

Wi-Fi/Bluetooth External Antennas

molex

Off-the-shelf 2.4, 5 GHz Wi-Fi/Bluetooth External Antennas, available in various configurations, offer high RF performance and reliability for wireless and networking applications

Features and Advantages

Single- and dual-band connectors in straight and folded modes with I-PEX, SMA-J, RP-SMA-J and N-type mounting options
Offers design flexibility



U.FL MHF I



RP-SMA-J



SMA-J

I-PEX type connector
Secures to the application's device radio and provides space savings



Wi-Fi Antenna, U.FL type

Multi-protocol solution that supports Wi-Fi, 2.4 GHz, 5.8 GHz and Bluetooth technologies
Makes it suitable for diverse applications

Hinge joint allows 90° rotation on the vertical plane and SMA-J connector allows 180° rotation on the horizontal plane
Provides excellent directional coverage

ø108.40 by 9.35mm (Straight mode)
ø87.80 by 9.35mm (Folded mode)



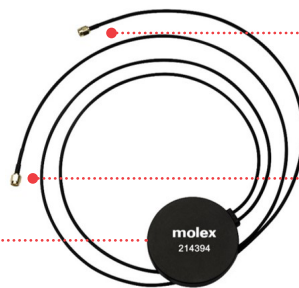
IP65-rated design
Provides protection against dust and water ingress

Wi-Fi Antennas, Hinge type

3M adhesive for "peel and stick" mounting
Enables easy mounting. Provides strong adhesion with shock absorption, and temperature and water resistance



2.4/5GHz External Wi-Fi MIMO Antenna



Multiple Input Multiple Output (MIMO) design

- Achieves superior bit error rate compared with SISO (Single Input Single Output), offering improved coverage
- Delivers higher data rates

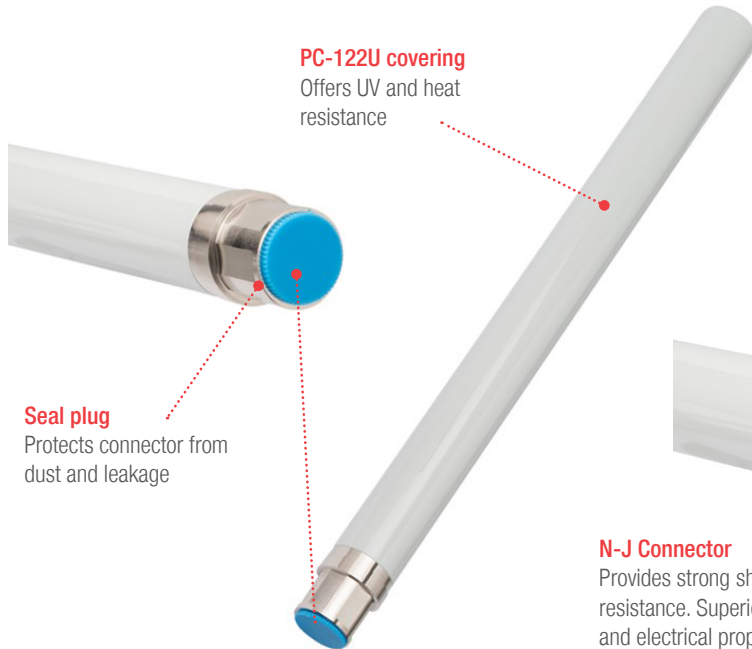


Two SMA straight cable plugs (male)
Provides reliable and durable connection for external applications

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Features and Advantages



PC-122U covering
Offers UV and heat resistance

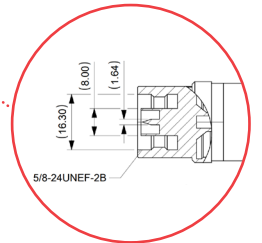
Seal plug
Protects connector from dust and leakage

Up to 6.0dBi peak gain with more than 80% efficiency
Provides improved signal strength and directional coverage

IP67-rated design
Makes it dustproof and waterproof

N-J Connector
Provides strong shock resistance. Superior mechanical and electrical properties make it highly reliable

