**3M Interconnect Products**
Short Form Catalog

# Comprehensive Solutions for Reliable Connections

# Complete Solutions for the Electronics Industry

3M Interconnect Solutions offers a comprehensive range of Interconnect Solutions for the electronics industry, with a product portfolio that includes connectors, cables, cable assemblies and assembly tooling for a wide variety of applications.

3M is dedicated to innovation, continually developing new products that become an important part of everyday life across many diverse markets. A number of 3M solution categories are based on custom-designed products for specialized applications. 3M Interconnect Solutions can help you design, modify and customize your product as well as help you seamlessly integrate our products into your manufacturing process on a global basis.

Design, modify and customize your product

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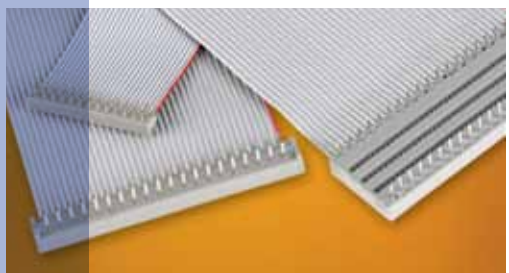
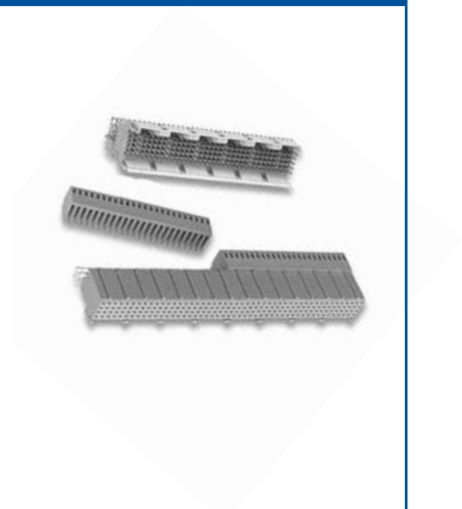


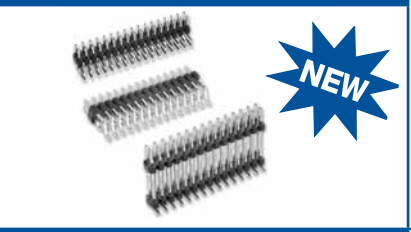
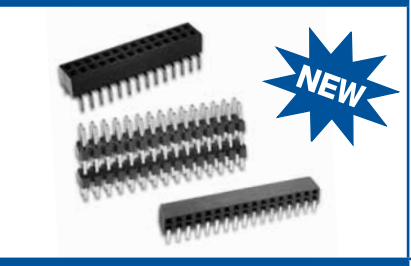
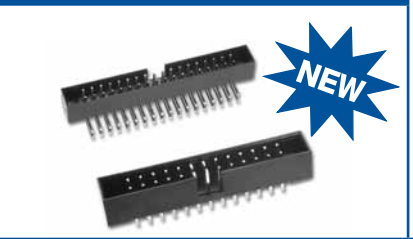
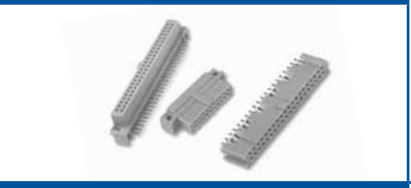
# 3M™ BACKPLANE CONNECTOR SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **DIN Connectors**<br> | • **RoHS Compliant Version Available**<br>• DIN 41612<br>• C-Form Plug and Socket<br>• C-Form Wiremount Plugs and Sockets<br>• R-Form Plug and Socket<br>• Q-Form Plug and Socket<br>• B-Form Wiremount Plug and Socket<br>• Pinless Shrouds<br>• Solder Tails or Press-Fit<br>• Inverse Versions<br>• EMLB Contact Loading<br>• PCB Retention Clips | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Engineering Thermoplastic<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" [ 1.27 µm ] Min. Nickel<br>Interface: 30 µ" [ 0.76 µm ] Gold or 3 µ" [ 0.08 µm ] Gold over 7 µ" [0.18 µm ] PdNi | **Current Rating:** 3.0 A @ 30°C T-rise Above Ambient<br>**Temperature Rating:** -55°C to +125°C |
| **MetPak™ 2-FB Connectors**<br>  | • **RoHS Compliant Version Available**<br>• Futurebus+®<br>• Inverse Version Available<br>• Vertical and Right Angle<br>• Stacking Versions<br>• Elevated Versions<br>• Guiding Features<br>• Pinless Shroud<br>• Power Header and Socket | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temp LCP<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" (1.27 µm) Nickel<br>Interface: 10 µ" [ 0.25 µm ] or 30 µ" [ 0.76 µm ] Gold or 3 to 5 µ" [ 0.07 to 0.12 µm ] Gold over 7, 27 or 40 µ" [ 0.18, 0.69, 1.01 µm ] PdNi | **Current Rating:** Signal: 1.5 A All Contacts Simultaneously<br>**Temperature Rating:** -55°C to +125°C |
| **MetPak™ CP2 Connectors**<br> | • **RoHS Compliant Version Available**<br>• Compact PCI®<br>• Types A, B, AB and C<br>• Header and Socket<br>• Grounding Options<br>• EMLB Contact Loading<br>• Coding Keys<br>• Pinless Shroud | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating**: 1 A at +70°C<br>**Temperature Rating:** -55°C to +125°C |

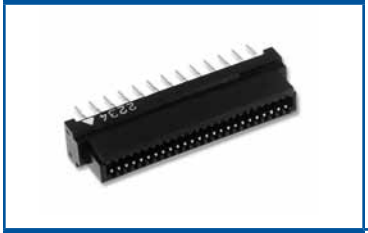
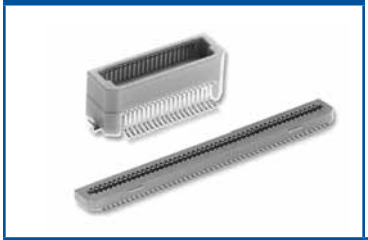
# 3M™ BACKPLANE CONNECTOR SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **MetPak™ HM Connectors**<br> | • **RoHS Compliant Version Available**<br>• Hard Metric (HM)<br>• 5- and 8-Row Versions<br>• Optional Four Integrated 8.25 A Power Blades for a Total of 33 A Power; Saves Space and Press-Fit Operations<br>• Socket and Header<br>• Power Options<br>• Protective Caps<br>• Coding Keys<br>• Shielding Options | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Thermoplastic<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Interface: 30 µ" [ 0.76 µm ] Gold or 5 µ" [ 0.13 µm ] Gold over 40 µ" [ 1.01 µm ] PdNi | **Current Rating:** (Fully Loaded): 1 A at 70°C Signal, 8.25 A @ 70°C Power<br>**Temperature Rating:** -55°C to +125°C |
| **MetPak™ HSHM Sockets and Headers**<br> | • **RoHS Compliant Version Available**<br>• Low Crosstalk at High Frequencies<br>• Optional Four Integrated 8.25 A Power Blades for a Total of 33 A Power; Saves Space and Press-Fit Operations<br>• 50/100 (Single-Ended/Differential) Impedance<br>• Modular/Scalable Format IEC 61076-4-101<br>• 63 Mated Lines Per Linear Inch<br>• Press-Fit Headers and Receptacles<br>• End-To-End Stackable with 5 Row 3M™ Metpak™ CP2, HM, and HSHM Headers<br>• High Speed Hard Metric (HSHM)<br>• **8 Gbps Per Second**<br>• Orthogonal Design Capable<br>• Differential Pairs in Rows or Columns<br>• Virtual Coax Capable<br>• 5- and 8-Row Versions<br>• Socket and Header<br>• Power Options<br>• Protective Caps for Headers<br>• Coding Keys<br>• Shielding Options<br>• Guide Pin Options | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Thermoplastic<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Interface: 30 µ" [ 0.76 µm ] Gold or 5 µ" [ 0.13 µm ] Gold over 40 µ" [ 1.01 µm ] PdNi | **Current Rating:** (Fully Loaded): 1 A at 70°C Signal, 8.25 A @ 70°C Power<br>**Temperature Rating:** -55°C to +125°C |
| **Ultra Hard Metric (UHM) Connectors**<br> | • **RoHS Compliant**<br>• 7+ Gbps Data Rates When Mated to Standard IEC 61076-4-101 2 mm Hard Metric Headers<br>• Low Crosstalk at High Frequencies<br>• 50/100 Ω (Single-Ended/Differential) Impedance<br>• Press-Fit Receptacles Fully Compatible With IEC 61076-4-101<br>• Dual Beam Contact Construction for High Reliability<br>• End-To-End Stackable with 5 Row 3M Metpak CP2, HM, UHM and HSHM Sockets<br>• Mates With 3M Metpak CP2, HM, UHM, HSHM Headers and Any Other cPCI® Type Headers | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Thermoplastic (LCP)<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Interface: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 1 A at 70°C Signal<br>**Temperature Rating:** -55°C to +125°C |

