

Hermetic Rectangular DC Connectors

Overview

Qnnect designs and manufactures custom ultra-rugged, light-weight hermetic connectors for use in extreme environments. MIL-SPEC interfaces combined with unique materials and shell design options provide the ultimate in flexibility and reliability.



Technical Advantages

Mil-Spec Configurations

Our MIL-DTL 83513 Micro-D, MIL-DTL 32139, Nano-D, MIL-C-24308 Sub-D, and MIL-DTL 38999 connectors all meet or exceed their military specification standards.

Ceramic-to-Metal Sealing Technology

DC connectors from Qnnect use a polycrystalline ceramic, Kroxflex, to seal pins into connector bodies. This material provides an extremely rugged hermetic seal and acts as a very effective insulator. It also allows the use of copper alloy pin materials. Beryllium copper is the most common pin material used and it delivers nearly 5x the current carrying capability of a comparably sized Kovar pin.

Shell Options

Our D-style connectors can be built for compatibility with titanium, aluminum or iron-nickel alloy housings. Laser welding is the most common and most reliable integration method, but we also offer solder or o-ring mounting options.



Nano-D Connectors [.025" Contact Pitch]

Qnnect's Nano-D connectors are compatible with lightweight materials such as aluminum and titanium, as well as conventional iron/nickel alloys. These connectors are available for both laser-weld and solder-in applications. Our Nano-D connectors are manufactured to exceed the requirements of MIL-DTL-32139.



ND Series	Nano-D Connector Style
100	Low Profile
200	Standard Profile

Junior-D™ Connectors [.030" Contact Pitch]

Qnnect's Junior-D connectors are miniature version of our mil-spec Sub-D connectors. They have a space savings of 70% over a standard Sub-D. Junior-D connectors are compatible with lightweight materials such as aluminum and titanium, as well as conventional iron/nickel alloys. These connectors are available for both laser-weld and solder-in applications.



JD Series	Junior-D Connector Style
100	Low Profile, Flanged
200	Low Profile, Not Flanged
300	Standard Profile, Flanged
400	Standard Profile, Double-Ended

Micro-D Connectors [.050" Contact Pitch]

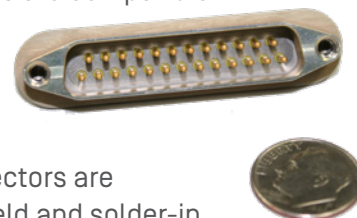
Qnnect's Micro-D connectors are compatible with lightweight materials such as aluminum and titanium, as well as conventional iron/nickel alloys. These connectors are available for both laser-weld and solder-in applications. This connector line includes options for light-weight, all aluminum versions, and a configuration for non-magnetic applications. Our Micro-D connectors are manufactured to exceed the requirements of MIL-PRF-83513.



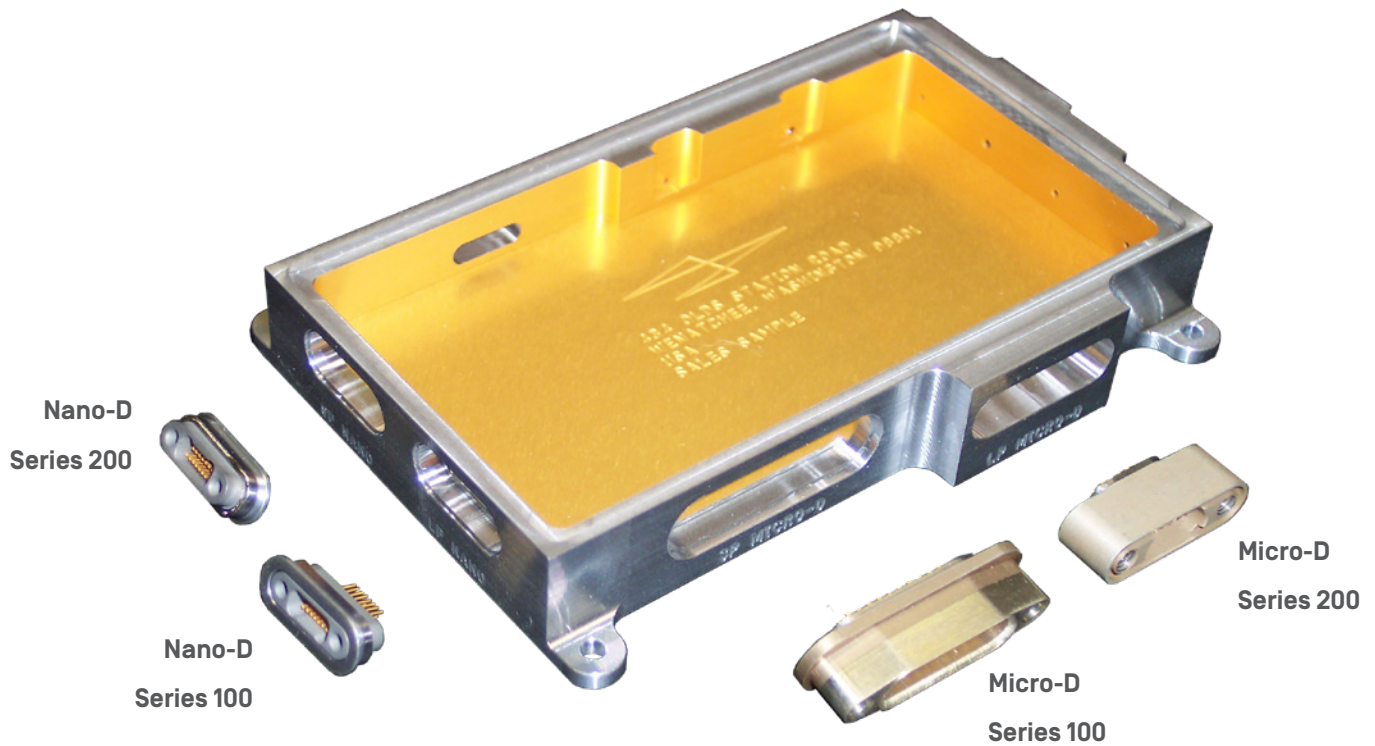
MD Series	Micro-D Connector Style
100	Low Profile, Flanged
200	Low Profile, Not Flanged
300	Standard Profile, Flanged
400	Standard Profile, O-Ring Flanged
500	Standard Profile, Double-Ended
600	Standard Profile, Solderable