High-Gain Antenna

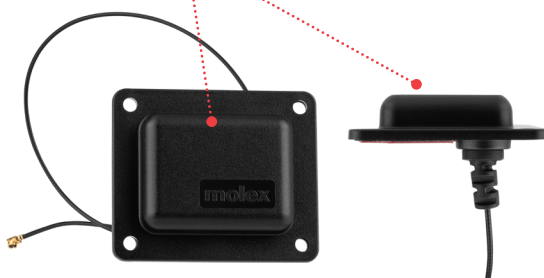


Backside adhesive and screw mounting options
Enables instant application anywhere on the device



Small form factor
Provides space savings

Metal surface mount
Allows mounting directly on the metal surface without compromising RF performance



On-metal Wi-Fi Antenna

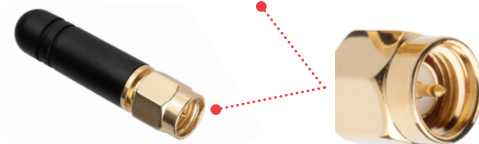


Ultra-miniature coaxial connectors
Allows connector and cable length adjustments

2.4, 5, 6GHz frequency band coverage
Enables good network flexibility and fast speeds with reduced latency



Low-profile design (35.00 by 8.00mm)
Provides space savings



Gold plated SMA connector

Mini-Link Tri-Band Antenna

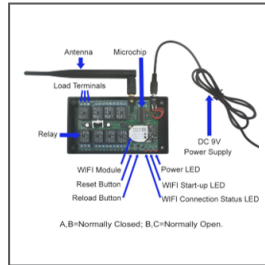
Wi-Fi/Bluetooth External Antennas



Markets and Applications

Connected Home

- Security and surveillance
- Home automation
- Home streaming
- Entertainment
- Smart appliances
- Energy and utilities



Smart transportation



Networking



Security and Surveillance

IoT

- Wireless solutions
- Smart factory/industry/city
- IoT and IT infrastructure

Telecommunications/Networking

- Infrastructure/Networking

Commercial Vehicles

- Networking

Specifications

	215872 (Tri-band)	215868 (On-metal)	214415	212860	214428	214386	214394 (MIMO)	214389 (High-Gain)
REFERENCE INFORMATION								
Packaging	Tray	Tray	PET bag				Carton	Tray
Mates With	SMA socket	SMA/U.FL/others	SMA jack receptacle; U.FL MHF I receptacle				SMA plugs (male)	N type-J
Designed In	Millimeters							
RoHS	Yes							
ELECTRICAL								
Frequency (GHz)	2.4 / 5.0 / 6.0	2.4 / 5.8	2.4	2.4 / 5.0	2.4	2.4 / 5.0	2.4 / 5.0	2.4 / 5.0
RF Power (Watt)	2.0							
Return Loss (dB)	<-10 / <-5 / <-3	<-6	<-10	<-10	<-8	<-10	<-10	<-10
Average Total Radiation Efficiency	>60% / >60% / >45%	>50% / >45%	>80%	>80% / >75%	>75%	>80% / >65%	>65% / >47.5%	>85% / >80%
Peak Gain (dBi)	3.4 / 6.0 / 4.5	2.0 / 5.5	5.3	5.3 / 4.5	3.1	5.2 / 3.3	Port 1: 2.5 / 2.6 Port 2: 3.1 / 3.4	5.0 / 6.0
Impedance (Ohms)	50							
MECHANICAL								
	Refer to product specifications							
PHYSICAL								
Size (mm)	30.00 by 8.00 / 35.00 by 8.00	44.00 by 37.00 by 8.50	108.40 by 9.35		104.00 by 9.40		77.00 by 15.00	275.00 by 23.00
Material	Refer to sales drawings							
Operating Temperature	-40 to +85°C							

Ordering Information

Series No.	Description	Type
215868	Wi-Fi/Bluetooth Antenna, Dual Band	On-metal
215872	Wi-Fi/Bluetooth Antenna, Tri Band	Mini-Link
214415	Wi-Fi/Bluetooth Antenna, Single Band	Hinged
212860	Wi-Fi/Bluetooth Antenna, Dual Band	
214428	Wi-Fi/Bluetooth Antenna, Single Band	I-PEX
214386	Wi-Fi/Bluetooth Antenna, Dual Band	
214394	Wi-Fi/Bluetooth Antenna, Dual Band	MIMO
214389	Wi-Fi/Bluetooth Antenna, Dual Band	High-Gain