


www.omnetics.com

Omnetics

Omnetics is a world-class miniature connector design and manufacturing company with over 30 years of experience, focused on Micro-miniature and Nano-miniature highly reliable electronic connectors and interconnection systems. Our miniature connectors are designed and assembled in a single location at our plant in Minneapolis, Minnesota.

MIL Spec Requirement vs. Omnetics

TEST	MICRO - D MIL-DTL-83513 (1.27 mm pitch)	NANO - D MIL-DTL-32139 (.64 mm pitch)
Content Resistance	26 mΩ	71 mΩ
	9 mΩ	13 mΩ
Shock	50 G	100 G
	500 G	500 G
Durability	500 Mating Cycles	200 Mating Cycles
	2000 Mating Cycles	2000 Mating Cycles
Temperature	-55°C to +125°C	-55°C to +125°C
	-270°C up to 260°C	-270°C up to 200°C

Nano-D Connectors/MIL-DTL-32139

SINGLE ROW NANO-D

Horizontal SMT (AA)	Vertical SMT (VV)	Straight Tails (DD)	Thru-Hole Horizontal (H2)	Thru-Hole Vertical (V2)	Pre-Wired (W2)	Jumpers (JU)	MIL-DTL-32139 QPL

LATCHING NANO-D



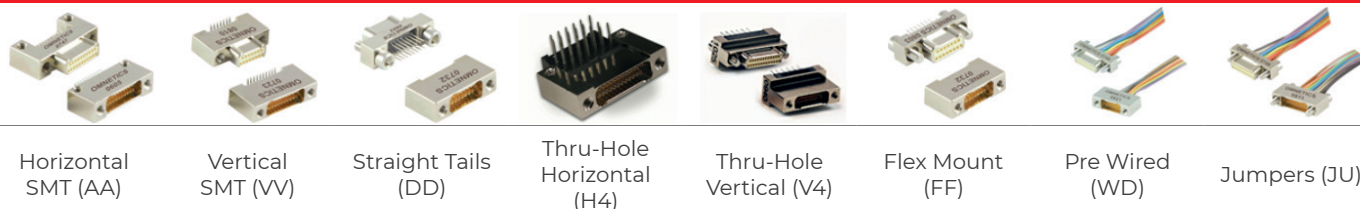
Surface Mount (AA)

Flex Mount (FF)

Straight Thru-Hole (DD)

Pre-Wired (WD)

DUAL ROW NANO-D



Horizontal
SMT (AA)

Vertical
SMT (VV)

Straight Tails
(DD)

Thru-Hole
Horizontal
(H4)

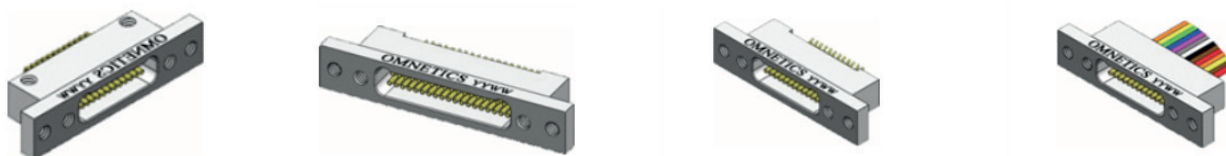
Thru-Hole
Vertical (V4)

Flex Mount
(FF)

Pre Wired
(WD)

Jumpers (JU)

PANEL TYPE NANO-D



Horizontal SMT (AA)

Straight Tails (DD)

Flex Mount (FF)

Pre-Wired (WD)

Micro-D Connectors/MIL-DTL-83513

STANDARD MICRO-D



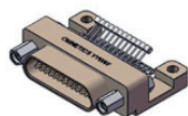
Discrete Wired (WD)

Soldercup (SS)

Power Micro-D

Horizontal Surface
Mount (H0)

Vertical Surface Mount
(V0)



Card Edge Surface
Mount (C0)



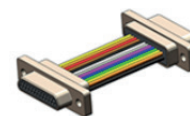
Flex Circuit
Mount (FF)



Straight Thru-Hole
Mount (S2)



Right Angle
Thru-Hole (R2)



Jumpers (WXY)

LATCHING MICRO-D



Discrete Wired (WD)

Horizontal Surface
Mount (H0)

Vertical Surface Mount
(V0)

Card Edge Surface
Mount (C0)

Flex Circuit
Mount (FF)



Straight Thru-Hole
Mount (S2)



Right Angle Thru-Hole Mount
(R2)



Soldercup (SS)



Power Micro-D

SINGLE ROW MICRO-D



Soldercup (SS)

Discrete Wired
(WD)

Soldercup (SS)

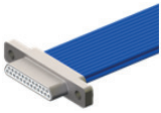
Wired (WD)

Vertical Surface
Mount (V0)

Straight Thru-
Hole Mount (S2)

Right Angle
Thru-Hole
Mount (R2)

LOW PROFILE MICRO-D



Discrete Wired (WD)



Right Angle Thru-Hole (H1)



