

# 5G RF Connector and Cable Assembly Solutions for the Wireless Industry >

Molex 5G RF Connector and Cable Assembly Solutions meet the performance needs of next-generation mobile network equipment, in a small form factor with best-in-class passive intermodulation (PIM) and less torque than current interfaces

## FEATURES AND ADVANTAGES

### 5G CABLE JUMPER SOLUTIONS



*RF Cable Jumper Assembly for 5G Applications*

Serialization of cable assemblies	Helps keep data on file for technicians working in the field
Custom connectors and cable jumpers designed to optimize performance	Delivers excellent passive intermodulation (PIM) and return loss (RL) results
Cables constructed with 1/2" corrugated cable as well as multiple superflex cable options	Provides design flexibility to meet the needs of a range of applications

### AISG CABLES AND CONNECTORS

**Cables available in multiple lengths, with male and female connector configurations. Customization also available**  
Delivers design flexibility to meet the application's specific needs

**Built to withstand harsh environments**  
Can remain in use in the field for multiple years



*AISG RF Cable Jumper Assembly for 5G Applications*

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## FEATURES AND ADVANTAGES

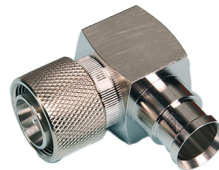
### AISG CABLES AND CONNECTORS

**30% smaller than DIN 7/16 connectors**

Decreases operational expenditures by reducing tower loading



Vertical Hand-Tight Plug



Right-Angle Hand-Tight Plug

**Low-PIM performance (160dBc @ 2x43dBm)**

Enables wireless service providers to build networks capable of superior performance



Right-Angle Wrench-Tight Plug



Vertical Wrench-Tight Plug

**IP68 rated with IEC 60529 standards**

Makes this connector ideal for use in outdoor environments

**Interface already adopted by radio and antenna OEMs**

Base station equipment will be deployed with new 4.3-10 connectors

Serialized cables mean 100% data traceability  
Enables quality assurance



**Patent-pending weatherproof boots**

Protects connection in harsh weather. Ideal for outdoor cellular sites

**Custom, factory-made low-PIM cable jumper assemblies (12.70mm [1/2"] coaxial cable, 9.53mm [3/8"] coaxial cable)**

Eliminates a vendor and the need for the customer to assemble

**Three mating options for right-angle and vertical plugs (hand tight, quick lock and torque)**

Provides design flexibility, depending on application needs, without compromising electrical performance

## MARKETS AND APPLICATIONS

### 5G

Consumer devices  
Internet of Things (IoT)  
Telecom infrastructure

### Connected Home

5G infrastructure and devices

### Consumer

Devices with 5G connectivity

### Telecommunications/Networking

Network radio OEMs  
Base station antennas  
Signal optimization equipment



5G Connectivity



Base Station Antenna



Smart Home Device

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## SPECIFICATIONS

### Reference Information

Packaging: Tray, carton  
 Mates with: series 73162 4.3/10 plugs mate with series 73162 jacks  
 Use with: Coaxial or fit cable: 12.70mm (0.5") foam or flexible models  
 Designed in: Millimeters  
 RoHS: Yes

### Electrical

Voltage: 1800Vrms @ sea level  
 Frequency (max.): DC to 12 GHz  
 Impedance: 50 Ohms  
 Dielectric Withstanding Voltage:  
   2500V AC @ 0.5mA  
 Contact Resistance:  
   Center Contact:  $\leq 1$  milliohm  
   Outer Contact:  $\leq 1$  milliohm  
 Insulation Resistance:  $\geq 5000$  Megohms  
 VSWR:  
    $\leq 1.03$  DC to 4 GHz  
    $\leq 1.05$  4 to 6 GHz  
 RF Insertion Loss:  $\leq 0.05 \times \sqrt{f}$  (GHz) dB  
 Center Contact Resistance:  $\leq 1$  milliohms  
 Outer Contact Resistance:  $\leq 1$  milliohms  
 PIM3 (Typical): -166dBc (2x43 dBm)

### Mechanical

Mating Torque: 5 to 8nm  
 Coupling Proof Torque: 8nm  
 Coupling Nut Retention Force:  $\geq 450$ N  
 Engagement Force (Quick Lock): 100N  
 Disengagement Force (Quick Lock): 80N  
 Durability: 100 cycles  
 Sealing: IP68

### Physical

Housing: Brass  
 Contact: Phosphor Bronze  
 Plating:  
   Contact Area—Silver  
 Insulator: Teflon  
 O-Ring: Silicone rubber  
 Operating Temperature: -55 to +90°C

[www.molex.com/link/rf5gcables.html](http://www.molex.com/link/rf5gcables.html)