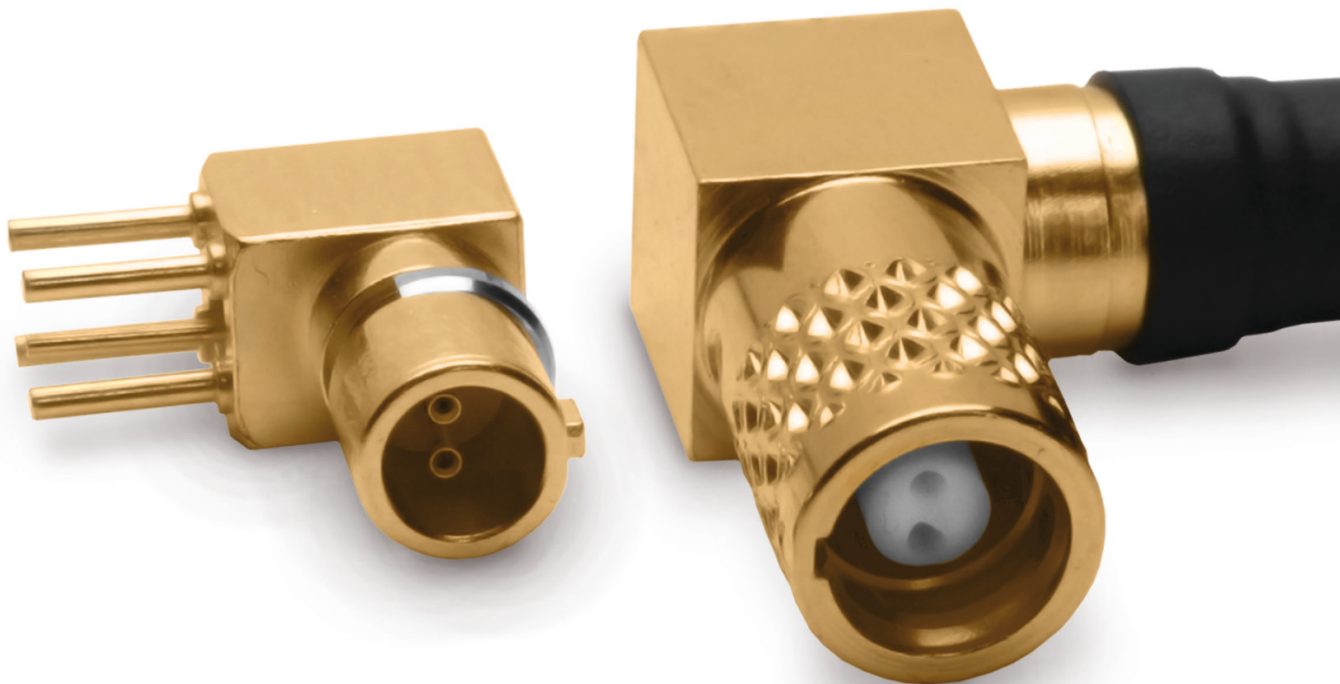


Micro Twinax / Quadrax Connectors

High Speed Connectors



Micro Twinax / Quadrax Connectors

Mechanical & Environmental 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 min
Coupling Nut Torque (threaded) Recommended	2.3 in-lbs min
Mating Torque (threaded)	2.5 in-lbs
Engagement / Disengagement Force (Quick Disconnect)	3 lbs max / 3 to 5 lbs

Electrical Specifications

Dielectric Withstanding Voltage	250 VDC max
Insulation Resistance	5,000 MegaOhms min
Contact Current Rating	3.0 Amps D.C. max
Data Rates	>1 Gbps
Differential Pair Cable Impedance	150 Ohm \pm 15 Ohm 100 Ohm \pm 10 Ohm
Signal to Shield Cable Impedance	75 Ohm \pm 10 Ohm 50 Ohm \pm 7 Ohm

Material & Finishes

Body	Brass per ASTM-B16, BeCu per ASTM-B196 Nickel per SAE-AMS-QQ-N-290 Gold per ASTM-B488
Insulators	PTFE per ASTM-D1710 Ultem per ASTM-D5205
Contacts	BeCu per ASTM-B196 Gold per ASTM-B488

Features & Benefits

Micro Twinax available in threaded, quick disconnect, SMA and Micro-D size packages

25% smaller in diameter than SMA coaxial connectors

Controlled impedance with tight PCB footprint spacing.