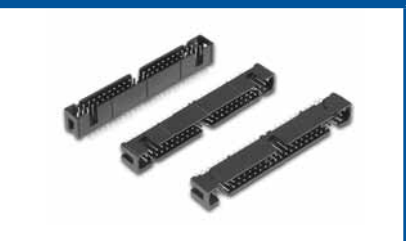
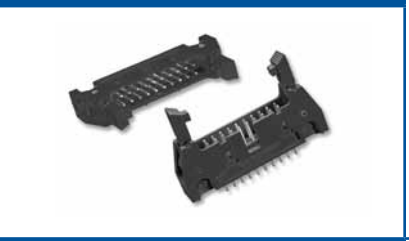
# 3M™ BOARDMOUNT CONNECTOR SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Pin Strip Headers Series 95X**<br>  <br> | • **RoHS Compliant**<br>• Single and Dual Row<br>• 3 - 80 Positions<br>• High Temperature Dielectric<br>• "No Lead" Wave and Reflow Solder Compatible<br>• Maximizes Use of PC Board Space<br>• End Stackable Feature<br>• Mates with Boardmount and Wiremount Products<br>• Available in Straight, Right Angle Through-Hole and Surfacemount Versions | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Thermoplastic<br>Color: Black<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 1.25–2.5 µm [ 100 µ" ] Nickel<br>Wiping Area: 0.25 µm [ 10 µ" ] Gold<br>Solder Tail Area: 1–3 µm [ 40–118 µ'" ] Matte Tin | **Current Rating:** 1 A<br>**Temperature Rating:** -40°C to +105°C |
| **Boardmount Pin Strips and Sockets 2 mm, Series 95X**<br>  <br> | • **RoHS Compliant**<br>• Maximizes Use of PC Board Space<br>• High Temperature Dielectric<br>• "No Lead" Wave and Reflow Solder Compatible<br>• Dual Row Design, 4–80 Pins<br>• Minimized PC Board Stacking Heights<br>• Mates With Pin Strip Header Products<br>• Available in Straight, Right Angle Through-Hole, Through-Board and Surfacemount Versions | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Thermoplastic<br>Color: Black<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 1.25–2.5 µm [100 µ" ] Nickel<br>Wiping Area: 0.25 µm [ 10 µ" ] Gold<br>Solder Tail Area: 1–3 µm [ 40–118 µ" ] Matte Tin | **Current Rating:** 1 A<br>**Temperature Rating:** -40°C to +105°C |
| **Box Headers 2 mm x 2 mm, Solder Tail Series 957**<br>  <br> | • **RoHS Compliant**<br>• High Temperature Dielectric<br>• "No Lead" Wave and Reflow Solder Compatible<br>• Maximizes Use of PC Board Space<br>• Center Slot Polarization Prevents Mis-Insertions and Reduces Insertion Time<br>• 10 - 68 Positions | **Contact**<br>Material: Square Pin 0.5 mm, Copper Alloy<br>**Insulation**<br>Material: High Temperature Thermoplastic<br>Color: Black<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 1.25–2.5 µm [ 100 µ" ] Nickel<br>Wiping Area: 0.25 µm [ 10 µ" ] Gold<br>Solder Tail Area: 1–3 µm [ 40–118 µ" ] Matte Tin | **Current Rating:** 1 A<br>**Temperature Rating:** -40°C to +105°C |
| **Sockets and Pin Strip Headers, .100" x .100" Series 929**<br> | • **RoHS Compliant Version Available**<br>• 2-72 Positions<br>• Single- and Dual-Row Options<br>• Through-Hole and Through-Board Options<br>• Customizable Stack Heights from .150" to 1.325"<br>• High Temperature Insulator Option | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester (PBT) or PCT (RoHS Compliant)<br>**Flammability** UL 94V-0<br>**Plating**<br>Pin Strip Underplating: 50 µ" [ 1.27 µm ] Nickel, Interface: 10 µ" [ 0.25 µm ] or 30 µ" [ 0.76 µm ] Gold<br>Socket Underplating: 100 µ" [ 2.54 mm ] Nickel, Interface: 10 µ" [ 0.25 µm ] or 30 µ" [ 0.76 µm ] Gold<br>Tin Plated Versions Available | **Current Rating:** 1 A, 2 A or 2.5 A<br>**Temperature Rating:** -40°C to +105°C |
| **Polarized Boardmount Sockets, .100" x .100" Series 5100, 6800, 8500, 9100**<br>  | • **RoHS Compliant**<br>• 10-64 Positions<br>• Vertical and Right Angle Options<br>• Center Bump Polarization | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 2 µm [ 79 µ" ] Nickel<br>Wiping Area: 0.3 µm [ 12 µ" ] Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **Sockets and Pin Strip Headers, 2 mm x 2 mm Series 15**<br> | • **RoHS Compliant Version Available**<br>• 4-60 Positions<br>• Single and Dual-Row Options<br>• Surfacemount, Through-Hole and Through-Board Options<br>• Customizable Stack Heights from .101" to 1.418"<br>• High Temperature Insulator | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled PCT<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50-150 µ" [ 1.27-3.81 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |

# 3M™ BOARDMOUNT CONNECTOR SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Pak 50 Sockets and Headers Series P50**<br>  | • **RoHS Compliant**<br>• 20-200 Positions<br>• .050" Pitch<br>• Reliable Ribbon Contacts<br>• 7.0 - 30.0 mm Stack Heights<br>• Parallel, Perpendicular and End-to-End Mating<br>• Audible Tactile "Click" for Blind Mating<br>• Optional Power/Ground Pins<br>• Wiremount Options Available | **Contact**<br>Material: Phosphor Bronze<br>**Insulation**<br>Material: Glass Filled Nylon<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: Nickel<br>Wiping Area: 10 µ" [ 0.25 µm ] Gold | **Current Rating:** 0.5 A<br>**Temperature Rating:** -55°C to +85°C |
| **Pak 10 Plugs and Connectors Series PK10**<br> | • **RoHS Compliant**<br>• 30-100 Positions<br>• 1.0 mm Pitch<br>• Optional Power/Ground Pins<br>• Parallel, Perpendicular and End-to-End Mating | **Contact**<br>Material: Phosphor Bronze<br>**Insulation**<br>Material: Glass Filled LCP<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: Nickel<br>Wiping Area: 2 µ" [ 0.05 µm ] or 4 µ" [ 0.1 µm ] Minimum Gold | **Current Rating:** 0.5 A<br>**Temperature Rating:** -55°C to +85°C |
| **Pak 8 Plug Connectors Series P08**<br>  | • **RoHS Compliant**<br>• 20-100 Positions<br>• .8 mm Pitch<br>• 3.0 - 8.0 mm Stack Heights | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Plastic<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Wiping Area: 8 µ" [0.20 µm] Gold | **Current Rating:** 0.5 A<br>**Temperature Rating:** -55°C to +85°C |
| **Pak 8 Hermaphroditic Connector Series P08**<br> | • **RoHS Compliant**<br>• 30-100 Positions<br>• .8 mm Pitch<br>• 11.5 mm Mated Height<br>• Mates to Itself, One Part on the Bill of Material | **Contact**<br>Material: Phosphor Bronze<br>**Insulation**<br>Material: High Temperature Plastic<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Wiping Area: 8 µ" [ 0.20 µm ] Minimum Gold | **Current Rating:** 0.5 A<br>**Temperature Rating:** -55°C to +85°C |
| **Pak 5 Connectors Series P05N**<br> | • **RoHS Compliant**<br>• 20-100 Positions<br>• .5 mm Pitch<br>• 3.0 - 6.0 mm Stack Height | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Thermoplastic<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Wiping Area: 8 µ [ 0.2 µm ] Gold | **Current Rating:** 0.5 A Per Contact<br>**Temperature Rating:** -55°C to +85°C |
| **Pak 5 Plugs Series PK5**<br> | • **RoHS Compliant**<br>• 40-160 Positions<br>• .5 mm Pitch<br>• 4.0 - 8.0 mm Stack Heights | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass filled LCP<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: Nickel<br>Wiping Area: 2 µ" [ 0.05 µm ] Minimum Gold over Nickel | **Current Rating:** 0.3 A<br>**Temperature Rating:** -55°C to +85°C |

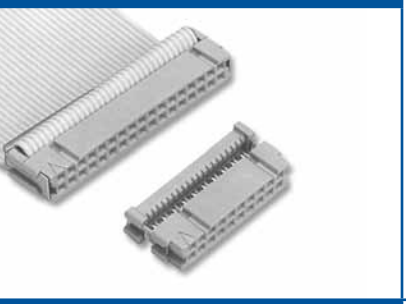
# 3M™ BOARDMOUNT CONNECTOR SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **4-Wall Low Profile Headers, .100" x .100", Series 2500 and Series D2500**<br>  | • **RoHS Compliant Low Profile, Space Saving Design**<br>• Center Slot Polarization<br>• Optional Retainer Clip for Locking Sockets in Place and Increasing Connection Reliability in Vibration Prone Environments<br>• Optional High Temperature Insulator<br>• Straight, Right Angle Through-Hole, and Straight Surfacemount Versions Available<br>• 10-64 Positions | **Contact**<br>Material: Brass<br>**Insulation**<br>Material: High Temp Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50-100 u" [ 1.27 - 2.54 µm ] Nickel<br>Wiping Area: 30 u" [ 0.76 µm ] Gold for 2500 Series<br>10 µ" [ 0.25 µm ] Gold for D2500 Series<br>Solder Tails: 40-120 u" [ 1-3 µm ] Matte Tin | **Current Rating:** 2 A<br>**Temperature Rating:** -55°C to +105°C |
| **4-Wall Latch/Eject Headers, .100" x .100", Series 3000, Series D3000**<br>  | • **RoHS Compliant Version Available**<br>• 10-64 Positions<br>• Straight and Right Angle Tails<br>• Vertical Compliant Pin Option<br>• 3- or 4-Wall Options<br>• Robust Roll Pin Latch System<br>• High Temperature Option | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 100 µ" [ 2.54 µm ] Nickel - Overall<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold 30 µ" Gold for 3000 Series, 10 µ" Gold for D3000 Series | **Current Rating:** 2 A<br>**Temperature Rating:** -55°C to +105°C |
| **Latch/Eject Headers, 2 mm Series 1552**<br> | • **RoHS Compliant**<br>• 13 Pin Counts, Ranging from 6–50 Positions<br>• Robust Ejectors for Vibration Environments and to Reduce Likelihood of Latch Breakage when Ejecting<br>• Mates to 3M™ Sockets, IDC, 1522 Series and 3M™ Molded Cable Assemblies, 2M Series (with Latching Ear Option) | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Wiping Area: 10 µ" [ 0.25 µm ] Gold or 30 µ" [ 0.76 µm ] Gold<br>Solder Tails: 200 µ" [ 5.0 µm ] Matte Tin | **Current Rating:** 1 A<br>**Temperature Rating:**<br>Operating Temperature: -55°C to +105°C |
| **4-Wall Condo Headers, .100" x .100" Series 3400**<br> | • **RoHS Compliant Version Available**<br>• 20-128 Positions<br>• Right Angle Tails<br>• 3- or 4-Wall Options<br>• Robust Roll Pin Latch System<br>• High Temperature Option<br>• 3-Wall Fits in VME Board Stacking Criteria<br>• "HDI" Alternative | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 100 µ" [ 2.54 µm ] Nickel - Overall<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **Surfacemount Latch/Eject Headers, .100" x .100" Series N4600**<br> | • **RoHS Compliant Version Available**<br>• 10-60 Positions<br>• Robust Roll Pin Latch System<br>• High Temperature Body<br>• Raised Body and Gull Wing Leads Allow for Easy Inspection | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 100 µ" [ 2.54 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |

