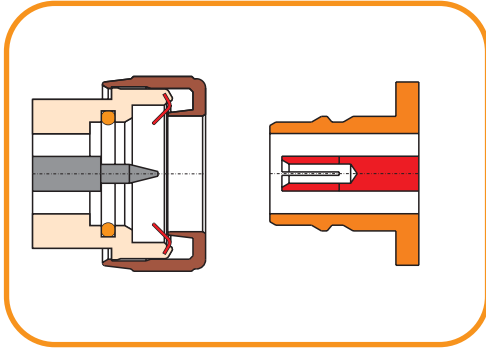
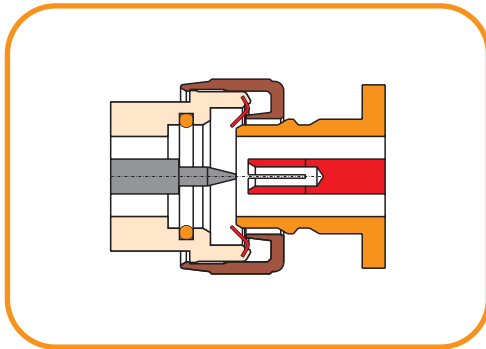


QUICK LOCK CONNECTORS---- CQMA.CQN Series

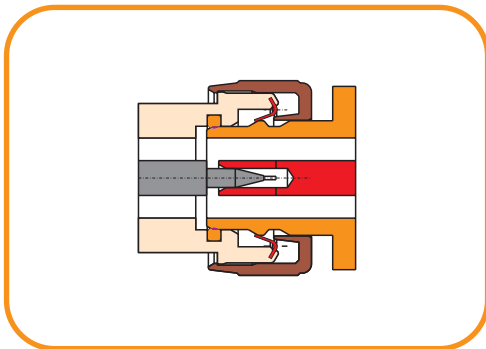
FUNCTIONAL DESCRIPTION



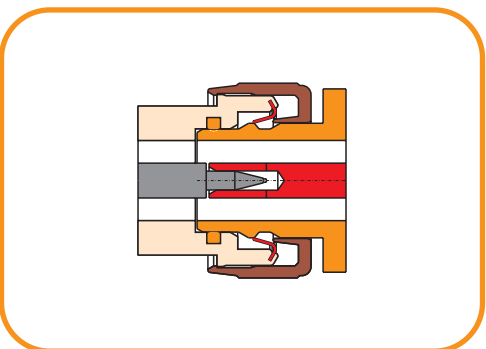
Before mating



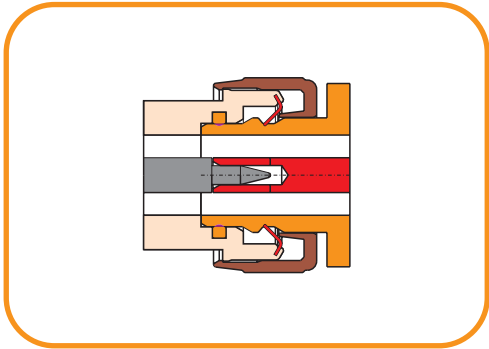
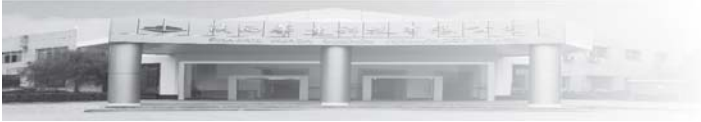
Mating