Smiths Interconnect's Micro Twinax NDL line features matched impedance miniaturized connectors that provide the user with controlled impedance and tight PCB footprint spacing.

The NDL Micro Twinax Series is offered in threaded and quick disconnect styles and are 25% smaller in diameter than SMA coaxial connectors. The quick disconnect version has a diameter of .250" max and the threaded version has .250" Hex coupling nut.

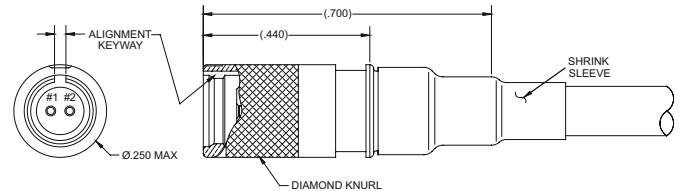
Micro Quadrax connectors are designed for differential pair matched impedance applications utilizing quadrax cable consisting of four wires where the diagonal pair of conductors forms a differential twinax pair. These connectors maintain the signal to shield impedance throughout the mated connector pair (quad configuration applications exceeding 1 Gbps) and are available in threaded versions including straight and right angle PCB mount configurations.

Micro Twinax and Quadrax connectors have a low impedance ground shield and are ideal for High-Speed Ethernet (100 and 1000 Base-T), Fibre Channel (>1 Gbps), IEEE 1394 Firewire, USB, DVI and Infiniband applications with 100 or 150 Ohm differential pair impedance.

Quick Disconnect NDL Size Packages

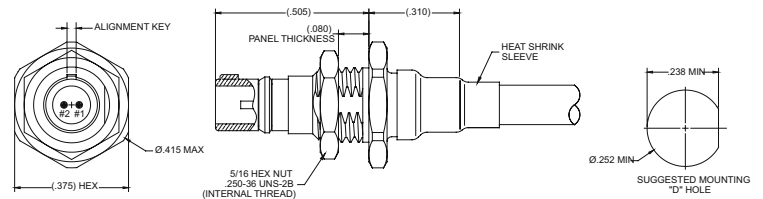
Quick Disconnect Micro Twinax NDL Plug 100 and 150 Ohm

Part Number	Ohms	Cable Type	Cable
014034-2049	100	Differential Twinax	540-1153-000
014034-2050	100	Flexible Twinax	540-1161-000
014034-2051	100	Differential Twinax	540-1167-000
014034-2052	150	Differential Twinax	540-1099-000



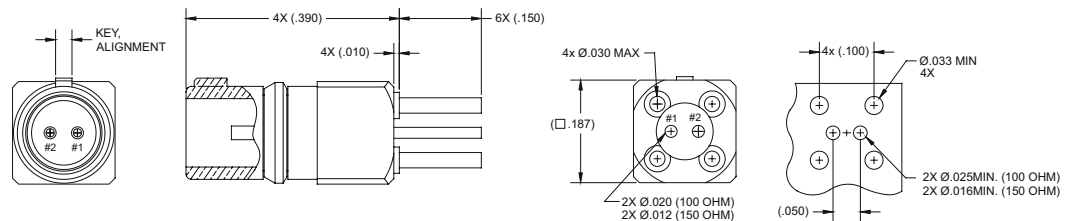
Quick Disconnect Micro Twinax NDL Bulkhead Mount Jack 100 and 150 Ohm

Part Number	Ohms	Cable Type	Cable
014134-5023	100	Differential Twinax	540-1153-000
014134-5024	100	Flexible Twinax	540-1161-000
014134-5025	100	Differential Twinax	540-1167-000
014134-5026	150	Differential Twinax	540-1099-000