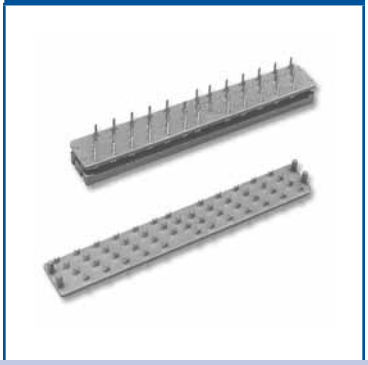
# 3M™ WIREMOUNT CONNECTOR SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Pak 50 Wiremount Sockets Series P25E, P25LE, P50E**<br> | • **RoHS Compliant**<br>• 20-100 Positions<br>• Accepts .025" And .050" Cable<br>• Integrated Latch/Eject<br>• Audible Tactile "Click" for Blind Mating | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 100 µ" [ 2.54 µm ] Nickel<br>Wiping Area: 10 µ" [ 0.25 µm ] Gold | **Current Rating:** 0.5 A<br>**Temperature Rating:** -55°C to +85°C |
| **Link Connectors, .100" IDC Series 381 and 382**<br> | • **RoHS Compliant**<br>• Simple and Low Cost Wiring Solution<br>• Hermaphroditic Mating Wiremount Connector<br>• Meets CC-Link/LT Standard IDC Termination to Discrete Wire or Flat Cable with Standard Pliers<br>• Straight and Right Angle Boardmount Sockets | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester (PBT)<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 2.54 µm [100 µ"] Minimum Nickel<br>Wiping Area: 0.2 µm [ 8 µ" ] Minimum Gold with Lubricant<br>Solder Tails: Gold Flash | **Current Rating:** 5.0 A<br>**Temperature Rating:** -20°C to +70°C |
| **Mini-Clamp Sockets and Plugs, Wiremount Series 371 and 373**<br> | • **RoHS Compliant**<br>• Flexible, Easy-To-Use, Wire-To-Wire or Wire-To-Board Connector System<br>• High Number of Mating Cycles<br>• Mating Latch Features Provide a Reliable Interconnection in Demanding Applications<br>• Allows Easy and Simple Interconnecting of Sensors or Other Discrete Wire Devices<br>• Dust Cap Accessory Available for Use in Harsh Environments | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Nylon<br>Color: Black<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 2.54 µm [100 µ"] Minimum Nickel<br>Wiping Area: 0.2 µm [8 µ"] Minimum Gold with Lubricant<br>Solder Tails: Gold Flash | **Current Rating**: 3.0 Amps<br>**Temperature Rating:**<br>-20˚C to +85˚C Ambient (1.0 A max.)<br>-20˚C to +75˚C Ambient (2.0 A max.)<br>-20˚C to +60˚C Ambient (3.0 A max.) |
| **Mini-Clamp Sockets, 2 mm, Boardmount and SMT Series 372**<br> | • **RoHS Compliant**<br>• Low Profile Design Minimizes Overall Thickness<br>• Compact Design Saves Board Space<br>• Multiple PCB Locating Post Layouts to Provide Competitive Compatibility<br>• Solder Tab Design Helps Provide a Reliable Solder Joint<br>• Matching Latch Feature Provides a Reliable Interconnection in Demanding Applications<br>• High Number of Mating Cycles (300)<br>• Maximum Current Rating of 3 Amps<br>• Dust Cover Accessory Available For Use in Harsh Environments | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: LCP<br>Color: Black<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: Nickel<br>Wiping Area: 0.2 µm [ 8 µ" ] Minimum Gold with Lubricant<br>Solder Tails: Gold Flash | **Current Rating**: 3.0 Amps<br>**Temperature Rating:**<br>-20˚C to +85˚C Ambient (1.0 A max.)<br>-20˚C to +75˚C Ambient (2.0 A max.)<br>-20˚C to +60˚C Ambient (3.0 A max.) |
| **Power Clamp Sockets, Headers and Branch Series 355, 356 and 357**<br> | • **RoHS Compliant**<br>• 5 Position<br>• Wiremount Socket<br>• Vertical Header<br>• Branch Header<br>• Easy, Labor Saving and Reliable IDC Termination<br>• Accommodates 18 - 20 AWG Discrete Wire<br>• No Special Wire Preparation Required<br>• Field Terminatable with a Common Pliers<br>• Polarization Provides Proper Interconnecting of Mated Pairs<br>• Based on CC-Link Standard | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Body Material: Nylon<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 2.5 µm Minimum Nickel<br>Wiping Area: 0.5 µm Minimum Gold<br>Solder Tails: Gold Flash | **Current Rating:** 10 A Maximum (1 Contact)<br>7 A Maximum (2 or More Contacts)<br>**Temperature Rating:** -20°C to +75°C Ambient |

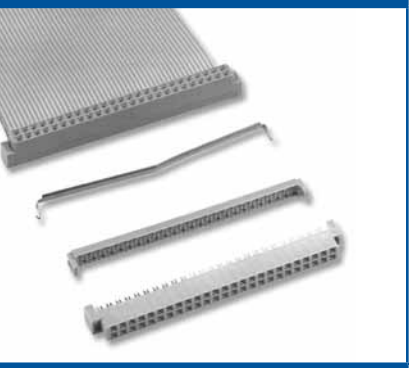
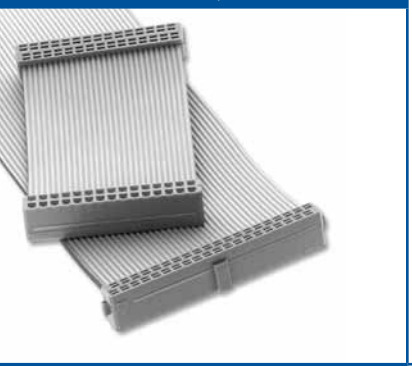
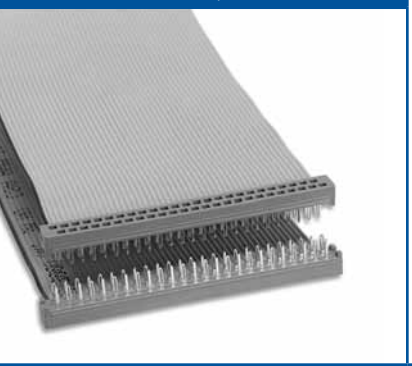
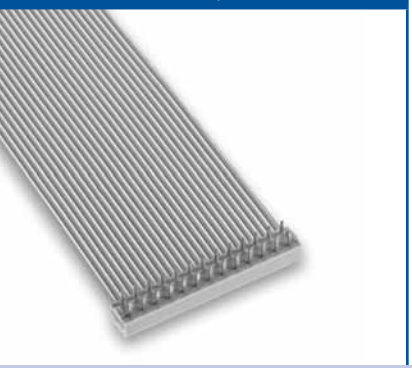
# 3M™ WIREMOUNT CONNECTOR AND ASSEMBLY SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Wiremount Sockets, .100" x .100" Series 3000**<br>  | • **RoHS Compliant**<br>• 10-60 Positions<br>• Two-Piece with Adhesive Cover for Daisy Chain or Round-to-Flat Cable Applications<br>• Plastic or Metal Strain Relief Option<br>• Positive Locking Metal Clip for High Cover Retention<br>• Open or Closed-End Covers | **Contact**<br>Material: Beryllium Copper<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating and U-Slot: 100 µ" [ 2.54 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold<br>Wire Accommodation: 26 and 28 AWG Stranded | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **Wiremount Sockets, .100" x .100" Series 891, Series D89**<br> | • **RoHS Compliant**<br>• Pre-Assembled for High Efficiency<br>• Pre-Assembled, Designed to Terminate Faster Than Two-Piece Sockets, "Sword" Packaging Makes Easy Loading of Manual And Semi-Automatic Assembly Equipment<br>• "Bumps" Prevent Premature Latch Locking During Shipment<br>• Military Polarization, with or without Centerbump<br>• Optional Double-Sided Adhesive Pull Tab For Easy Unplugging<br>• Double-Recessed Cover for Cable Terminating From Either Side Virtually Eliminates Need for Single-Recessed Cover Connectors | **Contact**<br>Material: Phosphor Bronze<br>**Insulation**<br>Material: Glass Filled Polyester (PBT)<br>Color: Gray<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] or 10 µ" [ 0.25 µm ] Gold<br>Wire Accommodation: 26 and 28 AWG Stranded | **Current Rating:** 2 A (EIA 364-70)<br>**Temperature Rating:** -55°C to +105°C |
| **Molded Socket Assembly, .100" x .100" Series 87, 1M**<br> | • **RoHS Compliant** When Used with Compliant Cable<br>• 6-64 Positions<br>• Supplied as Complete Assembly Only (1M Series)<br>• Mates with Standard 0.25" Square Contacts on .100" x .100" Centers<br>• One Piece, Molded-on Construction Provides Integral Strain Relief<br>• High and Low Profile, Polarity and Pull Tab Options Available | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Plating**<br>Underplating and U-Slot: 50 - 150 µ" [ 1.27 - 3.81 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **Polarized Wiremount Sockets, .100" and .100" x .100" Series CHG**<br> | • **RoHS Compliant**<br>• 10-64 Positions<br>• Single- and Dual-Row Side-to-Side Stackable<br>• Single-Row 2-36 Positions<br>• Dual-Row 6-72 Positions<br>• Dual-Row Polarized Version<br>• IDC with Individual Strain Reliefs on Each Contact<br>• 22-28 AWG Discrete or Flat Cable Wire | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Wipe Area: 30 µ" [ 0.76 µm ] Gold<br>Underplating and U-Slot: 100 µ" [ 2.54 µm ] Nickel | **Current Rating:** 22-24 AWG: 2 A; 26-28 AWG: 1.5 A<br>**Temperature Rating:** -55°C to +105°C |
| **Wiremount Plugs, .100" x .100" Series 4600**<br> | • **RoHS Compliant**<br>• 10-64 Positions<br>• Open- or Closed-End Covers<br>• Optional Ejector Latcwhes<br>• Optional Mounting Flanges<br>• Plastic Strain Relief Option | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating and U-Slot: 100 µ" [ 2.54 µm ] Nickel<br>Wiping Area: 30 µ" [0.76 µm] Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +120°C |

# 3M™ WIREMOUNT CONNECTOR SOLUTIONS

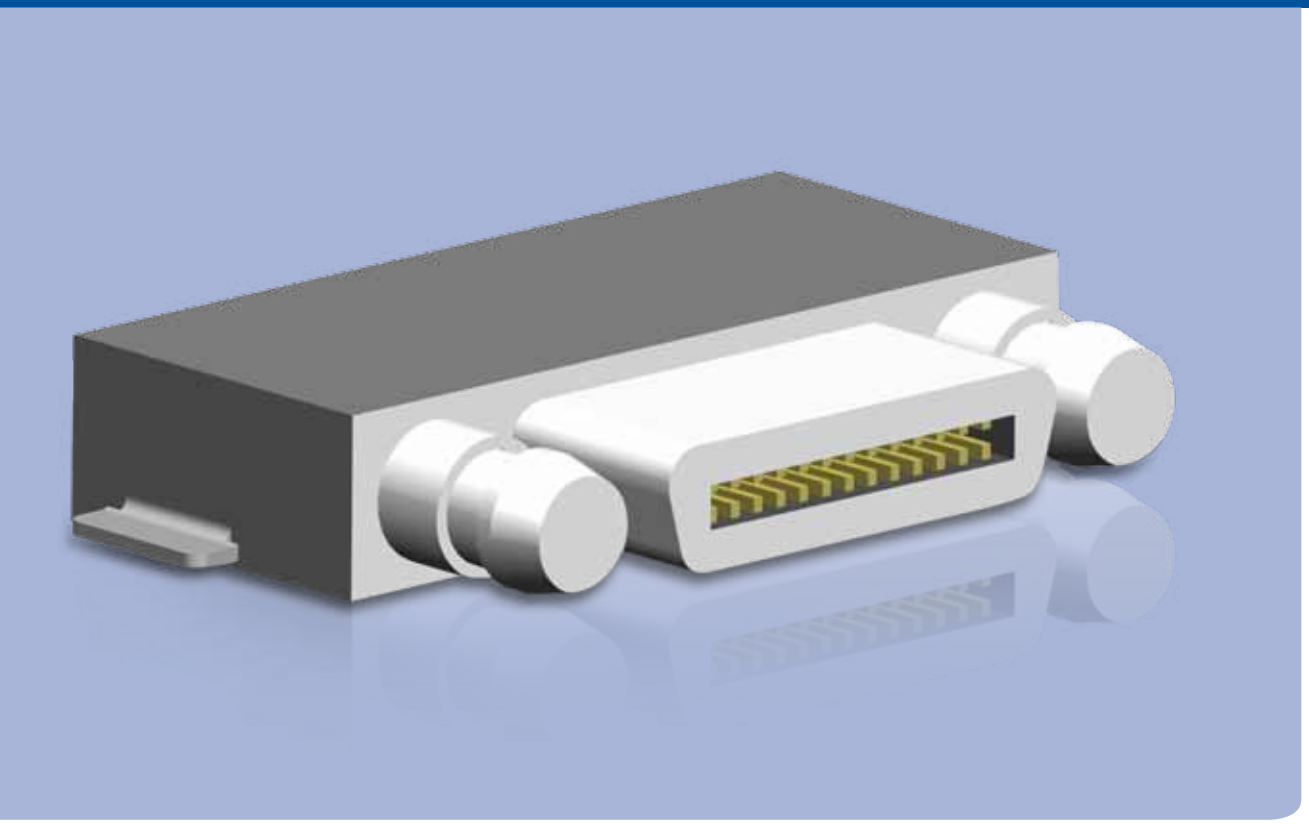
| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Tripolarized Wiremount Sockets, .050" x .100" Series 82**<br> | • **RoHS Compliant Version Available**<br>• 20-100 Positions<br>• Rugged Tri-Polarized Mating System<br>• High Performance Hill-n-Dale IDC Interface<br>• Metal Cover Latch<br>• Optional Metal Strain Relief<br>• Compatible with PVC, TPE and FEP Cable Insulations | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 100 µ" [ 2.54 µm ] Nickel<br>U-Slot: Matte Tin (RoHS compliant) or Tin-Lead<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 0.5 A<br>**Temperature Rating:** -55°C to +105°C |
| **4-Wall, Tripolarized Headers, .050" x .100" Series 81**<br> | • **RoHS Compliant Version Available**<br>• 20-100 Positions<br>• Straight and Right Angle<br>• Vertical SMT Option<br>• High Temperature | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Plastic<br>**Flammability** UL 94V-0<br>**Plating**<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold<br>Underplating: 100 µ" [ 2.54 µm ] Nickel | **Current Rating:** 0.5 A<br>**Temperature Rating:** -55°C to +105°C |
| **PCB 2-Row, .100" x .100" Series 78**<br> | • **RoHS Compliant**<br>• 10-64 Positions<br>• Low Profile<br>• 2.8 or 3.8 mm Tail Options | **Contact**<br>Material: Beryllium Copper<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 100 µ" [ 2.54 µm ] Nickel<br>U Slot and Solder Tails: Gold Flash | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **PCB 4-Row, .100" x .100" Series 3400**<br>  | • **RoHS Compliant Version Available**<br>• 10-50 Positions<br>• Low Profile Design | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 100 µ" [ 2.54 µm ] Nickel, Class 2<br>U-Slot and Solder Tails: 10 µ" [0.25 µm] Gold or 200 µ" [5.08 µm] Tin Lead | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +120°C |

