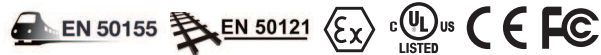


# AWK-3121 Series

## Industrial IEEE 802.11a/b/g wireless AP/bridge/client



- > IEEE 802.11a/b/g compliant
- > QoS (WMM) and VLAN for efficient network traffic
- > Supports long-distance data transfer and 100 ms Turbo Roaming
- > Maximum security with WEP/WPA/WPA2/802.11X and powerful filters
- > Compliant with essential sections of EN 50155
- > M12 anti-vibration connectors (AWK-3121-M12)
- > -40 to 75°C operating temperature range (T models)



### Introduction

The AWK-3121 AP/bridge/client is ideal for industrial hard to wire applications, keeping wireless costs under control, and integrating with existing mobile equipment. The AWK-3121 is compliant with the essential sections of EN 50155, covering operating temperature, power input voltage, surge, ESD and vibration. Installation is easy, with either DIN-Rail mounting or distribution boxes, and the DIN-Rail mounting capability, wide operating temperature range, and IP30 housing with LED indicators make the AWK-3121 a convenient yet reliable solution for any industrial wireless application.

### Advanced Security

- 64-bit and 128-bit WEP (Wired Equivalent Privacy)
- Enable/disable SSID broadcasts
- WPA/WPA2 (Wi-Fi Protected Access) and 802.11i support
- IEEE802.1X/RADIUS support
- Powerful filters for access control

### Specifications for Industrial-grade Applications

- Redundant DC power inputs
- Long-distance data transmission over 10 km
- Integrated DI/DO for on-site monitoring and warnings
- Signal strength LEDs for easy deployment and antenna alignment

### Specifications

#### WLAN Interface

##### Standards:

- IEEE 802.11a/b/g for Wireless LAN
- IEEE 802.11i for Wireless Security
- IEEE 802.3 for 10BaseT
- IEEE 802.3u for 100BaseTX
- IEEE 802.3af for Power-over-Ethernet
- IEEE 802.1D for Spanning Tree Protocol
- IEEE 802.1w for Rapid STP

##### Spread Spectrum and Modulation (typical):

- DSSS with DBPSK, DQPSK, CCK
- OFDM with BPSK, QPSK, 16QAM, 64QAM
- 802.11b: CCK @ 11/5.5 Mbps, DQPSK @ 2 Mbps, DBPSK @ 11 Mbps
- 802.11a/g: 64QAM @ 54/48 Mbps, 16QAM @ 36/24 Mbps, QPSK @ 18/12 Mbps, BPSK @ 9/6 Mbps

##### Operating Channels (central frequency):

###### US:

- 2.412 to 2.462 GHz (11 channels)
- 5.18 to 5.24 GHz (4 channels)

###### EU:

- 2.412 to 2.472 GHz (13 channels)
- 5.18 to 5.24 GHz (4 channels)

###### JP:

- 2.412 to 2.472 GHz (13 channels, OFDM)
- 2.412 to 2.484 GHz (14 channels, DSSS)
- 5.18 to 5.24 GHz (4 channels for W52)

##### Security:

- SSID broadcast enable/disable
- Firewall for MAC/IP/Protocol/Port-based filtering
- 64-bit and 128-bit WEP encryption, WPA /WPA2-Personal and Enterprise (IEEE 802.1X/RADIUS, TKIP and AES)

##### Transmission Rates:

- 802.11b: 1, 2, 5.5, 11 Mbps
- 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps

##### TX Transmit Power:

- 802.11b: Typ. 23±1.5 dBm @ 1 to 11 Mbps
- 802.11g: Typ. 20±1.5 dBm @ 6 to 24 Mbps, Typ. 19±1.5 dBm @ 36 Mbps, Typ. 18±1.5 dBm @ 48 Mbps, Typ. 17±1.5 dBm @ 54 Mbps
- 802.11a: Typ. 18±1.5 dBm @ 6 to 24 Mbps, Typ. 16±1.5 dBm @ 36 to 48 Mbps, Typ. 15±1.5 dBm @ 54 Mbps