Quick Disconnect Micro Twinax NDL Jack Straight PCB Mount 100 and 150 Ohm

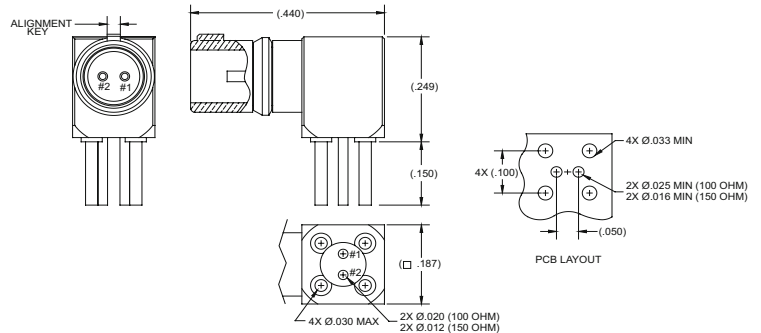
Part Number	Impedance
014117-2023	100 Ohms
014117-2024	150 Ohms



Quick Disconnect NDL Size Packages

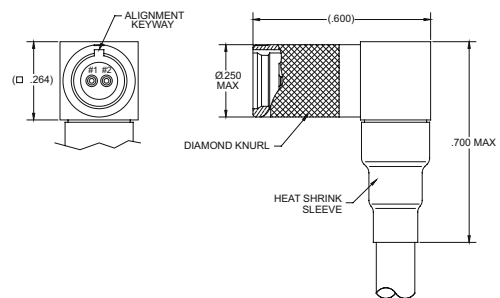
Quick Disconnect Micro Twinax NDL Right Angle PCB Mount 100 and 150 Ohm

Part Number	Impedance
014117-1037	100 Ohms
014117-1038	150 Ohms



Quick Disconnect Micro Twinax NDL Right Angle Plug 100 and 150 Ohm

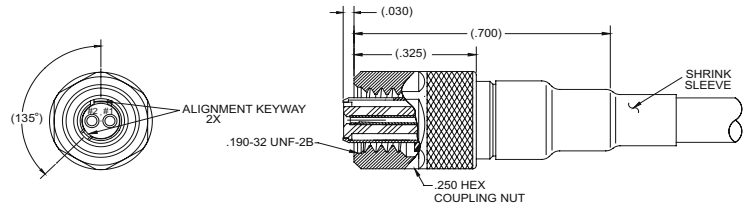
Part Number	Ohms	Cable Type	Cable
014034-1027	100	Differential Twinax	540-1153-000
014034-1028	100	Flexible Twinax	540-1161-000
014034-1029	100	Differential Twinax	540-1167-000
014034-1030	150	Differential Twinax	540-1099-000



Threaded NDL Size Packages

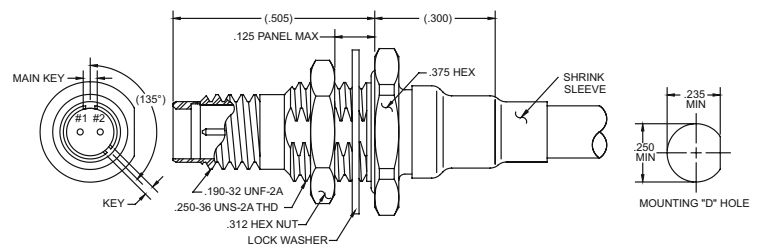
Threaded Micro Twinax NDL Straight Cable Plug 100 and 150 Ohm

Part Number	Ohms	Cable Type	Cable
014034-2045	100	Differential Twinax	540-1153-000
014034-2046	100	Flexible Twinax	540-1161-000
014034-2047	100	Differential Twinax	540-1167-000
014034-2048	150	Differential Twinax	540-1099-000



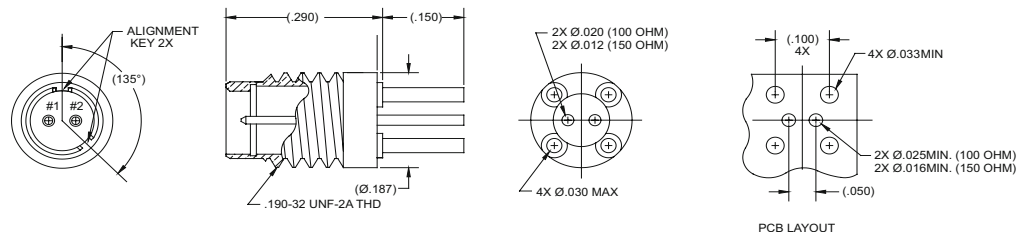
Threaded Micro Twinax NDL Bulkhead Mount Jack 100 and 150 Ohm