# 3M™ WIREMOUNT CONNECTOR AND ASSEMBLY SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Wiremount Sockets, 2 mm x 2 mm Series 1522**  | • **RoHS Compliant**<br>• 10 - 50 Positions<br>• Rugged Cover Retention<br>• Pre-Assembled for High Efficiency<br>• Low Profile Metal Strain Relief Option<br>• Open or Closed Cover | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester (PBT)<br>Color: Gray<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating and U-Slot: 50-150 µ" [ 1.27-3.81 µm ] Nickel-QQ-N-290, Class 2<br>Wiping Area: Gold, MIL-G-45204, Type II Grade C | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **Molded Socket Assembly, 2 mm x 2 mm Series 87, 2M**  | • **RoHS Compliant** When Used with Compliant Cable<br>• Available in Multiple Sizes<br>• Sockets Mate with Standard 2 mm x 2 mm Headers and Plugs<br>• Molded-In Strain Relief | Material Varies for Connectors and Cables. See Website for Specifics. | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **Molded PCB Assembly, .100" x .100" Series 87, 1M**  | • **RoHS Compliant** When Used with Compliant Cable<br>• 6 - 64 Positions<br>• Supplied as Complete Assembly Only (1M Series)<br>• Mates with Standard .100" x .100" Board Pattern<br>• One Piece, Molded-on Construction Provides Integral Strain Relief<br>• Straight and Retention Pin Options Available | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Plating**<br>Underplating and U-Slot: 50 - 150 µ" [ 1.27 - 3.81 µm ] Nickel<br>Contact Tail: 300 - 400 µ" [ 7.62 - 10.16 µm ] Matte Tin | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **Molded PCB Assembly, 2 mm x 2 mm Series 87, 2M**  | • **RoHS Compliant** When Used with Compliant Cable<br>• 6-50 Positions<br>• Supplied as Complete Assembly Only (2M Series)<br>• Mates with Standard 2 mm x 2 mm Board Pattern<br>• One Piece, Molded-on Construction Provides Integral Strain Relief | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Plating**<br>Underplating and U-Slot: 50-150 µ" [ 1.27 - 3.81 µm ] Nickel, Class 2 [ 2.62 - 10.10 µm ] Matte Tin<br>Contact Tail: 300-400 µ" | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |

# 3M™ DEVICE-TO-BOARD CONNECTOR SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **CF Card Headers, CompactFlash™ Series N7E50**<br> | • **RoHS Compliant**<br>• Headers for Both Type I and II Cards<br>• Wide Array of Connector Size Options to Balance Between Footprint Size and Functionality | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Thermoplastic<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 2.03 µm [ 80 µ"] Nickel<br>Wiping Area: 0.38 µm<br>[ 15 µ" ] or 0.76 µm [ 30 µ" ] Gold | **Current Rating:** 0.5 A<br>**Temperature Rating:** -40°C to +85°C |
| **CF Card Ejectors, CompactFlash™ Series 7E50**<br> | • **RoHS Compliant**<br>• Mates to Selected N7E50 Series CF Headers to Provide Added Ejection Functionality<br>• Multiple Button Styles and Orientations Allow Design Flexibility | **Button**<br>Material: Glass-Filled High Temperature Thermoplastic<br>**Frame**<br>Material: Stainless Steel<br>**Flammability** UL 94V-0 | **Process Rating:** 260°C (per J-STD-020C) |
| **Serial Attached SCSI (SAS) Connectors Series SBR and SBH**<br> | • **RoHS Compliant**<br>• 6.0 Gbps Input/Output Connector for Backplane Applications<br>• Two Contact Mating Levels for Early-Mate and Late-Break Allows "Blind Mating" or "Hot Swap" Applications<br>• Capable of Accepting SFF-Compliant HDD Fitted with SAS or Serial Advanced Technology Attachment (SATA) Header<br>**OPTIONS**<br>• Elevated Receptacle Version for Additional Backplane Stand-off<br>• Plated Through-Hole, Press-Fit or SMT Available<br>• Right Angle Version Available<br>• 29-Position Device Plugs for Drive Interface<br>• 29-Position Combo with Power | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Thermoplastic<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" [1.27 µm] Nickel<br>Wiping Area: 30 µ" [0.76 µm] Gold<br>Solder Tails: 100 µ" [ 2.54 µm ] Tin | **Current Rating:**<br>Power Pin: 1.5 A<br>Signal Pin: 500 mA<br>**Temperature Rating:** -40°C to +85°C |
| **Serial Advanced Technology Attachment (SATA) Connectors Series 5607 and 5622**<br> | • **RoHS Compliant**<br>• 3 Gbps I/O Connector for HDD Applications<br>• EMLB Contacts for Hot Swap<br>• Blind Mate Polarization<br>• Meets SATA 2.6 Specifications<br>**OPTIONS**<br>• Plated Through-Hole, Press-Fit or SMT Available<br>• Extended Height Receptacles for Additional Backplane Standoff<br>• Right Angle Surfacemount Receptacle<br>• 7-Pin Signal Plug<br>• 22-Position Device Plugs for Drive Interface<br>• 22-Position Combo wih Power | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Thermoplastic<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ"<br>[ 1.27 µm ] Nickel<br>Wiping Area: 30 - 40 µ"<br>[ 0.76 µm ] Gold<br>Solder Tails: 100 µ"<br>[ 2.54 µm ] Tin | **Current Rating:**<br>Power Pin: 1.5 A<br>Signal Pin: 500 mA<br>**Temperature Rating:**<br>Operating Temperature: 0°C to +55°C<br>Non-Operating Temperature: -40°C to +85°C |



# 3D CAD models are available on the 3M website

3M Interconnects Solutions now offers 3D CAD models of select products on our website, 3M.com/interconnects.

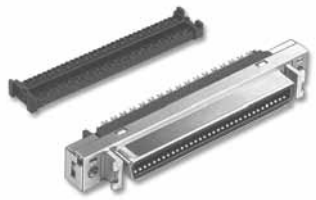
On the website, these models can be found in the Product Search box by clicking on “3D Models” and can also be found throughout the website if you choose to search for a corresponding product first. Contact your local 3M sales representative for information on CAD models of other products.

To view or open a 3D model, you must have a CAD program and the WinZip® software. To download, right-click on the desired file and choose the option to “save to desktop.”

# 3M™ DEVICE-TO-BOARD CONNECTOR AND ASSEMBLY SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Serial Advanced Technology Attachment (SATA) Cables Series 5601, 5602**<br> | • **RoHS Compliant**<br>• 7-Position Serial Signal Assembly<br>• Multiple Variations in Length and Interface Attachments<br>• Point-to-Point Signaling<br>• Polarized Interface Provides Proper Alignment<br>• 26 AWG Differential Pairs<br>• Meets SATA 2.6 Specification | **Insulation**<br>Material: High Temperature Thermoplastic<br>**Plating**<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold<br>Solder Tails: 100 µ" [ 2.54 µm ] Tin<br>Underplating: 50 µ" [ 1.27 µm ] Nickel | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |
| **Mini Serial Attached SCSI (miniSAS) Connectors, Series 8A26/8C26, 8A36/8B36, 8AB36**<br> | • **RoHS Compliant**<br>• 6 Gbps Data Rate<br>• Combination Connector with Attached Shell Available<br>• Multiple Keying Options<br>• Multiple Tail Options and Lengths Available on Shell<br>• Meets SAS 1.1 Specification<br>• Solder Hold Down Option on 26-Position Right Angle Receptacle Available<br>• External Housing Available in 1, 2 or 4 Ports | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: High Temperature Thermoplastic<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold<br>Solder Tails: 100 µ" [ 2.54 µm ] Tin | **Current Rating:** 0.5 A<br>**Temperature Rating:** -20°C to +85°C |
| **miniSAS External Cable Assemblies Series 8M26**<br> | • **RoHS Compliant**<br>• Capable of 6 Gbps Per Channel Data Rate<br>• 26 Conductor Signal Assembly<br>• Multiple Lengths Available<br>• Metal Latch<br>• Pull Tab Ring Provides Easier Unmating<br>• Two Levels of EMLB for Hot Plugging<br>• Multiple Key Options Available | **Connector**<br>**Backshell**<br>Material: Zinc Diecast<br>**Plating**<br>30 µ" [0.76 µm] Nickel<br>**Contact**<br>PCB Material: FR4<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold<br>Cable Conductor: Tin Plated Solid Conductor (AWG Depends on Length)<br>Drain Wire: Tin Plated Solid Conductor<br>Dielectric: Foam Polyethylene<br>Shield: Mylar<br>Jacket: Non-PVC<br>**Pulltab**<br>Material: Nylon<br>Color: Blue | **Current Rating:**<br>Per Contact: 0.5 A<br>**Operating Temperature:** -20°C to +75°C |

