

# Wi-Fi/Bluetooth External Antennas

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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 RP-SMA-J and

N-type mounting options  
Offers design flexibility

folded modes with U.FL, SMA-J,

U.FL MHF I

Wi-Fi Antenna,  
U.FL type

U.FL type connector  
Secures to the application's device radio and provides space savings

RP-SMA-J

SMA-J

5.8 GHz and Bluetooth tec  
Makes it suitable for diverse applications

Multi-protocol solution that supports Wi-Fi,  
2.4 GHz, Bluetooth technologies

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

ø87.80 by 9.35mm (Folded mode)

ø108.40 by 9.35mm (Straight mode)

IP65-rated design  
Provides protection against dust and water ingress

Hinge type

and stick" mounting  
Enables easy mounting. Provides strong adhesion with shock

3M adhesive for "peel and tempera and water resistance

absorption,

ture

Wi-Fi Antenn.

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

le Input Multiple Output (MIMO) design

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

2.4/5GHz External  
Wi-Fi MIMO Antenna

Алматы (7273)495-231  
Ангарск (3955)60-70-56  
Архангельск (8182)63-90-72  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Благовещенск (4162)22-76-07  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Владикавказ (8672)28-90-48  
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Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89

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Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Коломна (4966)23-41-49  
Кострома (4942)77-07-48  
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Красноярск (391)204-63-61  
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Курган (3522)50-90-47  
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Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
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Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
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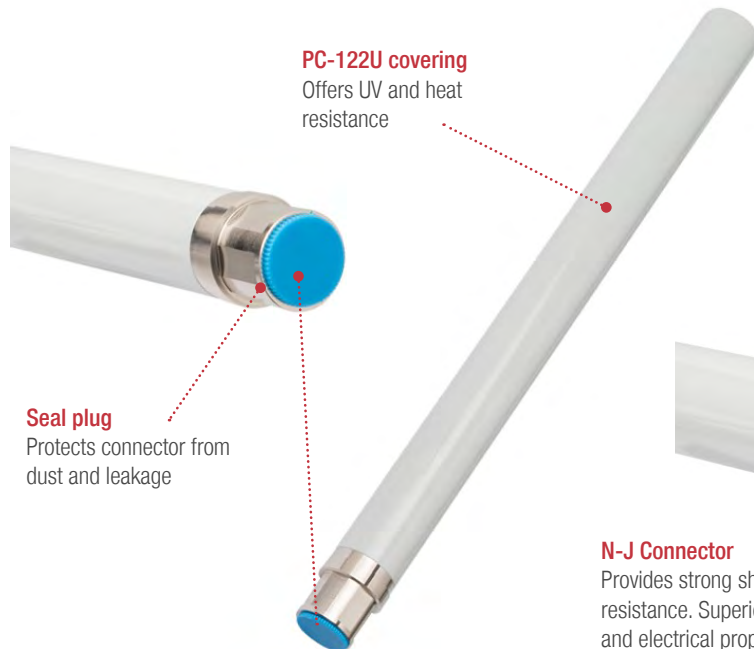
Тольятти (8482)63-91-07  
Томск (3822)98-41-53  
Тула (4872)33-79-87  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Улан-Удэ (3012)59-97-51  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Чебоксары (8352)28-53-07  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Чита (3022)38-34-83  
Якутск (4112)23-90-97  
Ярославль (4852)69-52-93

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## Features and Advantages



**PC-122U covering**  
Offers UV and heat resistance

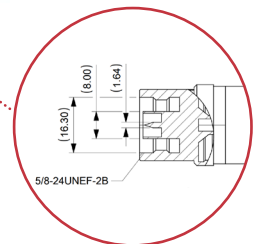
**Seal plug**  
Protects connector from dust and leakage

**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*

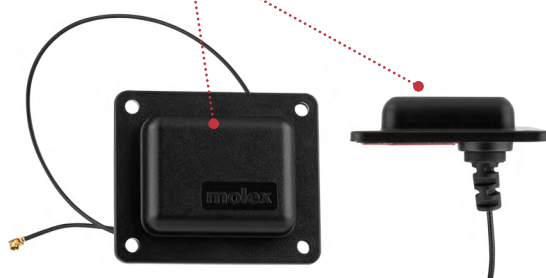


**Backside adhesive and screw mounting options**  
Enables instant application anywhere on the device



**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*

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|                                    | 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<br>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                    |                        |                                            |             |                |             |                                        |                    |

Wi-Fi/Bluetooth  
External Antennas

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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 | U.FL      |
| 214386     | Wi-Fi/Bluetooth Antenna, Dual Band   |           |
| 214394     | Wi-Fi/Bluetooth Antenna, Dual Band   | MIMO      |
| 214389     | Wi-Fi/Bluetooth Antenna, Dual Band   | High-Gain |

|                             |                            |                                 |                                |                          |
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