Part Number	Ohms	Cable Type	Cable
014134-5018	100	Differential Twinax	540-1153-000
014134-5019	100	Flexible Twinax	540-1161-000
014134-5020	100	Differential Twinax	540-1167-000
014134-5021	150	Differential Twinax	540-1099-000



Threaded Micro Twinax NDL Straight Jack 100 and 150 Ohm PCB Mount

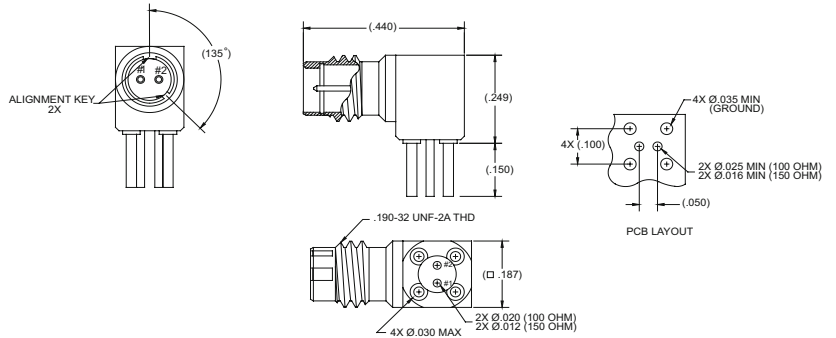
Part Number	Impedance
014117-2020	100 Ohms
014117-2021	150 Ohms



Threaded NDL Size Packages

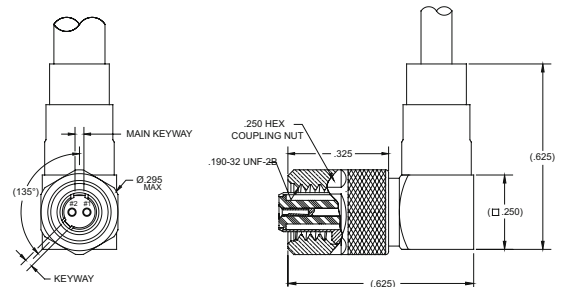
Threaded Micro Twinax NDL Right Angle Jack 100 and 150 Ohm PCB Mount

Part Number	Impedance
014117-1030	100 Ohms
014117-1031	150 Ohms



Threaded Micro Twinax NDL Right Angle Plug 100 and 150 Ohm

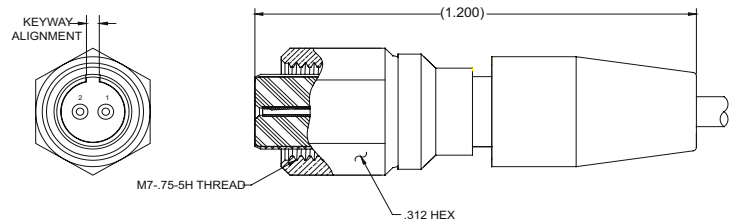
Part Number	Ohms	Cable Type	Cable
014034-1020	100	Differential Twinax	540-1153-000
014034-1021	100	Flexible Twinax	540-1161-000
014034-1022	100	Differential Twinax	540-1167-000
014034-1023	150	Differential Twinax	540-1099-000