# 3M™ INPUT/OUTPUT CONNECTOR SOLUTIONS
# MINI DELTA RIBBON (MDR)

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **MDR Wiremount Plugs - IDC**<br>**Series 101XX-60X0, 101XX-8000**<br> | • **RoHS Compliant**<br>• 14-100 Positions<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• Digital LCD Interface as a 20 or 26 Contact Connector<br>• IEEE 1284C Interface as a 36 Contact Connector<br>• Camera Link® Interface as a 26 Contact Connector<br>• Accepts a Wide Variety of Cable Constructions Including Split, Flat, Round, Twisted Pair and Twinax Cables<br>• Accepts a Wide Variety of Shielded Junction Shells<br>**OPTIONS**<br>• Plastic-Non Shielded Version<br>• Termination Tools<br>• Junction Shells | **Contact**<br>Material: Beryllium Copper<br>**Insulation**<br>Material: Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.0 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |
| **MDR Wiremount Plugs - Solder**<br>**Series 101XX-3000**<br> | • **RoHS Compliant Version Available**<br>• 14-50 Positions<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• Solder Cup Termination Requires No Special Tooling<br>• Accepts a Wide Variety of Discrete Wire (24 to 30 AWG) Cable Construction<br>**OPTIONS**<br>• Junction Shells<br>• Camera Link Interface as a 26 Contact Connector | **Contact**<br>Copper Alloy<br>**Insulation**<br>Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.0 µm ] Nickel<br>Wiping Area: Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **MDR Panelmount Receptacles - IDC**<br>**Series 102XX-0210**<br>  | • **RoHS Compliant**<br>• 20-68 Positions<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• IEEE 1284C Interface as a 36 Contact Connector<br>• Interface Latch Design for Connection Stability<br>• Accepts a Wide Variety of Cable Constructions Including Flat, Shielded Flat and Twisted Pair Cables<br>• Replaces Boardmount Receptacle When a Wire Transition Is Needed<br>**OPTION**<br>• Wire Termination Tools<br>• Camera Link Interface as a 26 Contact Connector | **Contact**<br>Material: Beryllium Copper<br>**Insulation**<br>Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.0 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |
| **MDR Junction Shells,**<br>**Round Cable Exit, Plastic**<br>**Series 103XX**<br> | • **RoHS Compliant**<br>• 14-80 Positions<br>• Durable One-Piece Plastic Over Two-Piece Metal Junction Shell for Straight Round Cable (Compatible with 101XX-6000 EC Plug)<br>• MDR Digital LCD Interface as a 20 or 26 Contact Connector<br>**OPTIONS**<br>• 80 Position<br>• Quick Release Latching or Secure Thumbscrew Versions Available | **Outer Shell**<br>Material: ABS<br>**Inner Shell**<br>Material: Steel<br>**Flammability** UL 94V-0<br>**Plating**<br>Nickel | |

# 3M™ INPUT/OUTPUT CONNECTOR SOLUTIONS
# MINI DELTA RIBBON (MDR)

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **MDR Junction Shells, Round Cable Exit, Metal Series 103XX**<br> | • **RoHS Compliant**<br>• 14-100 Positions<br>• Metal Junction Shell for Round Cable<br>• Rugged Two-Piece Die Cast Metal Shell with Round Straight Exit (Compatible with 101XX-6000 EC Plug)<br>• Reliable Metal Strain Relief Clamp Provides Grounding for Cable Shield<br>• Excellent EMI/ESD Protection<br>• Quick Release Latching Mechanism<br>**OPTION**<br>• 60 Degree Cable Relief Option | **Shell**<br>Aluminum<br>**Plating**<br>Nickel | |
| **MDR Junction Shells, Flat Cable Exit, Metal Series 103XX**<br> | • **RoHS Compliant**<br>• Metal Junction Shell for Flat Cable<br>• 20-50 Positions<br>• Rugged Two-Piece Metal Shells for High Performance Pleated Foil Cable Assemblies (Compatible with 101XX-6000 EC Plug)<br>• Kit Includes Conductive Gasket for Cable Shield to Shell Continuity<br>• Accepts 3M 50 Ohm PFC Cables | **Shell**<br>Material: Zinc<br>**Gasket**<br>Material: Elastomer with Conductive Fibers<br>**Plating**<br>Nickel | |
| **MDR Junction Shells, Flat Cable Exit, Metal Series 103XX**<br> | • **RoHS Compliant**<br>• Rugged Two-Piece Metal Junction Shell for Straight Flat Cable (Compatible with 101XX-6000 EC Plug)<br>• 68-100 Positions<br>• Jackscrew Latching for Connection Stability<br>• Kit Includes Gasket for Cable Shield to Shell Continuity. Accepts 3M™ PFC Cables, 50 Ohm | **Shell**<br>Zinc<br>**Gasket**<br>Material: Elastomer with Conductive Fibers<br>**Plating**<br>Nickel | |
| **MDR Junction Shells, Round Cable, Solder Cup Series 103XX**<br> | • **RoHS Compliant**<br>• 14-50 Positions<br>• Design Features Durable Two-Piece Glass Reinforced Polyester Backshell with Ground Strap (Compatible with 101XX-3000 Plug)<br>• Round Straight Exit<br>• Reliable Metal Strain Relief Clamp Provides Grounding for Cable Shield<br>• Quick Release Metal Latching Mechanism | **Outer Shell**<br>Glass Reinforced Polyester<br>**Cable Clamp and Ground Plate**<br>Material: Stainless Steel<br>**Flammability** UL 94V-0 | **Temperature Rating:** -20°C to +85°C |

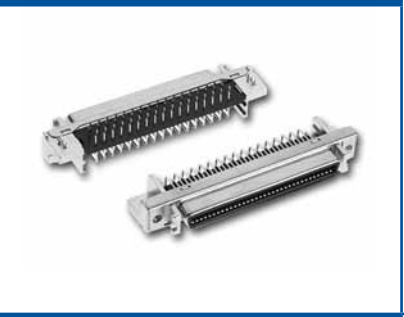
# 3M™ INPUT/OUTPUT CONNECTOR SOLUTIONS
# MINI DELTA RIBBON (MDR)

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **MDR Boardmount Receptacles, SMT Vertical Series 102XX**<br> | • **RoHS Compliant Version Available**<br>• 20-36 Positions<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• SMT Compatible PCT Insulator Material<br>• Screw Lock-Down for Reliable PCB Retention<br>• Interface Latch Design for Connection Stability<br>• IEEE 1284C Interface as a 36 Contact Connector<br>• Camera Link® Interface as a 26 Contact Connector<br>**OPTIONS**<br>• Dust Covers<br>• Board Lock and Panel Mount Hardware | **Contact**<br>Copper Alloy<br>**Insulation**<br>Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.00 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Minimum Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **MDR Boardmount Receptacles, SMT Right Angle Series 102XX**<br> | • **RoHS Compliant Version Available**<br>• 14-50 Positions<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• Ultra-Low Signal Skew for High Data Rate Transmission<br>• Interface Latch Design for Connection Stability<br>• Digital LCD Interface as a 20 or 26 Contact Connector<br>• Camera Link® Interface as a 26 Contact Connector<br>• Contacts: 14, 20, 26, 40 and 50 | **Contact**<br>Copper Alloy<br>**Insulation**<br>Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.00 µm ] Nickel<br>Wiping Area: 20 µ" [ 0.50 µm ] Minimum Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **MDR Boardmount Receptacles, PTH Vertical Series 102XX**<br> | • **RoHS Compliant Version Available**<br>• 14-100 Positions<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• Rugged Die Cast Metal Case Construction<br>• Screw Lockdown for Reliable PCB Retention<br>• Interface Latch Design for Connection Stability<br>• IEEE 1284C Interface as a 36 Contact Connector<br>**OPTIONS**<br>• Dust Covers<br>• Board Lock and Panel Mount Hardware | **Contact**<br>Copper Alloy<br>**Insulation**<br>Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.00 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Minimum Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |

# 3M™ INPUT/OUTPUT CONNECTOR SOLUTIONS
# MINI DELTA RIBBON (MDR)

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **MDR Boardmount Receptacles, Compliant Pin Vertical Series 102XX**<br> | • **RoHS Compliant**<br>• 14-100 Positions<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• Rugged Die Cast Metal Case Construction<br>**OPTIONS**<br>• Dust Covers<br>• Board Lock and Panel Mount Hardware | **Contact**<br>Copper Alloy<br>**Insulation**<br>Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.00 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Minimum Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |
| **MDR Boardmount Receptacles, PTH Right Angle Series 102XX**<br> | • **RoHS Compliant**<br>• 14-100 Positions<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• Rugged Die Cast Metal Case Construction Available<br>• SMT Compatible PCT Insulator Material<br>• Screw or Ground Lock for Reliable PCB Retention<br>• Interface Latch Design for Connection Stability<br>• IEEE 1284C Interface as a 36 Contact Connector<br>**OPTIONS**<br>• Stamped Metal Face and Die Cast Versions<br>• Dust Covers<br>• Board Lock and Panel Mount Hardware | **Contact**<br>Copper Alloy<br>**Insulation**<br>Glass Reinforced Polyester (PCT)<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.00 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Minimum Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **MDR Boardmount Receptacles, PTH Right Angle Condo Series 102XX**<br> | • **RoHS Compliant Version Available**<br>• Positions 40 (2 x 20), 100 (2 x 50) and 136 (2 x 68)<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• Rugged Die Cast Metal Case Construction<br>• Screw Lockdown for Reliable PCB Retention<br>• Interface Latch Design for Connection Stability<br>• Stacked Receptacles Save Board Space<br>**OPTIONS**<br>• Dust Covers<br>• Board Lock and Panel Mount Hardware | **Contact**<br>Copper Alloy<br>**Insulation**<br>Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.00 µm ] Nickel<br>Wiping Area: 20 µ" [ 0.50 µm ] Minimum Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |
| **MDR Boardmount Plugs, PTH Vertical Series 101XX**<br> | • **RoHS Compliant Version Available**<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• Contacts: 50 and 100 | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.00 µm ] Nickel<br>Wiping Area: 8 µ" [ 0.20 µm ] Minimum Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |

# 3M™ INPUT/OUTPUT CONNECTOR SOLUTIONS
# MINI DELTA RIBBON (MDR)

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **MDR Boardmount Plugs, PTH Right Angle Series 101XX**<br> | • **RoHS Compliant Version Available**<br>• 20-50 Positions<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• Rugged Die Cast Metal Case Construction<br>• Screw or Ground Lock PCB Retention<br>• IEEE 1284C Interface as a 36 Contact Connector<br>**OPTIONS**<br>• Normal and Reverse "D" Interface Options<br>• Panel and Board Locking Hardware | **Contact**<br>Copper Alloy (C521)<br>**Insulation**<br>Glass Reinforced Polyester-Body<br>Glass Reinforced Polyester-Alignment Plate<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.00 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Minimum Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |
| **MDR Boardmount Plugs, Straddlemount Series 101XX**<br> | • **RoHS Compliant Version Available**<br>• 26, 50, 68 and 100 Positions<br>• Wiper-on-Wiper Contact for Reliable Repetitive Plugging<br>• Solder Tails Require No Special Tooling | **Contact**<br>Copper Alloy (C521)<br>**Insulation**<br>Glass Reinforced Polyester-Body<br>Glass Reinforced Polyester-Insert Mold<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.00 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Minimum Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |
| **MDR Connectors, 68-Position BM SCSI Footprint Series 102**<br>  | • **RoHS Compliant**<br>• Reverse Pin Layout — SCSI-2 Board Compatible<br>• Proven Reliability of the MDR Ribbon Contact Interface | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.03 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Minimum Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **MDR Connectors, 1S10 Series 102**<br> | • **RoHS Compliant**<br>• Rugged Die Cast Body Resists Tipping During Automated Soldering Operations<br>• Wiper-On-Wiper Contact for Reliable Repetitive Plugging<br>• Ultra-Low Signal Skew for High Data Rate Transmission<br>• Interface Latch Design for Connection Stability<br>• Suitable for Thumbscrew Attach (See TS-0142 for Available Hardware)<br>• MDR Digital LCD Interface as a 20 or 26 Contact Connector<br>• Camera Link® Interface as a 26 Contact Connector<br>• Contact: 14, 20, 26, 40 and 50 | **Contact**<br>Material: Copper Alloy<br>Body Material: Glass Reinforced Polyester (PCT)<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.00 µm ] Nickel<br>Wiping Area Plating: See Ordering Information | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +85°C |