##### RX Sensitivity:

- 802.11b: -97 dBm @ 1 Mbps, -94 dBm @ 2 Mbps, -92 dBm @ 5.5 Mbps, -90 dBm @ 11 Mbps
- 802.11g: -93 dBm @ 6 Mbps, -91 dBm @ 9 Mbps, -90 dBm @ 12 Mbps, -88 dBm @ 18 Mbps, -84 dBm @ 24 Mbps, -80 dBm @ 36 Mbps, -76 dBm @ 48 Mbps, -74 dBm @ 54 Mbps
- 802.11a: -90 dBm @ 6 Mbps, -89 dBm @ 9 Mbps, -89 dBm @ 12 Mbps, -85 dBm @ 18 Mbps, -83 dBm @ 24 Mbps, -79 dBm @ 36 Mbps, -75 dBm @ 48 Mbps, -74 dBm @ 54 Mbps

## Protocol Support

**General Protocols:** Proxy ARP, DNS, HTTP, HTTPS, IP, ICMP, SNMP, TCP, UDP, RADIUS, SNMP, PPPoE, DHCP

## Interface

**Default Antennas\*:** 2 dual-band omni-directional antennas, 2 dBi, RP-SMA (male)

\*Only available with the AWK-3121 and AWK-3121-SSC models.

### Connector for External Antennas:

AWK-3121 and AWK-3121-SSC: RP-SMA (female)

AWK-3121-M12: QMA (female)

**RJ45 Ports:** 1, 10/100BaseT(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection (AWK-3121 only)

**Fiber Ports:** 1, 100BaseFX port (SC connector, AWK-3121 only)

**M12 Ports:** 1, 10/100BaseT(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection (AWK-3121-M12 only)

**Console Port:** RS-232 (RJ45-type)

**LED Indicators:** PWR1, PWR2, PoE\*, FAULT, STATE, signal strength, CLIENT MODE, BRIDGE MODE, WLAN, 10/100 (TP port), 100M (fiber port), LAN (M12 port)

\*PoE is only available for the AWK-3121 and AWK-3121-M12

**Alarm Contact:** 1 relay output with current carrying capacity of 1 A @ 24 VDC

**Digital Inputs:** 2 electrically isolated inputs

- +13 to +30 V for state "1"
- +3 to -30 V for state "0"
- Max. input current: 8 mA

## Optical Fiber\*

|                  | 100BaseFX          |
|------------------|--------------------|
|                  | Single Mode        |
| Wavelength       | 1310 nm            |
| Max. TX          | 0 dBm              |
| Min. TX          | -5 dBm             |
| RX Sensitivity   | -34 dBm            |
| Link Budget      | 29 dB              |
| Typical Distance | 40 km <sup>a</sup> |
| Saturation       | -3 dBm             |

\* Only available for AWK-3121-SSC models

## Physical Characteristics

**Housing:** Metal, providing IP30 protection

**Weight:** 850 g

**Dimensions:** 53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)

**Installation:** DIN-Rail mounting, wall mounting (with optional kit)

## Environmental Limits

### Operating Temperature:

Standard Models: -25 to 60°C (-13 to 140°F)

Wide Temp. Models: -40 to 75°C (-40 to 167°F)

**Storage Temperature:** -40 to 85°C (-40 to 185°F)

**Ambient Relative Humidity:** 5% to 95% (non-condensing)

## Power Requirements

**Input Voltage:** 12 to 48 VDC, redundant dual DC power inputs or 48 VDC Power-over-Ethernet (IEEE 802.3af compliant)\*

\*Compliant with EN 50155 on 24 VDC

\*PoE is only available for the AWK-3121 and AWK-3121-M12

**Connector:** 10-pin removable terminal block

**Power Consumption:** 12 to 48 VDC, 0.121 to 0.494 A

**Reverse Polarity Protection:** Present

## Standards and Certifications

**Safety:** UL 60950-1, EN 60950-1

**Hazardous Location:** UL/cUL Class I Division 2, ATEX Zone 2 (for AWK-3121 only)

**EMC:** EN 301 489-1/17; FCC Part 15, Subpart B; EN 55022/55024

**Radio:** EN 300 328, EN 301 893, DSPR (Japan)

**Rail Traffic:** EN 50155, EN 50121-1/4

Note: Please check Moxa's website for the most up-to-date certification status.