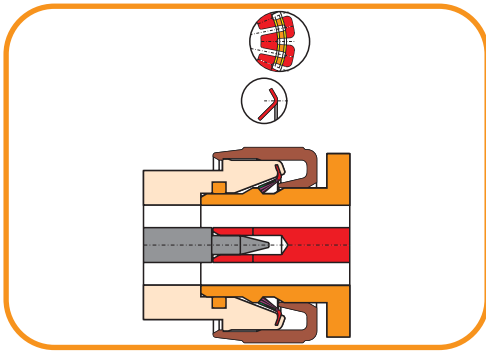
Mating



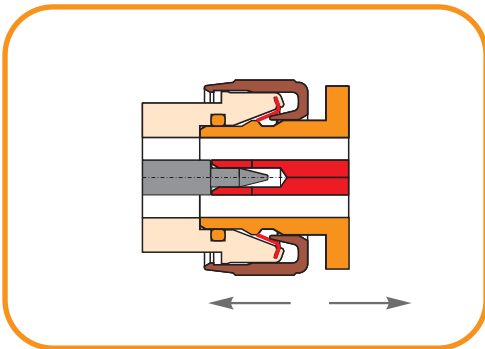
Mating



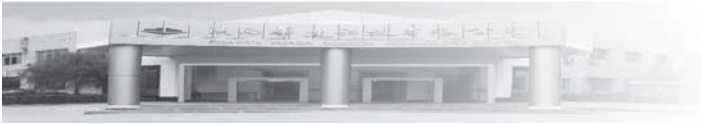
Locking



Consistent Locking



Unlocking



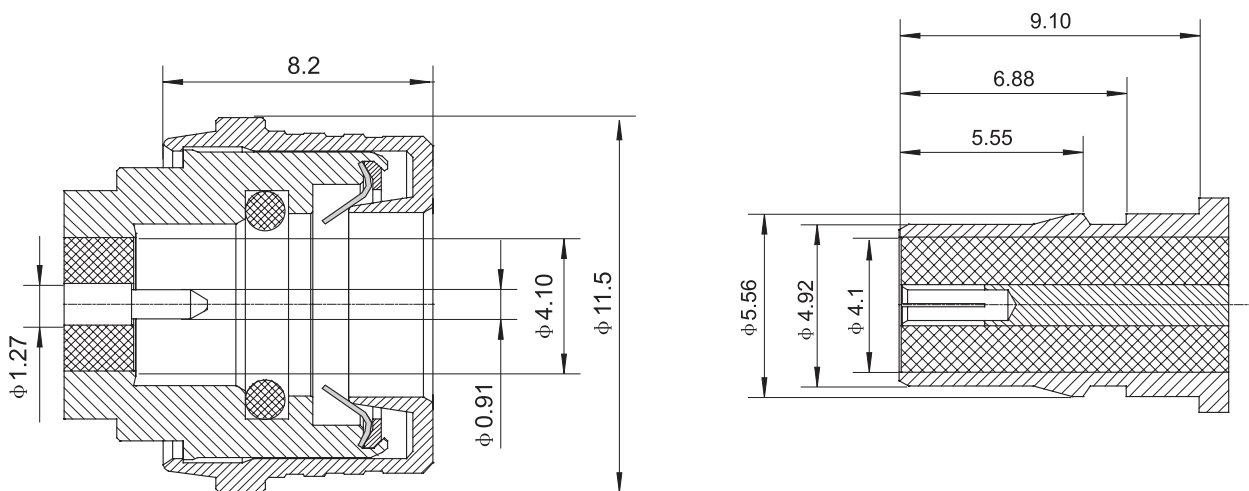
CQMA QUICK LOCK CONNECTORS

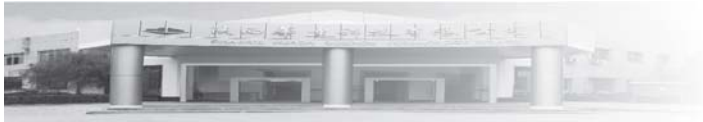


The HD CQMA connectors are designed for applications up to 6 GHz. The interface is based on the SMA dimension. Compared with traditional SMA, CQMA adopts a new snap-lock mechanism, widely applied to wireless base stations.

The CQMA interface has a very similar performance to the SMA, but additionally, it offers an easier, faster coupling operation, saving installation space, accomplishing high density connection.

INTERFACE DIMENSION





TECHNICAL DATA CQMA CONNECTORS

Electrical Characteristics

Characteristic Impedance	50Ω
Frequency Range	DC-6GHz
Working Voltage	300V
Dielectric Withstanding Voltage	1000V
Contact Resistance	Center contact: 3.0 mΩ Outer contact : 2.5mΩ
Insulation Resistance	5000 MΩ minimum
VSWR(straight connector)	Semi-rigid cable: $\leq 1.10+0.02f(\text{GHz})$ Flexible cable: $\leq 1.15+0.02f(\text{GHz})$

Mechanical Characteristics

Center Contact Retention Force	$\geq 27 \text{ N}$
Durability	200 cycles minimum

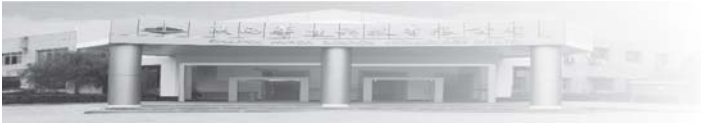
Environmental Characteristics

Temperature Range	- 40°C to +85°C
Thermal Shock	MIL-STD-202 method 107 (test condition B)
Corrosion	MIL-STD-202 method 101 (test condition B)
Humidity	MIL-STD-202 method 106