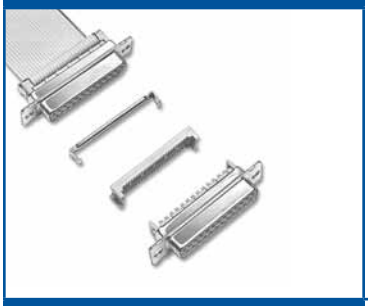
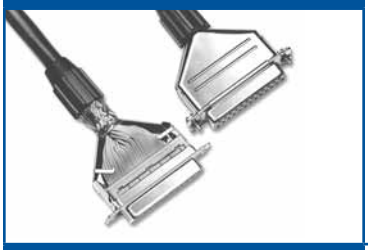
# 3M™ INPUT/OUTPUT CONNECTOR & CABLE ASSEMBLY SOLUTIONS MINI DELTA RIBBON (MDR)

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **MDR Cable Assemblies, Power Over Camera Link® Series 1SXXX, 1MXXX**<br> <br> | • **RoHS Compliant**<br>• 3M Is One of the Recognized Leaders in Camera Link® Connectivity<br>• Supports Base Configuration Power over Camera Link® Applications<br>• Straight or Right Angle Cable Exit<br>• Flexible Cable Options Available for Moving Head Applications<br>• SDR-to-SDR and SDR-to-MDR Configurations Available for Cross-Platform Use | Materials Vary for Connectors, Cables, Shells and Jackscrews. See Website for Specifics. | **Current Rating:** 0.5 A<br>**Temperature Rating:** 0°C to +75°C |
| **MDR Cable Assemblies, Round Cable, Input/Output Series 14XXX, 4926, 4120**<br> | • **RoHS Compliant Pending on Some Versions**<br>• 14-100 Positions<br>• .050" Pitch Ribbon Style Contact Provides Reliable Mating and Is Industry Preferred<br>• Compatible for a Variety of LVDS, IEEE 1284, PanelLink™/ TMDS, Flat Link™, and Channel Link™, OpenLDI and QuadLDI Applications<br>• Mates with Standard 3M MDR Boardmount Products<br>• Unshielded or Sheilded Twisted Pair or Twinax Cable Options<br>• Contact 3M for Custom Configurations | Materials Vary for Connectors, Cables, Shells and Jackscrews. See Website for Specifics. | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +75°C |
| **MDR Cable Assemblies, Camera Link® Series 1XX26**<br> <br> | • **RoHS Compliant**<br>• 3M Is One of the Recognized Leaders in Camera Link® Connectivity<br>• Versions Available to Support Base, Medium and Full Configuration Camera Link® Applications<br>• Straight or Right Angle Cable Exit<br>• Flexible Cable Options Available for Moving Head Applications<br>• Extension Cables for Bulkhead/Feed-Through | Materials Vary for Connectors, Cables, Shells and Jackscrews. See Website for Specifics. | Performance Varies by Type. See Tech Sheets. |
| **MDR Pleated Foil Input/Output Cable Assemblies Series OM, LS**<br> | • **RoHS Compliant**<br>• Offers Superior Combination of High-Density, Electrical Performance, Shielding and Durability<br>• Allows Digital Data Rates of up to 200 Megabits Per Second Per Conductor<br>• Mates with Standard 3M MDR Boardmount Connectors<br>• Pleated Copper Foil Provides 360 Degree Shield and Allows Coax-Like Performance<br>• Overmolded and Metal with Latching and Thumbscrew Shells Available<br>• Position Sizes from 20-100 | Materials Vary for Connectors, Cables, Shells and Jackscrews. See Website for Specifics. | **Temperature Rating:**<br>75°C Maximum |

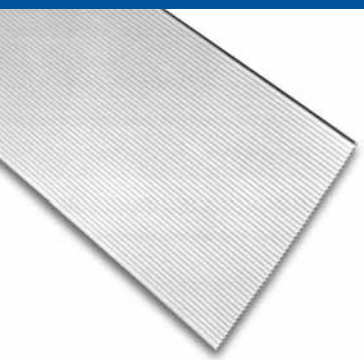
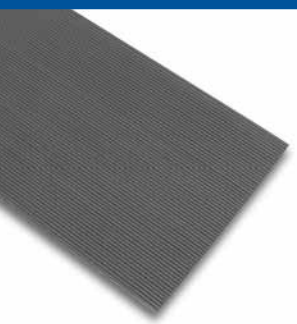
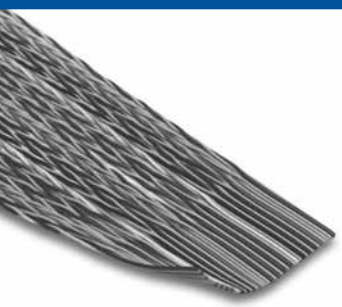
# 3M™ INPUT/OUTPUT CONNECTOR AND CABLE ASSEMBLY SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Shrunk Delta Ribbon (SDR) Boardmount Receptacles Series 122XX**<br> | • **RoHS Compliant**<br>• 14-50 Positions<br>• Wiper-on-Wiper Contact for Reliable Repetitive Mating<br>• Ground Lock for Reliable PCB Retention<br>• Full Metal Face for Better EMI Shielding Effectiveness<br>• On-Board Jacksockets Maintains a Secure Connection<br>**OPTIONS**<br>• Surfacemount and Through-Hole<br>• Right Angle and Vertical<br>• Panel and Board Lock Hardware<br>• Mini Camera Link® Interface as a 26 Contact Connector | **Contact**<br>Phosphor Bronze<br>**Insulation**<br>Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 80 µ" [ 2.00 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 0.5 A<br>**Temperature Rating:** -40°C to +70°C |
| **Shrunk Delta Ribbon (SDR) Cable Assemblies, .80 mm, Mini Camera Link® Series 1MG, 1MF, 1SF**<br> | • **RoHS Compliant**<br>• Supplied as a Complete Assembly Only<br>• Supports New AIA Industrial Camera Link® Standard for Mini C/L Camera to C/L Frame Grabber Applications<br>• 11 Shielded Twisted Twinax Pairs with Four Drain Wires<br>• Double Overall Shield with Foil and Outer Braid EMI Shielded Cable Assembly<br>• Straight and Right Angle Configurations Available<br>• SDR-to-SDR and MDR-to-SDR Options Available<br>• Mates with 3M SDR and MDR Boardmount Products | Material Varies for Connectors, Cables, Shells and Jackscrews. See Website for Specifics. | **Current Rating:** 0.5 A<br>**Temperature Rating:** 0°C to 70°C |
| **Shielded Compact Ribbon (SCR) Connectors Series 361, 362, 363**<br> | • **RoHS Compliant**<br>• Robust, Vibration Resistant Connection<br>• Up to 1A per Pin (Signal or Power)<br>• 10 Pin Plug/Receptacle<br>• Solder Termination — No Tooling Required<br>• EMI Shielded<br>• Multiple Boardmount and Wiremount Configurations for Design Flexibility | **Contact**<br>Material: Copper Alloy or Phosphor Bronze<br>**Insulation**<br>Material: Glass Reinforced LCP or Nylon<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: Nickel<br>Wiping Area: See Ordering Information<br>Termination Area: See Ordering Information | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +85°C |
| **I/O Connectors, IEEE 1394 Compatible, 2.0 mm Series 3E**<br> | • **RoHS Compliant**<br>• Compatible with Popular IEEE 1394 I/O Interconnect Standard<br>• Robust, Vibration Resistant Connection with Secure Latching System<br>• Up to 1A per Pin (Signal or Power)<br>• 6 Pin Plug/Receptacle<br>• Solder Termination — No Tooling Required<br>• EMI Shielded | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 50µ" - 100 µ" [ 1.27 µm - 2.54 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold<br>Termination Area: See Ordering Information | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |

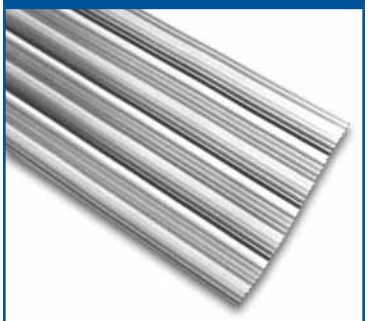
# 3M™ INPUT/OUTPUT CONNECTOR AND CABLE ASSEMBLY SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **D Sub Plugs<br>IDC Mass Terminated<br>Series 8200**<br> | • **RoHS Compliant**<br>• 9-50 Positions<br>• Available in Either Open or Closed-End Cover<br>• Shell Dimples to Aid in EMI/ESD Protection<br>• Metal Strain Relief Hooks Directly to Metal Shell<br>• Low Profile<br>• Open (Except 50) or Threaded (SAE or Metric) Mounting Holes<br>**OPTIONS**<br>• Mounting Hardware<br>• Open and Closed-End Covers | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Reinforced Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 100 µ" [ 2.54 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **D Sub Receptacles<br>IDC Mass Terminated<br>Series 8300**<br>  | • **RoHS Compliant**<br>• 9-50 Positions<br>• Available in Either Open or Closed-End Cover<br>• Metal Strain Relief — Hooks Directly to Metal Shell<br>• Low Profile<br>• Open (Except 50) or Threaded (SAE or Metric) Mounting Holes<br>**OPTIONS**<br>• Mounting Hardware<br>• Open and Closed-End Covers | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0<br>**Plating**<br>Underplating: 100 µ" [ 2.54 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **D Sub - Junction Shell<br>Round Cable, Metal<br>Series 3357**<br>  | • **RoHS Compliant**<br>• Provides EMI/ESD Protection Similar to Aluminum Die Cast<br>• Easy Assembly Reduces Time and Labor to Ensure Low Applied Cost<br>• Optional Thumbscrew Kit<br>• Provides Option in Grounding for Discrete Wire Applications<br>• Lightweight, Compact Design<br>**OPTIONS**<br>• Thumbscrew Kit<br>• Retainer Rings | **Cover Nut**<br>Material: Glass Filled Polyester<br>**Shell and Hardware**<br>Material: Steel<br>**Flammability** UL 94V-0<br>**Plating**<br>Nickel | |
| **D Sub - Junction Shells<br>Round Cable, Plastic<br>Series 3357**<br> | • **RoHS Compliant**<br>• Protection from EMI/ESD<br>• Easy Assembly Reduces Time and Labor for Low Cost<br>• Lightweight and a Compact Design<br>• Strain Relief Compensates for Multiple Cable Diameters<br>• Jackscrews Provide Positive Retention<br>**OPTIONS**<br>• 60 Degree Relief Cable Exits | **Shell and Hardware**<br>Shell Material: ABS<br>**Insulation**<br>Material: Thermoplastic Elastomer<br>**Flammability** UL 94VO<br>**Plating**<br>Bright Zinc | **Temperature Rating:** 0°C to +75°C |
| **D Sub - Junction Shells<br>Flat Cable<br>Series 3485**<br> | • **RoHS Compliant**<br>• Uses Standard Hardware<br>• Lightweight, Compact Size<br>• Full Family of Sizes<br>**OPTIONS**<br>• EMI Versions Available | **Shell**<br>Material: Glass Filled Polyester<br>**Flammability** UL 94V-0 | **Temperature Rating:** -55°C to +105°C |