## Reliability

**MTBF (mean time between failures):**

AWK-3121: 392,209 hrs

AWK-3121-M12: 480,831 hrs

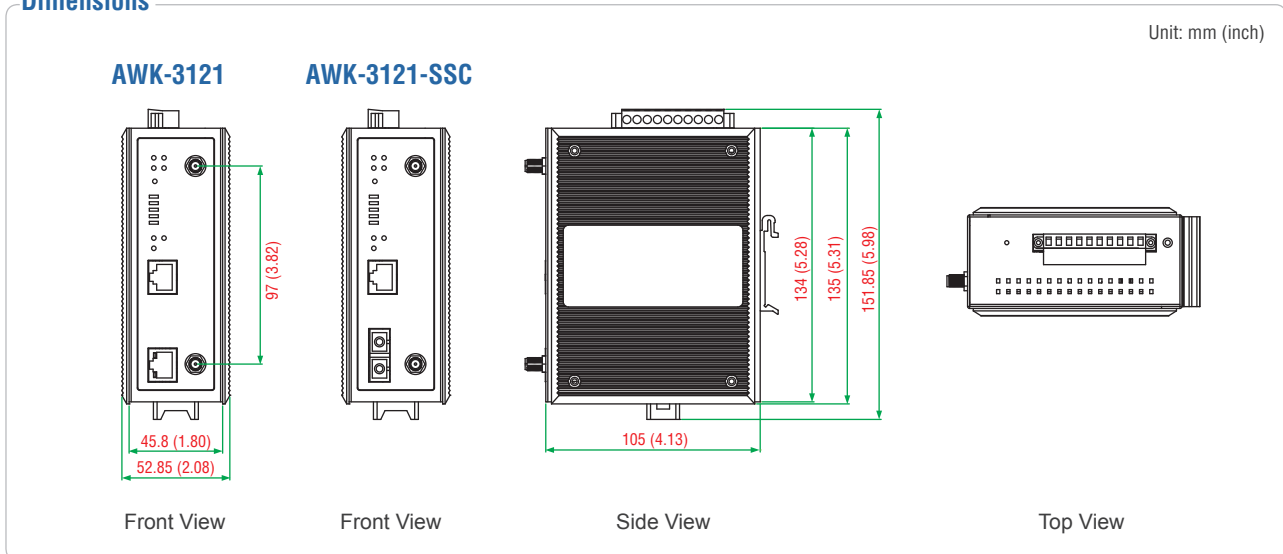
AWK-3121-SSC: 445,913 hrs

## Warranty

**Warranty Period:** 5 years

**Details:** See [www.moxa.com/support/warranty.aspx](http://www.moxa.com/support/warranty.aspx)

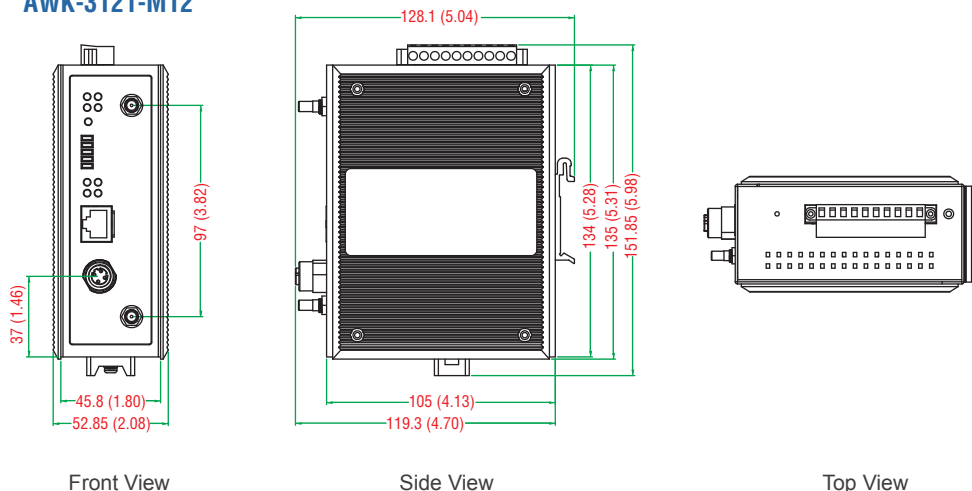
## Dimensions



## Dimensions

Unit: mm (inch)