Micro Twinax Threaded SMA Size Package

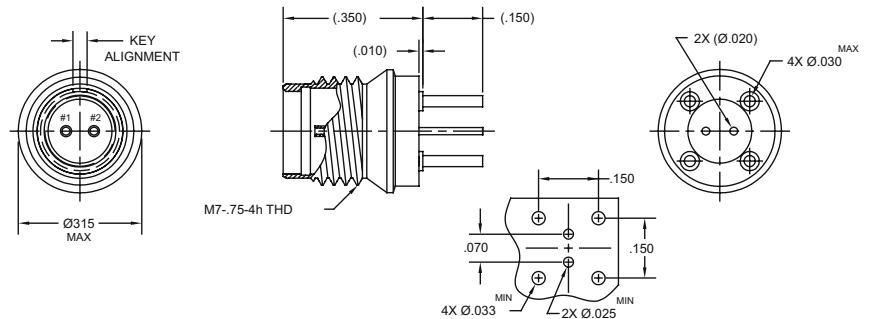
Micro Twinax SMA Size Plug 100 or 150 Ohm Matched Impedance

Part Number	Ohms	Cable Type	Cable
014034-2004	100	Differential Twinax	540-1153-000
014034-2010	100	Flexible Twinax	540-1161-000
014034-2015	100	Flexible Twinax	540-1086-000
014034-2003	150	Differential Twinax	540-1099-000
014034-2009	150	Differential Twinax	540-1114-000



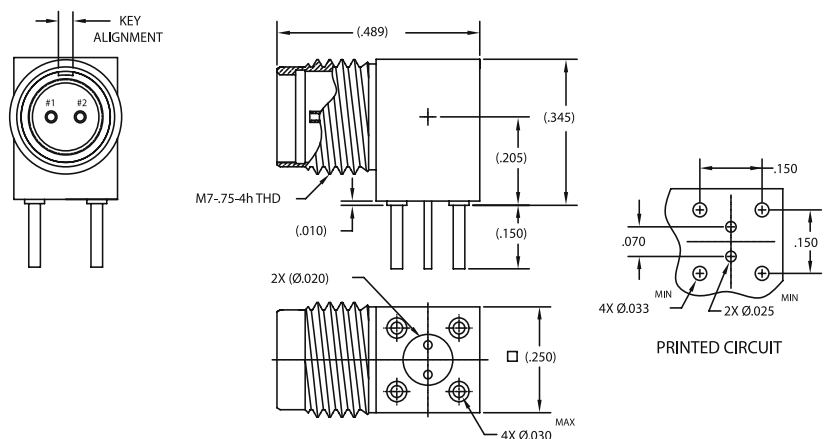
Micro Twinax SMA Size Straight Jack 100 or 150 Ohm Matched Impedance

Part Number	Impedance
014117-2003	100 Ohms
014117-2002	150 Ohms



Micro Twinax SMA Right Angle Jack Straight PCB Mount 100 or 150 Ohm

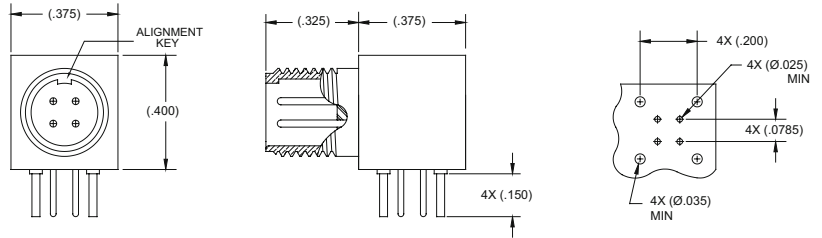
Part Number	Impedance
014117-1004	100 Ohms
014117-1005	150 Ohms



100 Ohm Quadrx

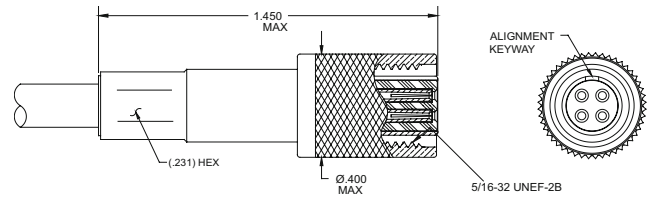
Micro Quadrx Right Angle PCB Mount Receptacle