Material and Plating

Bodies	Brass, gold plated
Lock Sleeve	Brass, nickel or trimetal plated
Lock Denticulate Washer	Stainless steel, passivated
Center Contact	Male: Brass, gold plated Female: Beryllium copper, heat treated, gold plated
Insulator	PTFE
Gasket	Silicone rubber
Crimp Ferrule	Copper alloy, nickel plated

The above performance values shown are typical and may not relate to all connector styles available

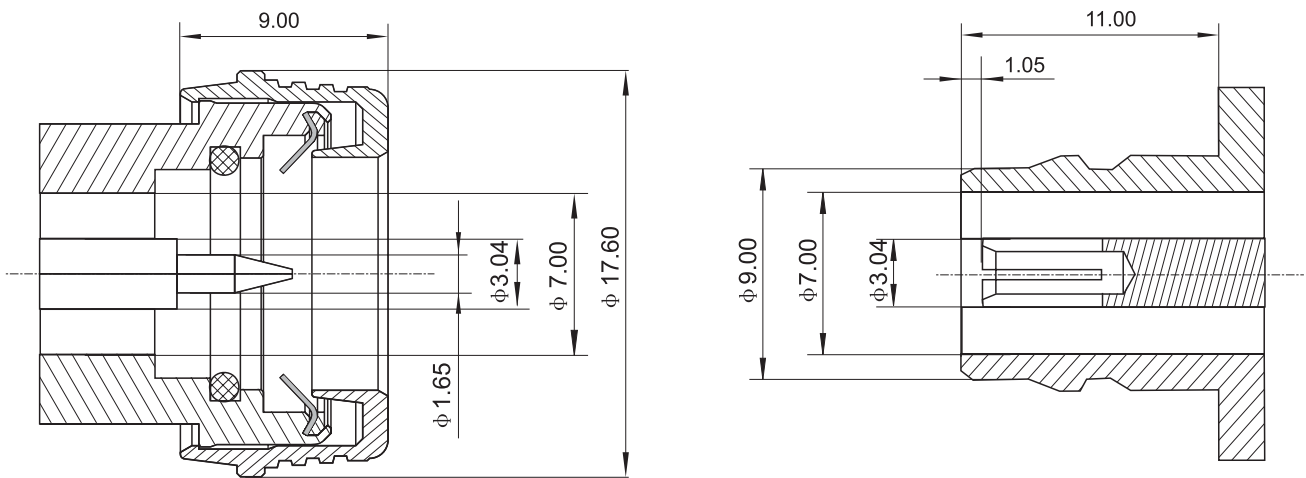


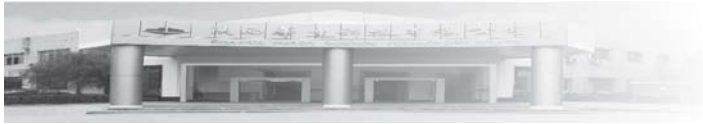
CQN QUICK-LOCK CONNECTORS



The HD CQN connectors are designed for applications up to 11 GHz. The interface is based on the N dimension. Compared with traditional N, CQN adopts a new snap-lock mechanism, the outer dimensions are smaller than N, widely applied to wireless base stations. The CQN interface has a very similar performance to the N, but additionally it offers an easier, faster coupling operation, no torque spanner is required to fasten the coupling nut, saving installation space, accomplishing high density connection.

INTERFACE DIMENSION





TECHNICAL DATA CQN CONNECTORS

Electrical Characteristics

Characteristics Impedance	50Ω
Frequency Range	DC-11 GHz
Dielectric Withstanding Voltage	2500V
Contact Resistance	Center contact: 1.5mΩ Outer contact: 1.5mΩ
Insulation Resistance	5000 MΩ minimum
VSWR(straight connector)	≤1.30typ.