### AWK-3121-M12



## Ordering Information

| Model Name          | Available Models                 |                                | Port Interface      |     |                          | Antenna Interface |     |
|---------------------|----------------------------------|--------------------------------|---------------------|-----|--------------------------|-------------------|-----|
|                     | Standard Temperature (0 to 60°C) | Wide Temperature (-40 to 75°C) | PoE, 10/100BaseT(X) |     | 100BaseFX                | RP-SMA            | QMA |
|                     |                                  |                                | RJ45                | M12 | Single-Mode SC Connector |                   |     |
| <b>AWK-3121</b>     |                                  |                                |                     |     |                          |                   |     |
| AWK-3121-US         | ✓                                | -                              | ✓                   | -   | -                        | ✓                 | -   |
| AWK-3121-EU         | ✓                                | -                              | ✓                   | -   | -                        | ✓                 | -   |
| AWK-3121-JP         | ✓                                | -                              | ✓                   | -   | -                        | ✓                 | -   |
| AWK-3121-US-T       | -                                | ✓                              | ✓                   | -   | -                        | ✓                 | -   |
| AWK-3121-EU-T       | -                                | ✓                              | ✓                   | -   | -                        | ✓                 | -   |
| AWK-3121-JP-T       | -                                | ✓                              | ✓                   | -   | -                        | ✓                 | -   |
| <b>AWK-3121-M12</b> |                                  |                                |                     |     |                          |                   |     |
| AWK-3121-M12-US     | ✓                                | -                              | -                   | ✓   | -                        | -                 | ✓   |
| AWK-3121-M12-EU     | ✓                                | -                              | -                   | ✓   | -                        | -                 | ✓   |
| AWK-3121-M12-JP     | ✓                                | -                              | -                   | ✓   | -                        | -                 | ✓   |
| AWK-3121-M12-US-T   | -                                | ✓                              | -                   | ✓   | -                        | -                 | ✓   |
| AWK-3121-M12-EU-T   | -                                | ✓                              | -                   | ✓   | -                        | -                 | ✓   |
| AWK-3121-M12-JP-T   | -                                | ✓                              | -                   | ✓   | -                        | -                 | ✓   |
| <b>AWK-3121-SSC</b> |                                  |                                |                     |     |                          |                   |     |
| AWK-3121-SSC-US     | ✓                                | -                              | -                   | -   | ✓                        | ✓                 | -   |
| AWK-3121-SSC-EU     | ✓                                | -                              | -                   | -   | ✓                        | ✓                 | -   |
| AWK-3121-SSC-JP     | ✓                                | -                              | -                   | -   | ✓                        | ✓                 | -   |
| AWK-3121-SSC-US-T   | -                                | ✓                              | -                   | -   | ✓                        | ✓                 | -   |
| AWK-3121-SSC-EU-T   | -                                | ✓                              | -                   | -   | ✓                        | ✓                 | -   |
| AWK-3121-SSC-JP-T   | -                                | ✓                              | -                   | -   | ✓                        | ✓                 | -   |

Note:  
 US: USA band  
 EU: Europe band  
 JP: Japan band

Note: Please visit Moxa's website for a complete list of optional wireless accessories and antennas available for Moxa's wireless products.

### Package Checklist

- AWK-3121 wireless AP/bridge/client
- Cable holder with one screw
- 2 plastic RJ45 protective caps for console port
- 1 plastic protective cap for Fiber Port (AWK-3121-SSC only)
- DIN-Rail kit
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

\* 2 dual-band omni-directional antennas (2 dBi, RP-SMA, 2.4/5 GHz)