# 3M™ CABLE SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Round Conductor Flat Cable Series 3365, 3355, 2010, 3601**<br>  | • **RoHS Compliant**<br>• 28 AWG Wire on .050 Inch Centers Permits Mass Termination to a Broad Line of IDC Connectors<br>• Stranded Wire Provides Flexibility and Extended Product Life<br>• Zippable for Branching or Discrete Termination<br>• Series 3365 Available in Gray or Black<br>• 2010 Is Halogen Free<br>**OPTIONS**<br>• .025", .033", .050", 1 mm, .100" and .156" Center Line<br>• 18, 22, 24, 26 , 28 and 30 AWG Conductors<br>• Solid and Stranded Conductors<br>• Multiple Roll Lengths<br>• UL/CSA Marking Line<br>• PVC Jacket Options<br>• Split Sections<br>• For Other Variations, See Website | **Insulation**<br>Material: Polyvinyl Chloride TPE, FEP, PO Insulators | **Flammability** USA: VW-1<br>Canada: FT-1<br>**Temperature Rating:** -20°C to +105°C<br>**Voltage:** USA 300V,<br>Canada: 150V, EU: <50V |
| **Extended Flex Life - Flat Cable Series 3319, 3539**<br>  | • **RoHS Compliant**<br>• Flex Life of 100 Million Cycles at 1 3/4 Inch Diameter<br>• High Strength Copper Alloy Provide the Longest Flex Life Available for Dynamic Applications<br>• 28 AWG Wire on .050 Inch Wire Spacing Permits Mass Termination to a Broad Line of IDC Connectors<br>• Zippable for Branching or Discrete Termination<br>**OPTIONS**<br>• High Flex<br>• Medium Flex | **Insulation**<br>Material: Polyvinyl Chloride | **Flammability** USA: VW-1,<br>Canada FT-1<br>**Temperature Rating:** -20°C to +105°C<br>**Voltage:** USA 300V,<br>Canada: 150V, EU: <50V |
| **Twisted Pair Flat Cable Series 1700, 2100, 3782**<br>  | • **RoHS Compliant**<br>• Wires Are Color-Coded for Easy Identification<br>• Twist and Flat Repeat Has Variable Length Option<br>• Can Be Mass Terminated to a Broad Line of IDC Connectors<br>• Provides Reduced Crosstalk in Balanced Drive Applications<br>• 28 AWG Stranded Wire Provides Flexibility and Extended Product Life<br>• 10-Color Repeat<br>• 2100 Is Halogen Free<br>**OPTIONS**<br>• Variable Twist and Flat Repeat Lengths | **Insulation**<br>Material: Polyvinyl Chloride or PO Insulators | **Flammability** USA: VW-1<br>Canada: FT-1<br>**Temperature Rating:**<br>USA: -20°C to +105°C<br>Canada: -20°C to +80°C<br>**Voltage:** USA 300V,<br>Canada: 150V, EU: <50V |
| **Round Jacketed Flat Cable Series 3659, 3759, 3758, 3896**<br> | • **RoHS Compliant**<br>• Round Construction Permits Easier Routing<br>• 28 AWG Wire on .050 Inch Pitch Permits Mass Termination to Broad Line of IDC Connectors<br>• Continuous Split/Bond Repeat Allows for Mass Termination on 2.4 Inch Centers (Approximate)<br>• Primary Cable Is Zippable for Branching or Discrete Terminations<br>• Meets External Wiring Requirements of National Electrical Code, Article 725 (CL2)<br>• UL Listed for USA and Canadian Markets<br>• Dual Shielding Provides 35 db Average Shielding Effectiveness<br>**OPTIONS**<br>• .025", .050" Centerline<br>• 26, 28 and 30 AWG Conductors<br>• Solid and Stranded Conductors<br>• Shielded and Non-Shielded Versions | **Jacket**<br>Material: Polyvinyl Chloride or PO Insulators | **Flammability** USA: N.E.C. 725, CL2<br>Canada: FT-1<br>**Temperature Rating:** USA: CL2; 75°C Max or AWM; -20°C to +80°C,<br>Canada: 80°C<br>**Voltage:** USA 300V,<br>Canada: 150V, EU: <50V |

# 3M™ CABLE SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Color Coded Flat Cable Series 3302, 3811**<br>  | • **RoHS Compliant**<br>• 28 AWG Wire on .050 Inch Centers Permits Mass Termination to a Broad Line of IDC Connectors<br>• Stranded Wire Provides Flexibility and Extended Product Life<br>• Zippable for Branching or Discrete Termination Color Coded for Wire Identification<br>**OPTIONS**<br>• 22, 26 and 28 AWG Conductors<br>• 100", .156" Centerline | **Insulation**<br>Material: Polyvinyl Chloride | **Flammability** USA: VW-1<br>Canada: FT-1<br>**Temperature Rating:** USA: -20°C to +105°C<br>Canada: -20°C to + 80°C<br>**Voltage:** USA 300V,<br>Canada: 150V, EU: <50V |
| **Round Jacketed Discrete Twisted Pair Cable Series 3600, 3644**<br> | • **RoHS Compliant**<br>• Meets External Wiring Requirements of National Electrical Code, Article 725 (CL2)<br>• 28 AWG Stranded Wire Provides Flexibility<br>• Twisted Pairs Reduce Crosstalk for Balanced Drive Applications<br>• Dual Shielding with Aluminum Film Foil and Copper Braid Provides Excellent EMI/ESD Protection<br>• Wires Are Color-Coded for Easy Identification<br>• 35 db Average Shielding Effectiveness<br>**OPTIONS**<br>• 26 and 28 AWG Conductors | **Jacket**<br>Material: Polyvinyl Chloride and PO Insulators and Jacket | **Flammability** USA: N.E.C.725, CL2<br>Canada: FT-1<br>**Temperature Rating:** USA: CL2<br>75°C Max, Canada: 80°C<br>**Voltage:** USA 300V,<br>Canada: 150V, EU: <50V |
| **Pleated Foil Flat Cable Series 901XX, 902XX, 931XX**<br> | • **RoHS Compliant**<br>• Compatible with IDC Mass Termination Connectors<br>• Functions with Applications Requiring Standard Impedance of 100Ω Balanced (Differential)<br>• Extremely Low Crosstalk, Used in the All-Signal Mode to Quadruple Signal Density as Compared to Standard .050 Inch Flat Ribbon Cable<br>• Solid Pleated Copper Foil Provides Flexibility and 35 db Average Shielding Effectiveness<br>• CL2 Rated, Rugged Design and High Reliability for Peripheral Applications<br>**OPTIONS**<br>• .025" and .050" Centerline<br>• 28 and 30 AWG Conductors<br>• Solid and Stranded Conductors<br>• Thick and Thin Jacket Options<br>• Low Skew Versions | **Jacket**<br>Material: TPE with PVC and TPE Jacketing Materials | **Flammability** USA: N.E.C. 725, CL2,<br>Canada: FT-1<br>**Temperature Rating:**<br>USA: CL2: 75°C; Canada: 80˚C<br>**Voltage:** USA 300V,<br>Canada: 150V, EU: <50V |

# 3M™ CABLE ASSEMBLY SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Molded Flat Ribbon Assemblies Series 87, 1M and 2M** | • **RoHS Compliant**<br>• 10-60 Positions<br>• Two-Piece with Adhesive Cover for Daisy Chain or Round-to-Flat Cable Applications<br>• Plastic or Metal Strain Relief Option<br>• Positive Locking Metal Clip for High Cover Retention<br>• Open or Closed-End Covers | **Contact**<br>Material: Copper Alloy<br>**Insulation**<br>Material: Glass Filled Polyester<br>**Plating**<br>Underplating and U-Slot: 100 µ" [ 2.54 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold | **Current Rating:** 1 A<br>**Temperature Rating:** -55°C to +105°C |
| **Mini Delta Ribbon (MDR) Cable Assemblies, Round Cable, Input/Output Series 14XXX, 4926, 4120** | • **RoHS Compliant**<br>• Pre-Assembled for High Efficiency<br>• Pre-Assembled, Terminates Faster Than Two-Piece Sockets "Sword" Packaging Makes Easy Loading of Manual and Semi-Automatic Assembly Equipment<br>• "Bumps" Prevent Premature Latch Locking During Shipment<br>• Military Polarization, With or Without Centerbump<br>• Optional Double-Sided Adhesive Pull Tab for Easy Unplugging<br>• Double-Recessed Cover for Cable Terminating from Either Side Virtually Eliminates Need for Single-Recessed Cover Connectors | **Contact**<br>Material: Phosphor Bronze<br>**Insulation**<br>Material: Glass Filled Polyester (PBT)<br>Color: Gray<br>**Plating**<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] or 10 µ" [ 0.25 µm ] Gold<br>Wire Accommodation: 26 and 28 AWG Stranded | **Current Rating:** 2 A (EIA 364-70)<br>**Temperature Rating:** -55°C to +105°C |
| **MDR Cable Assemblies, Power over Camera Link® Series 1SXXX, 1MXXX** | • **RoHS Compliant**<br>• 3M Is One of the Recognized Leaders in Camera Link® Connectivity<br>• Supports Base Configuration Power over Camera Link® Applications<br>• Straight or Right Angle Cable Exit<br>• Flexible Cable Options Available for Moving Head Applications<br>• SDR-to-SDR and SDR-to-MDR Configurations Available for Cross-Platform Use | Materials Vary for Connectors, Cables, Shells and Jackscrews. See Website for Specifics. | **Current Rating:** 0.5 A<br>**Temperature Rating:** 0°C to +75°C |
| **MDR Cable Assemblies, Camera Link® Series 1XX26** | • **RoHS Compliant**<br>• 3M Is One of the Recognized Leaders in Camera Link® Connectivity<br>• Versions Available to Support Base, Medium and Full Configuration Camera Link® Applications<br>• Straight or Right Angle Cable Exit<br>• Flexible Cable Options Available for Moving Head Applications<br>• Extension Cables for Bulkhead/Feed-Through | Materials Vary for Connectors, Cables, Shells and Jackscrews. See Website for Specifics.w | Performance Varies by Type. See Tech Sheets. |
| **Mini Delta Ribbon (MDR), Pleated Foil Input/Output Cable Assemblies Series OM, LS, MS** | • **RoHS Compliant**<br>• Offers Superior Combination of High-Density, Electrical Performance, Shielding and Durability<br>• Allows Digital Data Rates of up to 200 Megabits per Second per Conductor<br>• Mates with Standard 3M MDR Boardmount Connectors<br>• Pleated Copper Foil Provides 360 Degree Shield and Enables Coax-Like Performance<br>• Overmolded and Metal with Latching and Thumbscrew Shells Available<br>• Position Sizes from 20-100 | Materials Vary for Connectors, Cables, Shells and Jackscrews. See Website for Specifics. | **Temperature Rating:** 75°C Maximum |