Part Number
012817-1000



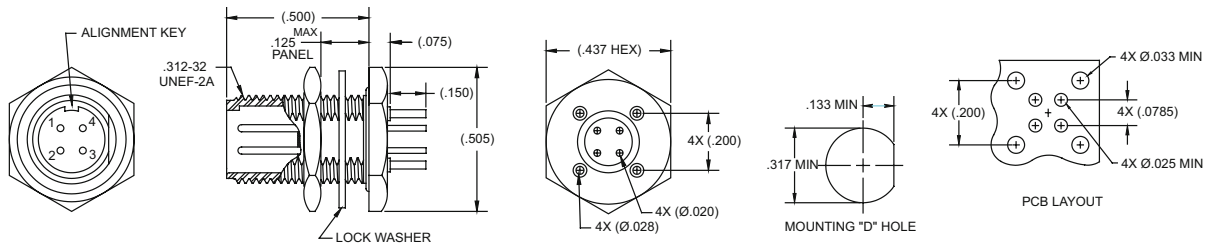
Micro Quadrx Plug 100 Ohm

Part Number	Ohms	Cable Type
012735-2013	Differential Quadrx	540-1183-000



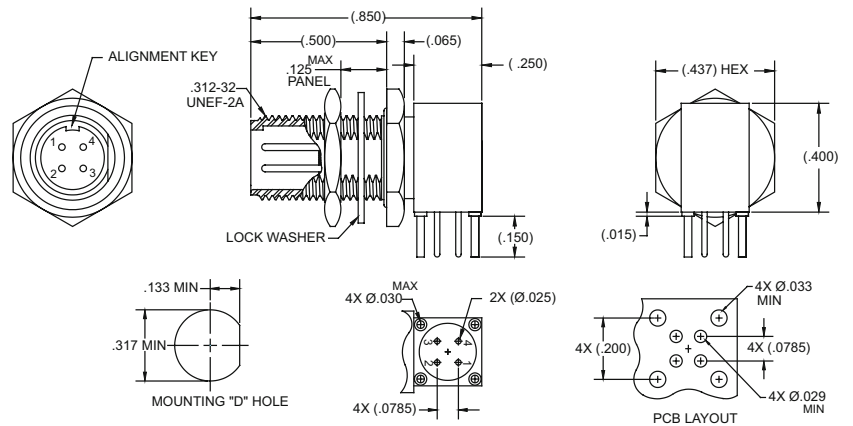
Micro Quadrx Straight Bulkhead Mount PCB Jack

Part Number
012817-5001



Micro Quadrx Right Angle Bulkhead Mount PCB Jack

Part Number
012817-5003



How to Order



1 Connector #1

2 Cable Group

Flexible Twinax

- 1 = M17/176-00002
- 2 = 540-1086-000
- 3 = 540-1161-000
- 4 = 540-1171-000
- 5 = 540-1172-000

Differential Twinax

- 6 = 540-1099-000
- 7 = 540-1114-000
- 8 = 540-1153-000
- 3 4 = 540-1167-000

Differential Quadrax

- 9 = 540-1138-000
- 1 0 = 540-1143-000
- 1 1 = 540-1165-000
- 3 6 = 540-1183-000

3 Connector #2

OL for Open Lead

4 Cable Length in Inches (XXX)

Flexible Twinax Cables				
Cable Group	Cable Designation	Impedance (Ohms)	Jacket	Conductor (DIA)
1	M17/176-00002	77	0.129"	0.024"
2	540-1086-000	98	0.143"	0.019"
3	540-1161-000	100	0.130"	0.024"
4	54 0-1171-000	100	0.087"	0.010"
5	540-1172-000	100	0.122"	0.016"
Differential Pair Twinax Cables				
6	540-1099-000	Differential: 150 Sig. to Shield: 75	0.097" x 0.160"	0.014" Stranded
7	540-1114-000	Differential: 150 Sig. to Shield: 75	0.138" x 0.224"	0.020" Solid
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
Differential Quadrax Cables				
9	540-1138-000	Differential: 150 Sig. to Shield: 75	0.290"	0.032"
10	540-1143-000	Differential: 150 Sig. to Shield: 75	0.190"	0.020"
11	540-1165-000	Differential: 100 Sig. to Shield: 50	0.175"	0.025"
36	540-1183-000	Differential: 100 Sig. to Shield: 50	0.160"	0.024"

Global Support

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