# Wireless Antenna Selection Guide

## IEEE 802.11b/g 2.4 GHz Wireless Antennas



|                       | ANT-WSB-AHRM-05-1.5m  | ANT-WSB-ANF-09  | ANT-WSB-PNF-12                                  | ANT-WSB-PNF-18                                  | ANT-WSB5-ANF-12  | ANT-WSB5-PNF-18                               |
|-----------------------|---|---|---|---|--|---|
| Frequency Range       | 2.4 to 2.5 GHz  |   |   |   | 5.1 to 5.9 GHz   |   |
| Antenna Type          | $\lambda/4$ Dipole  | Omni-directional  | Directional, Panel                              | Directional, Panel                              | Omni-directional   | Directional, Panel                            |
| Typical Antenna Gain  | 5 dBi   | 9 dBi   | 12 dBi  | 18 dBi  | 12 dBi   | 18 dBi  |
| Description           | 2.4 GHz, omni-directional/dipole antenna, 5 dBi   | 2.4GHz, omni-directional antenna, 9 dBi, N-type (female)  | 2.4 GHz, panel antenna, 12 dBi, N-type (female) | 2.4 GHz, panel antenna, 18 dBi, N-type (female) | 5 GHz, omni-directional antenna, 12 dBi, N-type (female) | 5 GHz, panel antenna, 18 dBi, N-type (female) |
| Impedance             | 50 $\pm$ 5 ohms   | 50 $\pm$ 5 ohms   | 50 $\pm$ 5 ohms                                 | 50 $\pm$ 5 ohms                                 | 50 $\pm$ 5 ohms  | 50 $\pm$ 5 ohms                               |
| Polarization          | Vertical  | Linear  | Linear  | Linear  | Linear   | Linear  |
| HPBW/Horizontal       | 360°  | 360°  | 50°   | 30°   | 360°   | 10°   |
| HPBW/Vertical         | –   | 10°   | 30°   | 20°   | 6°   | 10°   |
| V.S.W.R.              | 2.0   | 1 : 1.3 Max.  | 1 : 1.5 Max.                                    | 1 : 1.5 Max.                                    | 1 : 1.3 Max.   | 1 : 1.5 Max.                                  |
| Power Handling        | –   | 15 W Max.   | 10 W Max.                                       | 15 W Max.                                       | 10 W Max.  | 10 W Max.                                     |
| Connector(s)          | RP-SMA (male)   | N-type (female)   | N-type (female)                                 | N-type (female)                                 | N-type (female)  | N-type (female)                               |
| Operating Temperature | -40 to 80°C   | -40 to 80°C   | -40 to 80°C                                     | -40 to 80°C                                     | -40 to 80°C  | -40 to 80°C                                   |
| IP rating             | –   | IP65  | IP65  | IP65  | IP65   | IP65  |
| Antenna Profile       | –   | 420 mm length   | 215 x 90 x 30 mm                                | 270 x 205 x 15 mm                               | 420 mm length  | 270 x 205 x 15 mm                             |
| Weight                | 300 g   | 430 g   | 560 g   | 310 g   | 430 g  | 990 g   |
| Related Products      | AWK-1121/1127, AWK-3121, AWK-3121-SSC, AWK-3131, AWK-5222, AWK-5232, NPort W2150/2250 Plus, NPort W2004 | AWK-1121/1127, AWK-3121, AWK-3131, AWK-4121, AWK-4131, AWK-5222, AWK-5232, AWK-6222, AWK-6232, NPort W2150/2250 Plus, NPort W2004 |   |   |  |   |

