass per ASTM-B16, alloy UNS C3600 or BeCu per ASTM-B196, alloy UNS C17200, C17300 or leaded nickel copper, alloy UNS C19500, C19600 Gold plate per MIL-DTL-45204 Type II, Class 1 |
| Insulators | PTFE per ASTM-D1710 Ultem per ASTM-D5205 |
| Connector Plug/ Receptacle Shells | Aluminum per ASTM-B211/221, 6061-T6 Electroless nickel plate per SAE AMS-C-26074 or Cadmium plate per SAE AMS QQ-P-416 |

Smiths Interconnect's Micro-D Twinax Connectors (MDTX) offer twinax blindmate assemblies fitted into a low-profile metalized Micro-D style shell. This series allows for modularity of PCB routing of high speed signaling capable of 100 Ohm differential pair matched impedance for IEEE 1394b firewire and gigabit ethernet applications in a size 10 twinax contact. These connectors allow for maximum space utilization, ultra-miniature size, high vibration capability and are extremely light weight and modular with true signal integrity. Insert arrangements are available in 2, 4, 6 and 8 way twinax assemblies with mixed signal and power contacts available in hybrid layouts. Connectors are available with locking post mechanisms or blind mate features.

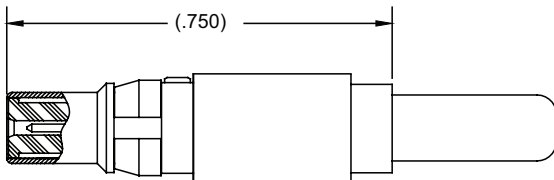
Please consult Smiths Interconnect for unique hybrid layouts and custom shell configurations.

SIZE 10 Twinax Socket Contact 100 Ohm for MDTX Cable Mount Plug



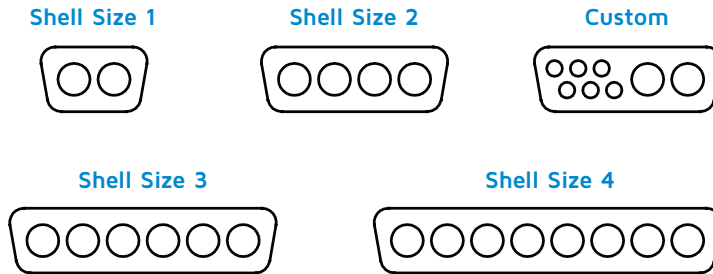
| Part Number | Cable Type | Cable |
|-------------|---------------------|--------------|
| 018934-0002 | Differential Twinax | 540-1153-000 |
| 018934-0003 | Flexible Twinax | 540-1161-000 |
| 018934-0004 | Differential Twinax | 540-1167-000 |

SIZE 10 Twinax Pin Contact 100 Ohm for MDTX Cable Mount Receptacle



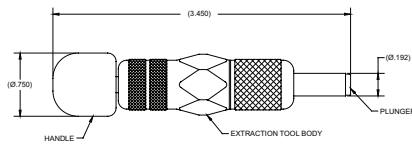
| Part Number | Cable Type | Cable |
|-------------|---------------------|--------------|
| 018834-0002 | Differential Twinax | 540-1153-000 |
| 018834-0003 | Flexible Twinax | 540-1161-000 |
| 018834-0004 | Differential Twinax | 540-1167-000 |

Insert Arrangements

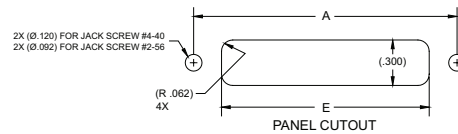


Shell Dimensions

| Shell Size | Contacts | A | B | C | D | E |
|------------|----------|--------|--------|--------|-------|--------|
| 1 | 2 | .845" | 1.070" | .600" | #2-56 | .572" |
| 2 | 4 | 1.285" | 1.510" | 1.040" | #2-56 | 1.012" |
| 3 | 6 | 1.765" | 2.040" | 1.480" | #4-40 | 1.452" |
| 4 | 8 | 2.205" | 2.480" | 1.920" | #4-40 | 1.892" |



Removal Tool SIR-035

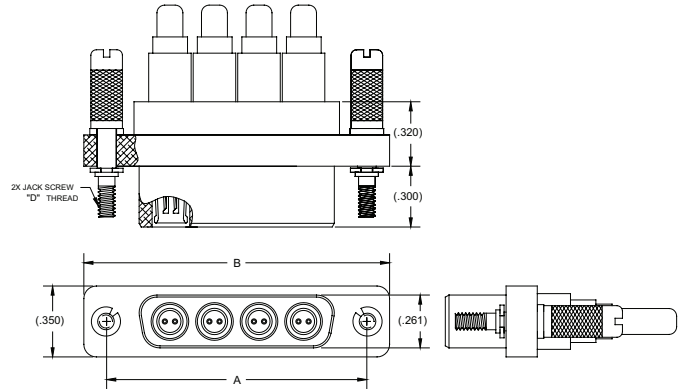


* Removable Twinax Contacts Require Removal Tool SIR-035 (ordered separately)