Sub-D Connectors [Contact Pitch Per Mil Spec.]

Qnnect's Sub-D connectors are compatible with lightweight materials such as aluminum and titanium, as well as conventional iron/nickel alloys. These connectors are available for both laser-weld and solder-in applications. Our Sub-D connectors exceed the requirements of MIL-DTL-24308.



SD Series	Sub-D Connector Style
100	Standard Profile, Flanged
200	Standard Profile, O-Ring Flanged
300	Standard Profile, Solderable
400	Standard Profile, Double Ended



	Nano-D		Junior-D				Micro-D						Sub-D			
	Series 100	Series 200	Series 100	Series 200	Series 300	Series 400	Series 100	Series 200	Series 300	Series 400	Series 500	Series 600	Series 100	Series 200	Series 300	Series 400
Material Comparability	Designed for Aluminum, Titanium or Iron/Nickel Alloy Applications															
Contact Material	303 SS, Beryllium Copper CDA Alloy 172/173		Beryllium Copper CDA Alloy 172/173													
Shell Finish Options	Passivated, Nickel/Gold Plated or Chromate Conversion Coated as Applicable															
Contact Finish Options	Nickel/Gold Plating															
Interface	Per MIL-DTL-32139		Proprietary				Per MIL-PRF-83513						Per MIL-DTL-24308			
Number of Contacts	9, 15, 21, 25, 31, 37 and 51		9, 15, 21, 25, 31 and 37				9, 15, 21, 25, 31, 37, 51 and 100						Per MIL-DTL-24308			
Optional Solder Cup	Contact Qnnect															
Leak Rate	Less than 1X10-9 cc/sec Helium at 1 Atmospheric Differential Pressure															
Thermal Cycling	Tested to 500 (minimum) thermal cycles without hermetic performance loss															
Insulation Resistance	Connectors Provide Greater than 5,000 Megohms at 500 VDC When Tested in IAW MIL-STD-1344, Method 3003															
Dielectric Withstanding Voltage	Connectors Exhibit no Evidence of Breakdown or Flashover When Tested in IAW MIL-STD-1344, Method 3003															
Corrosion	Connectors Meet Salt Spray Test in IAW MIL-STD-1344, Method 3003															
Operating Temperature	-65°C to 200°C															

Other Products & Services:

Hermetic Electronic Packaging

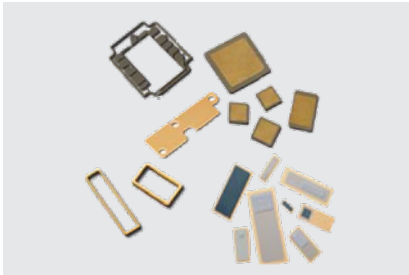
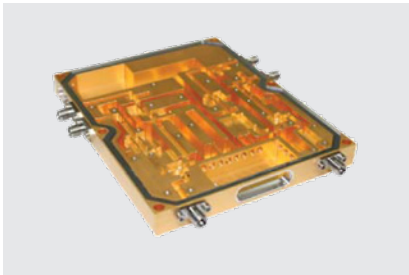
We bring customers' hermetic electronic package designs to life and use unique materials and manufacturing processes to help optimize for weight savings, footprint reduction, thermal transfer and more. Our precision machining capabilities allow us to meet very tight tolerances for aluminum and titanium housings. We deliver the custom packaging solutions that ensure the electronics within those devices are unaffected by whatever extreme environmental condition they operate in.

Enabling Components

There's more to a reliable hermetic package solution than a box and connectors and we manufacture components to ensure a module's long term viability. We produce: getters to prevent build-up of contaminants; solder preforms that aid in attaching electronic circuitry; ring frames that become integral side walls of a hermetic package; and custom thermal spreaders that ensure heat from a chip or substrate is efficiently dissipated. To top things off, we also manufacture package lids.

Laser and Integration Services

We provide high-speed laser welding, sealing and marking with consistent accuracy. Our laser welding expertise also extends to the manufacture of custom designed/build laser welding, cutting & sealing systems for customers who wish to bring those capabilities in house.



Qnnect



For Product Info:
hermeticsolutions.com

For Company Info:
qnnectnow.com