## IEEE 802.11a/b/g 2.4/5 GHz Dual-band Antennas



|                       | ANT-WDB-ANM-0502  | ANT-WDB-ANM-0407  | ANT-WDB-ANF-0407  | ANT-WDB-ANM-0609  | ANT-WDB-ANF-0609  | ANT-WDB-PNF-1518   |
|-----------------------|---|---|---|---|---|--|
| Frequency Range       | 2.4 to 2.5 / 5.1 to 5.9 GHz   |   |   |   |   |  |
| Antenna Type          | Omni-directional  | Omni-directional  | Omni-directional  | Omni-directional  | Omni-directional  | Directional, Panel   |
| Typical Antenna Gain  | 2/5 dBi   | 4/7 dBi   | 4/7 dBi   | 6/9 dBi   | 6/9 dBi   | 15/18 dBi  |
| Description           | 2.4/5 GHz, dual-band omni-directional antenna, 2/5 dBi, N-type (male) | 2.4/5 GHz, dual-band omni-directional antenna, 4/7 dBi, N-type (male) | 2.4/5 GHz, dual-band omni-directional antenna, 4/7 dBi, N-type (female)   | 2.4/5 GHz, dual-band omni-directional antenna, 6/9 dBi, N-type (male) | 2.4/5 GHz, dual-band omni-directional antenna, 6/9 dBi, N-type (female)   | 2.4/5 GHz, dual-band panel antenna, 15/18 dBi, N-type (female) |
| Impedance             | 50 $\pm$ 5 ohms   | 50 $\pm$ 5 ohms   | 50 $\pm$ 5 ohms   | 50 $\pm$ 5 ohms   | 50 $\pm$ 5 ohms   | 50 $\pm$ 5 ohms  |
| Polarization          | Linear  | Linear  | Linear  | Linear  | Linear  | Linear   |
| HPBW/Horizontal       | 360°  | 360°  | 360°  | 360°  | 360°  | 50/10°   |
| HPBW/Vertical         | 65°   | 10/8°   | 10/8°   | 10/8°   | 10/8°   | 30/10°   |
| V.S.W.R.              | 1 : 2.0 Max.  | 1 : 1.5 Max.  | 1 : 1.5 Max.  | 1 : 1.5 Max.  | 1 : 1.5 Max.  | 1 : 1.5 Max.   |
| Power Handling        | 2 W Max.  | 10 W Max.   | 10 W Max.   | 10 W Max.   | 10 W Max.   | 20 W Max.  |
| Connector(s)          | N-type (male)   | N-type (male)   | N-type (female)   | N-type (male)   | N-type (female)   | N-type (female)  |
| Operating Temperature | -40 to 80°C   | -40 to 80°C   | -40 to 80°C   | -40 to 80°C   | -40 to 80°C   | -40 to 80°C  |
| IP rating             | IP67  | IP65  | IP65  | IP65  | IP65  | IP65   |
| Antenna Profile       | 220 mm length   | 220 mm length   | 260 mm length   | 632 mm length   | 660 mm length   | 270 x 205 x 15 mm  |
| Weight                | 72 g  | 115g  | 155 g   | 238 g   | 286 g   | 1020 $\pm$ 10 g  |
| Related Products      | AWK-4121, AWK-4131, AWK-6222, AWK-6232                                |   | AWK-1121/1127, AWK-3121, AWK-3131, AWK-4121, AWK-4131, AWK-5222, AWK-5232, AWK-6222, NPort W2150/2250 Plus, NPort W2004 | AWK-4121, AWK-4131, AWK-6222, AWK-6232                                | AWK-1121/1127, AWK-3121, AWK-3131, AWK-4121, AWK-4131, AWK-5222, AWK-5232, AWK-6222, AWK-6232, NPort W2150/2250 Plus, NPort W2004 |  |

# Wireless Accessories Selection Guide

| Cables           |   |   |   |   |   |   |   |   |   |  |  |
|------------------|---|---|---|---|---|---|---|---|---|--|--|
|                  | CRF-N0117SA-3M                                    | CRF-N0429N-3M                                     | A-CRF-NMNM-LL4-300                                      | A-CRF-NMNM-LL4-600                                      | A-CRF-NMNM-LL4-900                                      | A-CRF-RMNM-L1-300   | A-CRF-RMNM-L1-600                                       | A-CRF-RMNM-L1-900                                       | A-CRF-RFRM-S1-060                                   | A-CRF-QMAMNM-R2-50                                     | A-CRF-RFQMAM-R2-50                         |
|                  | CFD200 cable, N-type (male) to RP SMA (male), 3 m | CFD400 cable, N-type (male) to N-type (male), 3 m | LMR-400 Lite cable, N-type (male) to N-type (male), 3 m | LMR-400 LITE cable, N-type (male) to N-type (male), 6 m | LMR-400 LITE cable, N-type (male) to N-type (male), 9 m | LMR-195 Lite cable, N-type (male) to RP SMA (male), 3 m             | LMR-195 Lite cable, N-type (male) to RP SMA (male), 6 m | LMR-195 Lite cable, N-type (male) to RP SMA (male), 9 m | S141 cable, RP-SMA (male) to RP-SMA (female), 0.6 m | RG316 cable, QMA (male) to N-type (male)               | RG316 cable, QMA (male) to RP-SMA (female) |
| Cable Type       | CFD200  | CFD400  | LMR-400Lite   | LMR-400 Lite  | LMR-400 Lite  | LMR-195 Lite  | LMR-195 Lite  | LMR-195 Lite  | S141  | RG316  | RG316                                      |
| Connector Type   | N-type male to RP SMA male                        | N-type male to N-type male                        | N-type male to N-type male                              | N-type male to N-type male                              | N-type male to N-type male                              | N-type male to RP SMA male  | N-type male to RP SMA male                              | N-type male to RP SMA male                              | RP-SMA male to RP-SMA female                        | QMA male to N-type male                                | QMA male to RP-SMA female                  |
| Cable Length     | 3 m   | 3 m   | 3 m   | 6 m   | 9 m   | 3 m   | 6 m   | 9 m   | 0.6 m   | 0.5 m  | 0.5 m                                      |
| Outer Dimension  | 5 mm  | 10.3 mm   | 10.29 mm  | 10.29 mm  | 10.29 mm  | 4.95 mm   | 4.95 mm   | 4.95 mm   | 5 mm  | 2.54 mm  | 2.54 mm                                    |
| Min. Bend Radius | 12.7 mm   | 24.5 mm   | 25.4 mm   | 25.4 mm   | 25.4 mm   | 12.7 mm   | 12.7 mm   | 12.7 mm   | 12.7 mm   | 15 mm  | 15 mm                                      |
|                  | 55.4@2.5 GHz<br>86.5@5.8 GHz                      | 22.2@2.5 GHz<br>35.5@5.8 GHz                      |   | 22.2@2.5 GHz<br>35.5@5.8 GHz                            | 22.2@2.5 GHz<br>35.5@5.8 GHz                            | 62.4@2.5 GHz<br>98.1@5.8 GHz  | 62.4@2.5 GHz<br>98.1@5.8 GHz                            | 62.4@2.5 GHz<br>98.1@5.8 GHz                            | 75.4@3 GHz<br>98.4@5 GHz                            | 206@2.4 GHz<br>345@6 GHz                               | 206@2.4 GHz<br>345@6 GHz                   |
| Related Products | AWK-  | AWK-4121, AWK-4131, AWK-6222, AWK-6232-M12        |   |   |   | AWK-1121/1127, AWK-3121, AWK-3121-SSC, AWK-3131, AWK-5222, AWK-5232 |   |   |   | AWK-3121-M12, AWK-3131-M12, AWK-5222-M12, AWK-5232-M12 |  |