Mechanical Characteristics

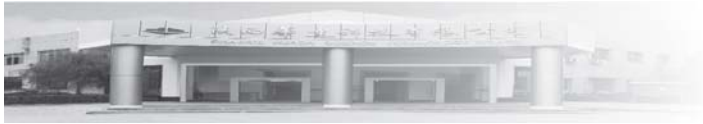
Center Contact Retention Force	≥28N
Durability	200 cycles minimum

Environmental Characteristics

Temperature Range	- 40°C to +85°C
Thermal Shock	MIL-STD-202 method 107, test condition B
Humidity	MIL-STD-202, method 106
Corrosion	MIL-STD-202, method 101, test condition B

Material and Plating

Bodies	Brass,nickel or trimetal plated
Lock Sleeve	Brass, nickel or trimetal plated
Lock Denticulate Washer	Stainless steel, passivated
Center Contact	Male: Brass,gold plated Female:Beryllium copper, heat treated, gold plated
Insulator	PTFE
Gasket	Silicone rubber
Crimp Ferrule	Copper alloy, nickel plated



Interface Sealing Performance

The HD CQMA and CQN connectors have the same sealing performance as SMA and N connectors, which assure the contact parts of connectors wouldn't be polluted or eroded by harmful gas, such as dust, humidity, mildew, oxygen, sulfur dioxide etc.

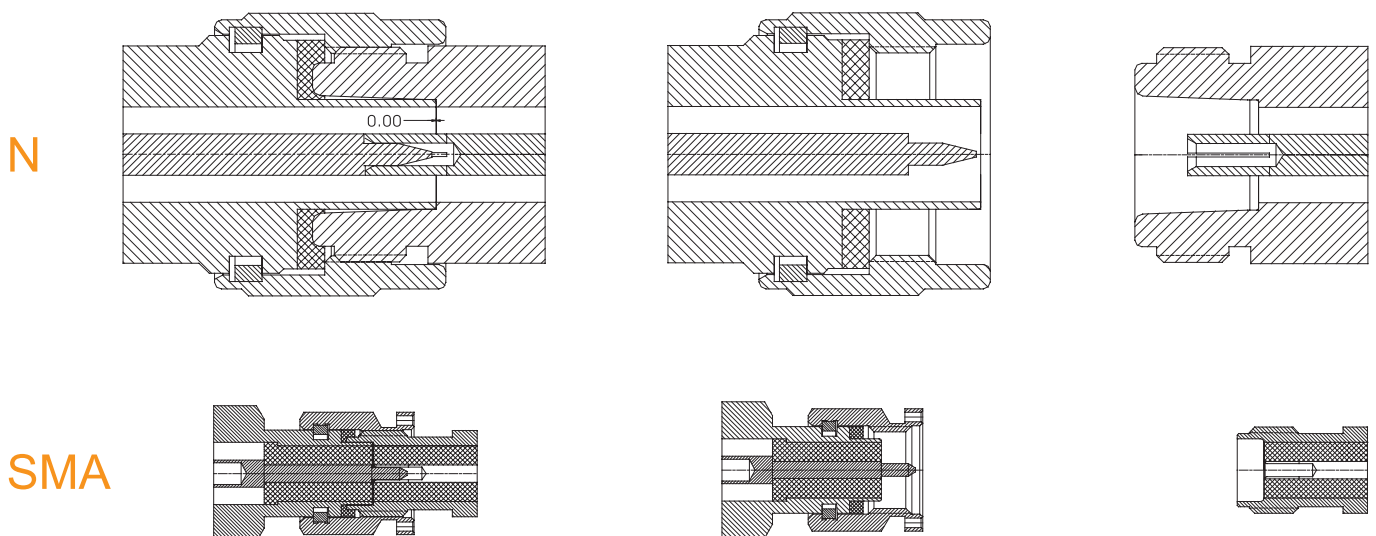
Sealing Performance Comparison

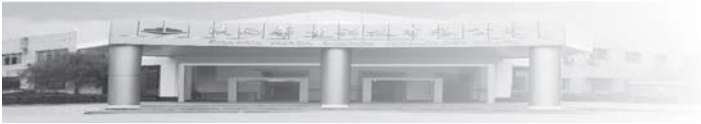
Type	Sealing Principle	Results
N, SMA	In the process of mating, sealing gasket would get strong upright force. There is no sliding friction between gasket and contact part. High sealing performance can still be accomplished after frequent insertion/extraction. Please refer to drawing I .	Excellent
QN	In the process of mating, sealing gasket wouldn't get strong upright force. There is sliding friction between gasket and contact part. Abrasion to surface would happen after frequent insertion/extraction, as a result of decreasing sealing performance. Please refer to drawing II .	Common
QMA	Sealing mechanism unsighted. Please refer to drawing II .	No sealing
CQN, CQMA	In the process of mating, sealing gasket would get strong upright force. There is no sliding friction between gasket and contact part. High sealing performance can still be accomplished after frequent insertion/extraction. Please refer to drawing III.	Excellent

Patent

Huada has registered patent for CQMA and CQN in China, with Patent No.CN 2896603Y. The ones in America and Europe are under application.