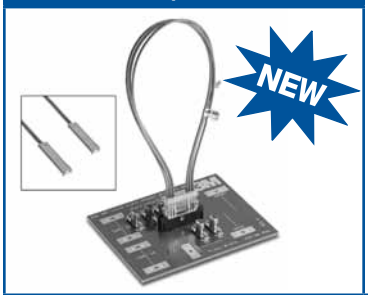
# 3M™ CABLE ASSEMBLY SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Shrunk Delta Ribbon (SDR) Cable Assemblies, .80 mm, Input/Output Series 1MG, 1MF, 1SF**<br> | • **RoHS Compliant**<br>• Supplied as a Complete Assembly Only<br>• Supports New AIA Industrial Camera Link® Standard for Mini C/L Camera to C/L Frame Grabber Applications<br>• 11 Shielded Twisted Twinax Pairs with Four Drain Wires<br>• Double Overall Shield with Foil and Outer Braid EMI Shielded Cable Assembly<br>• Straight and Right Angle Configurations Available<br>• SDR-to-SDR and MDR-to-SDR Options Available<br>• Mates with 3M SDR and MDR Boardmount Products | **Insulation**<br>Material: Polyvinyl Chloride<br>**Plating**<br>Underplating: 100 µ" [ 2.55 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Minimum Gold<br>Materials Vary for Connectors, Cables, Shells and Jackscrews. See Website for Specifics. | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |
| **Serial Advanced Technology Attachment (SATA) Power Cable Series 5601**<br> | • **RoHS Compliant**<br>• 15-Position Power Cable<br>• Rugged Over-Molded Construction Provided in Standard Lengths<br>• "Y" Type Supports Multiple Devices | **Insulation**<br>Material: High Temperature Thermoplastic<br>**Plating**<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold<br>Solder Tails: 100 µ" [ 2.54 µm ] Tin<br>Underplating: 50 µ" [ 1.27 µm ] Nickel | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85° |
| **Serial Advanced Technology Attachment (SATA) Signal Cable Series 5602**<br> | • **RoHS Compliant**<br>• 7-Position Serial Signal Assembly<br>• Multiple Variations in Length and Interface Attachments<br>• Point-to-Point Signaling<br>• Polarized Interface Ensures Proper Alignment<br>• 26 AWG Differential Pairs<br>• Meets SATA 2.6 Specification | **Insulation**<br>Material: High Temperature Thermoplastic<br>**Plating**<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold<br>Solder Tails: 100 µ" [ 2.54 µm ] Tin<br>Underplating: 50 µ" [ 1.27 µm ] Nickel | **Current Rating:** 1 A<br>**Temperature Rating:** -20°C to +85°C |

# 3M™ CABLE ASSEMBLY SOLUTIONS

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **Mini Serial Attached SCSI (miniSAS) Cable Assembly, Series 8N36**<br> | • **RoHS Compliant**<br>• 6 Gbps per Channel Data Rate<br>• 36 Conductor Signal Assembly<br>• Custom Lengths Available<br>• Metal Latch<br>• 30 AWG Twin Axial Cable<br>• Universal Key<br>• Right Angle Version Available | Materials Vary for Connectors, Cables, Shells and Jackscrews. See Website for Specifics. | **Current Rating:** 0.5 A<br>**Temperature Rating:** -20°C to +80°C |
| **Mini Serial Attached SCSI (miniSAS) Cable Assembly, Series 8M26**<br> | • **RoHS Compliant**<br>• Capable of 6 Gbps Per Channel Data Rate<br>• 26 Conductor Signal Assembly<br>• Multiple Lengths Available<br>• Metal Latch<br>• Pull Tab Ring Provides Easier Unmating<br>• Two Levels of EMLB for Hot Plugging<br>• Multiple Key Options Available | **Connector**<br>**Backshell**<br>Material: Zinc Diecast<br>**Plating**<br>30 µ" [0.76 µm] Nickel<br>**Contact**<br>PCB Material: FR4<br>Underplating: 50 µ" [ 1.27 µm ] Nickel<br>Wiping Area: 30 µ" [ 0.76 µm ] Gold<br>Cable Conductor: Tin Plated Solid Conductor (AWG Depends on Length)<br>Drain Wire: Tin Plated Solid Conductor<br>Dielectric: Foam Polyethylene<br>Shield: Mylar<br>Jacket: Non-PVC<br>**Pulltab**<br>Material: Nylon<br>Color: Blue | **Current Rating:**<br>Per Contact: 0.5 A<br>**Operating Temperature:** -20°C to +75°C |

# 3M™ CABLE ASSEMBLY SOLUTIONS
# HIGH SPEED ASSEMBLIES

| PRODUCT | FEATURES | MATERIALS | PERFORMANCE |
|---|---|---|---|
| **SCI Latch/Eject 2 mm Development Kit**<br>  <br> | • 1 Gbps Single-Ended, 5 Gbps Differential or Mix and Match Cable-to-Board Solution<br>• Robust Latching for Mechanically Challenging Environments<br>• Low Crosstalk and Skew<br>• Upgrade to Higher Speed and Better Crosstalk for Molded and IDC Cable Assemblies<br>• High Density – 2 mm Pitch – Upgrade from 0.100"<br>• Vertical SMT and Through-Hole Options Available | Material Varies for Connectors and Cables. See Website for Specifics. | 1 Gbps Single-Ended, 5 Gbps Differential |
| **Shielded Controlled Impedance (SCI) Assemblies High Speed Series 98**<br> | • **RoHS Compliant Version Available**<br>• Robust Metal Grounded Connectors Provide EMI Shielding and Controlled Impedance for Industry Leading Signal Integrity and Performance<br>• Various Carrier Types and Sizes for .100" 2 mm SCI Connectors | | |
| **SCI Cable Assembly, .100"**<br> | • .100" (2.54 mm) Center Spacing<br>• Available in Stand-Alone and Carrier Versions<br>**Stand-Alone Version**<br>• Available in Right Angle and Straight Configurations<br>• Mates with 3M Two-pin Headers<br>**Carrier Version**<br>• Available in Straight Configuration Designed for Use with the 3M SCI Carrier System<br>• Mates with .100" x .100" Headers<br>• Carriers May Be Purchased Separately<br>• Up to 3 Gbps Performance | **Contact**<br>Material: Beryllium Copper<br>**Insulation**<br>Material: Thermoplastic | **Current Rating:** 1 A<br>**Temperature Rating:** -55˚C to +105˚C |
| **SCI Cable Assembly, 2 mm**<br> | • High Density 2.0 mm Center Spacing<br>• Available in Carrier Versions Only<br>• Mates with Compact PCI®, HSHM, Futurebus® and 3M™ Pin Strip Headers, 1512 Series<br>• Provides over 12 Gbps Performance<br>• Available with High Performance Coaxial or Twinaxial Cables<br>• Available With or Without External Ground Clips | **Contact**<br>Material: Beryllium Copper<br>**Insulation**<br>Material: Thermoplastic | **Bandwidth:** Rated for Applications Requiring up to 12 Gbps Performance<br>**Current Rating:** 1 A<br>**Temperature Rating:** -40˚C to +105˚C |
| **Custom Harness Assemblies**<br> | • Available with 0.100" and 2 mm SCI<br>• Double-Ended SCI with Carrier or Optional Spring Probe Termination<br>• Controlled Impedance Through the Interface to Provide Minimal Reflections<br>• Low-loss, Low Crosstalk and Low Skew to Provide Industry Leading Eye Openings and Performance<br>• Available in Differential or Coaxial Cable Configurations<br>• Contact 3M for Custom Configurations<br>**0.100" Harness Assemblies**<br>• Compatible with Standard .100" x .100" Headers<br>• Standard Carriers Available<br>**2 mm Harness Assemblies**<br>• Compatible with CompactPCI®, HSHM, Futurebus® and 3M™ Pin Strip Headers, 1512 Series<br>• Industry Leading Signal Density of up to 101 Signals per Linear Inch<br>• Surfacemount 3-Wall Header Available | | |

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- Configure a part
- Check distributor inventory
- Request samples or quotes
- Build and configure cable assemblies using our Virtual Cable Assembly Tool (VCAT)
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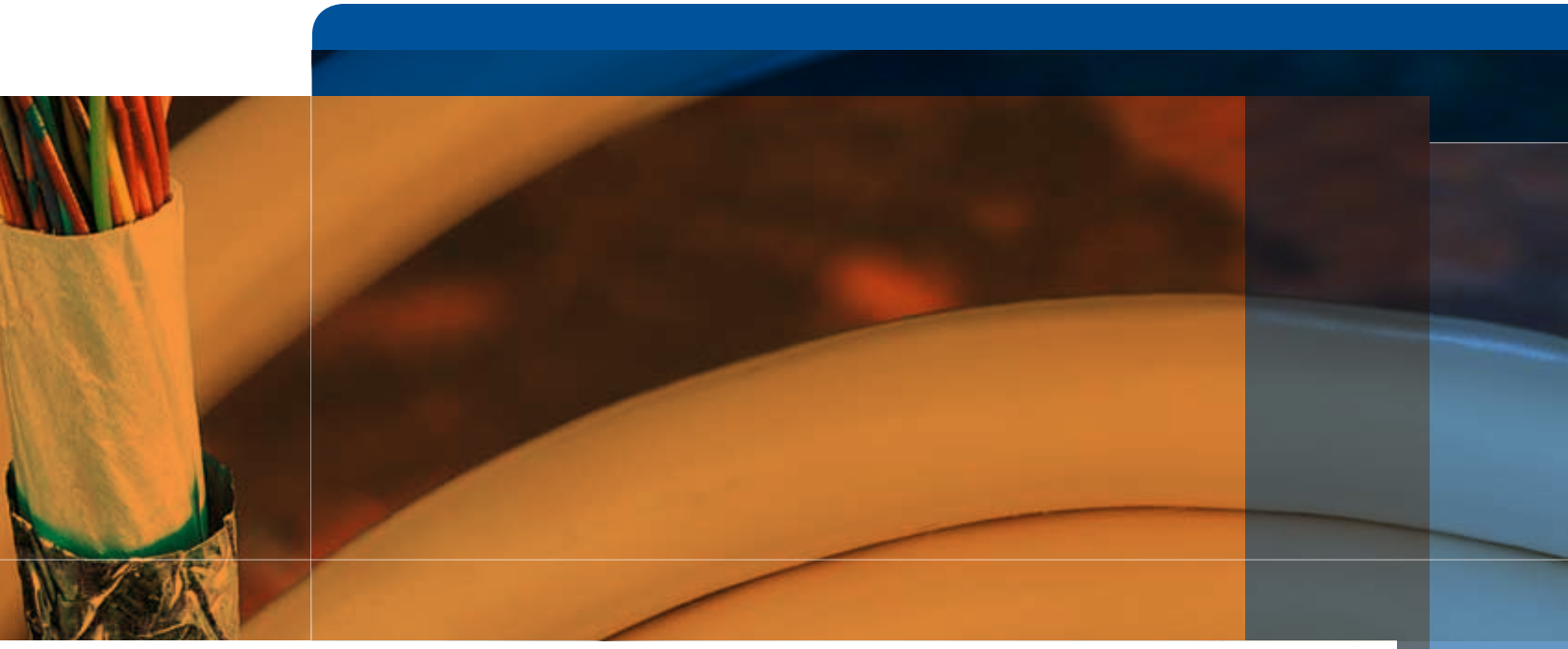

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