MDTX Cable Mount Plug

| Part Number | Contacts |
|-------------|----------|
| 014034-0012 | 2 |
| 014034-0014 | 4 |
| 014034-0016 | 6 |
| 014034-0018 | 8 |

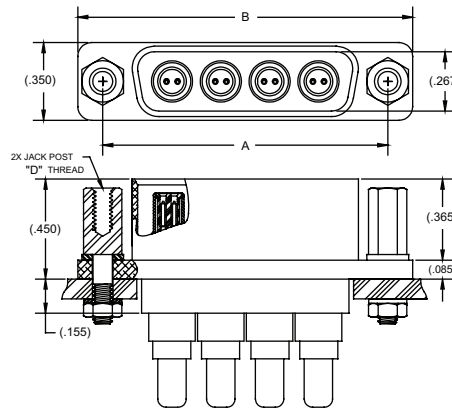
*Cable Mount Twinax Contacts Sold Separately



MDTX Cable Mount Receptacle

| Part Number | Contacts |
|-------------|----------|
| 014134-0012 | 2 |
| 014134-0014 | 4 |
| 014134-0016 | 6 |
| 014134-0018 | 8 |

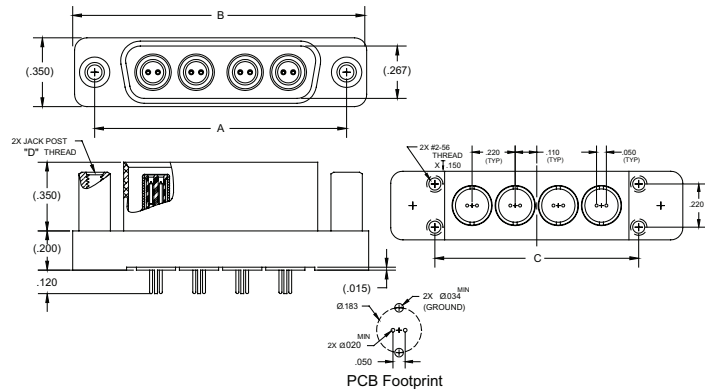
*Cable Mount Twinax Contacts Sold Separately



MDTX Receptacle With Straight PC Tail Twinax Pin Contact

| Part Number | Contacts |
|-------------|----------|
| 014117-0012 | 2 |
| 014117-0014 | 4 |
| 014117-0016 | 6 |
| 014117-0018 | 8 |

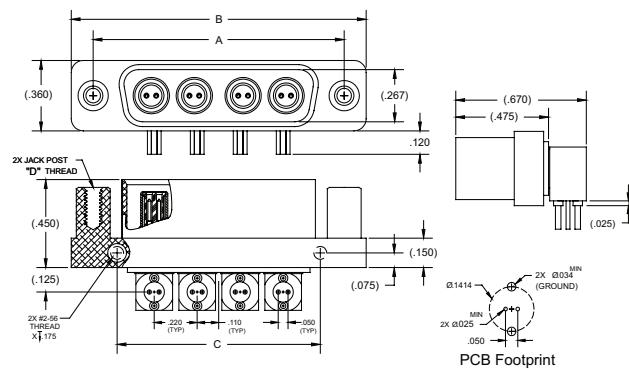
*PC Tail Twinax Contacts included



MDTX Receptacle With R/A PC Tail Twinax Pin Contact

| Part Number | Contacts |
|-------------|----------|
| 014117-1112 | 2 |
| 014117-1114 | 4 |
| 014117-1116 | 6 |
| 014117-1118 | 8 |

*R/A PC Tail Twinax Contacts included



How To Order



1 Connector #1

| | | |
|------------------------|---|--|
| 2 Cable Group # | Flexible Twinax 3 540-1161-000 | Differential Twinax 8 540-1153-000 3 4 540-1167-000 |
| 3 Connector #2 | OL for Open Lead | |

4 Cable Length in Inches (XXX)

| Cable Group | Cable Designation | Impedance (Ohms) | Jacket | Conductor (DIA) |
|-------------|-------------------|---|-----------------|------------------|
| 3 | 540-1161-000 | 100 | 0.130" | 0.024" |
| 8 | 540-1153-000 | Differential: 100 Sig. to Shield: 50 | 0.085" x 0.130" | 0.019" Stranded |
| 34 | 540-1167-000 | Differential: 100 Sig. to Shield: 50 | 0.117" x 0.160" | 0.0233" Stranded |

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