Right Angle Thru-Hole (R2)

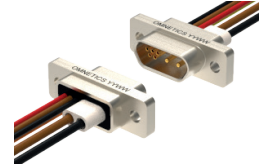
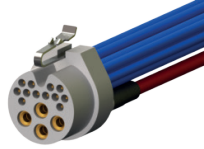
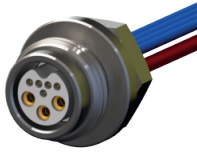


Solder Cup (SS)



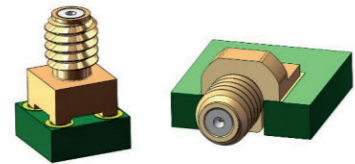
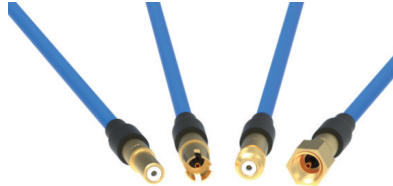
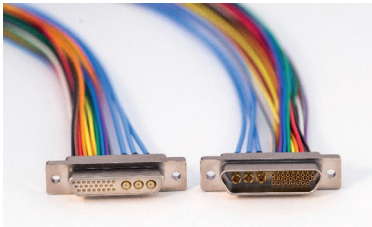
Straight Thru-Hole (S2)

• Power and Signal Micro Hybrids: 10A, 5A, 3A



• Nano Coax Connectors

Omnetics Nano Coax contacts are available either in a Hybrid Micro-D or as a standalone contact.. The standalone version provides optimal performance in one of the lowest form factors on the market. The Nano Coax contacts are designed to be terminated to a low-loss 29 AWG (.047") 50 coax cable. Cable: 20GHz / Edge Launch: 20GHz / Thru Hole: 10GHz



• Micro 360® Circular Connectors

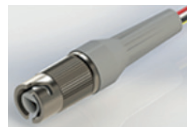
Omnetics' Micro Circular Connector Series utilizes Omnetics' rugged and reliable Flex-Pin contact system, is spaced on 50 mil (1.27mm) centerlines, features a mated length of less than 12.4 mm, and is specified to MIL-DTL-83513.



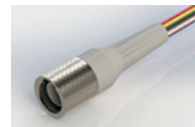
Micro Plastic Circularity



Micro Threaded Metal Shell Circularity



Micro Twist Lock Metal Shell Circularity



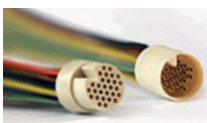
Micro Break Away Circularity



Micro ACME Triple Thread Ratcheting Circularity

• Nano 360® Circular Connectors

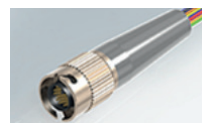
Omnetics' Nano Circular Connector Series utilizes Omnetics' rugged and reliable Flex-Pin contact system, is spaced on 25 mil (.64mm) centerlines, has a 9.0 mm mated length, and is specified to MIL-DTL-32139. These ultra miniature circular connectors are ideal for industries that require small and durable performance.



Nano Plastic Circularity



Nano Circular Threaded Metal Shell



Nano Circularity Twist Lock Metal Shell



Nano Break Away Circularity

● IP68 Micro Circulares



Full Keyed Breakaway (M)



Full Keyed Breakaway (F)



Ratcheting - RMCP

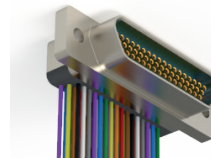


Ratcheting - RMCS

● Cobra: Body-Worn Connector



● 90° Prewired Micro-D Without Backshell



● IP68 Nano Circulares



Full Keyed
Breakaway (F)

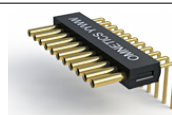
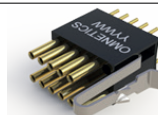
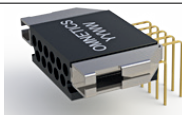


Full Keyed
Breakaway (M)



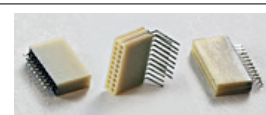
Nano 360° USB 3.0 (USB 3.1 Gen 1) Con-
nector

● Micro Strip Connectors



Single row: pin count changes up to 48
Dual row: pin count changes up to 97 available with latch

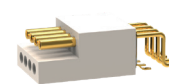
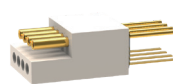
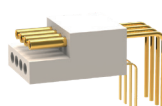
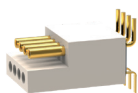
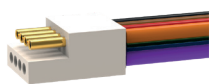
● Nano Strip Connectors



2-60 positions for single row
2-48 for dual row

● Polarized Nano Connector (PZN)

This configuration effectively polarizes the connector without the additional space required for guide pins. Termination options include: Pre-Wiring, Straight tail, Horizontal SMT, and Vertical SMT. Up to 24 positions.



● Capabilities

OVERMOLDING



EMI SHIELDING



CUSTOM HARNESSING



CUSTOM METAL SHELL