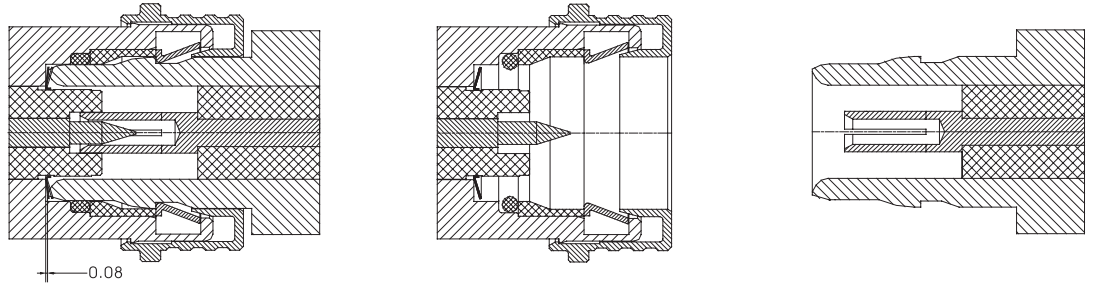
I



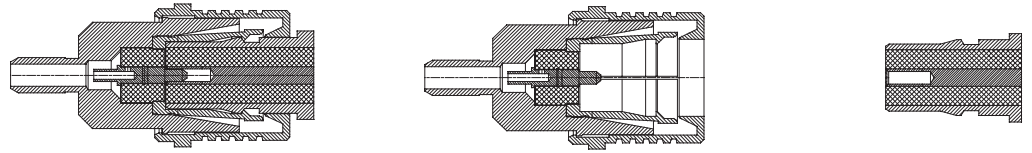


II

QN

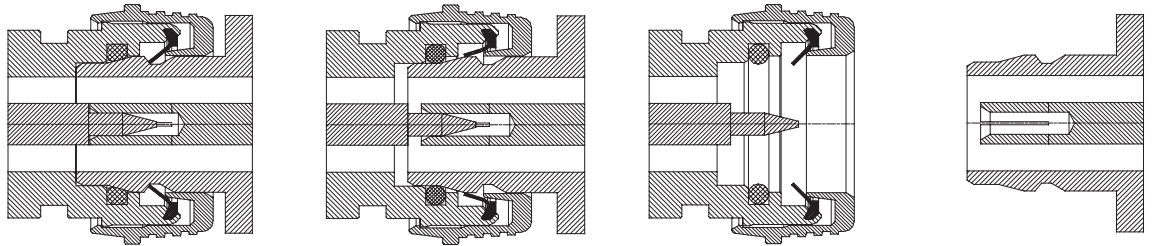


QMA

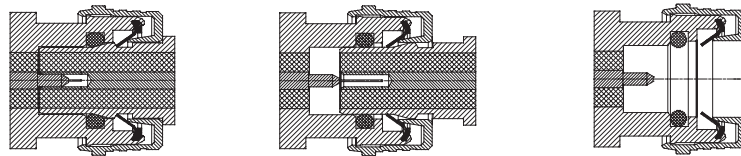


III

CQN

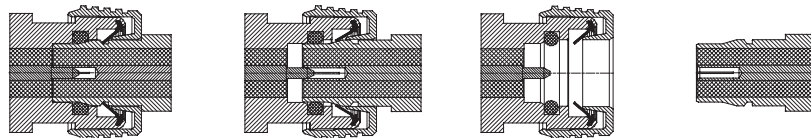


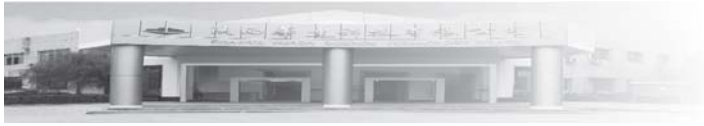
CQMA



MINI-CQMA QUICK-LOCK CONNECTORS

Mini-CQMA





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