## Termination Resistors



|                  | A-TRM-50-NM                                  | A-TRM-50-RM   |
|------------------|--|---|
| Description      | Termination resistor, 50 ohms, N-type (male) | Termination resistor, 50 ohms, RP-SMA (male)                        |
| Related Products | AWK-4121, AWK-4131, AWK-6222, AWK-6232       | AWK-1121/1127, AWK-3121, AWK-3121-SSC, AWK-3131, AWK-5222, AWK-5232 |

**Power Amplifiers**



|                     | <b>A-WPA-2410gM-IDU</b>  | <b>A-WPA-5410aM-IDU</b>  |
|---------------------|--|--|
| Description         | Wireless power amplifier   | Wireless power amplifier   |
| Signal Type         | 2.4 GHz band antenna (included)  | 5 GHz band antenna (included)  |
| Connector Type      | RP-SMA connector   | RP-SMA connector   |
| Power Output        | 1 W  | 1 W  |
| Power Consumption   | 12 VDC   | 12 VDC   |
| Power Cable         | Power plug to power jack cable (included)  | Power plug to power jack cable (included)  |
| Dimensions          | 92 x 60 x 31 mm  | 92 x 60 x 31 mm  |
| Related Accessories | <ul style="list-style-type: none"> <li>N-type male to RP-SMA male cable</li> <li>RP-SMA male to RP-SMA female cable</li> </ul> | <ul style="list-style-type: none"> <li>N-type male to RP-SMA male cable</li> <li>RP-SMA male to RP-SMA female cable</li> </ul> |
| Related Products    | AWK-1121/1127, AWK-3121, AWK-3121-SSC, AWK-3131, AWK-5222, AWK-5232  | AWK-1121/1127, AWK-3121, AWK-3121-SSC, AWK-3131, AWK-5222, AWK-5232  |

**Arrestors**



|                  | <b>A-SA-NMNF-01</b>   |
|------------------|---|
| Frequency        | 0-6 GHz   |
| Connector Type   | N-type female to N-type male  |
| Related Products | AWK-1121/1127, AWK-3121, AWK-3131, AWK-4121, AWK-4131, AWK-5222, AWK-6222 |

**Adaptors**



|                  | <b>A-ADP-RJ458P-DB9F-ABC01</b>     | <b>A-ADP-QMAM-RF</b>                                   |
|------------------|------------------------------------|--|
| Description      | RJ45-to-DB9 adaptor for the ABC-01 | QMA(male) to RP-SMA (female) adaptor for antenna       |
| Related Products | All AWK series                     | AWK-3121-M12, AWK-3131-M12, AWK-5222-M12, AWK-5232-M12 |

Note: The actual product may vary in physical appearance, but the functionality will be the same.