

# Industrial Wireless Ethernet AirWorks 1100 Series

## Industrial IEEE802.11g/b Wireless AP/Bridge/AP Client



### Highlights

- > IEEE802.11g/b compliant
- > Power input by redundant 24 VDC power inputs or Power-over-Ethernet
- > Powerful security with WPA/802.1X/MAC address filtering
- > DIN-Rail or panel mounting ability
- > IP30, rugged, high-strength metal case



### Features

#### Advanced Security Capability

- 64-bit and 128-bit WEP (Wired Equivalent Privacy)
- Enabling/disabling SSID broadcasts
- MAC-address-based access control
- IEEE802.1X/RADIUS
- WPA (Wi-Fi Protected Access)

#### Useful Utilities and Remote Configuration

- Firmware upgrade from TFTP or HTTP
- Web-based Management

- Supports SNMP and UPnP
- Configuration backup and reset

#### Industrial Grade Design

- Operating temperature range from 0 to 60°C
- Power input by redundant 24 VDC power inputs or Power-over-Ethernet
- DIN-Rail or panel mounting capability
- Case design meets IP30 protection standard

### Introduction

AWK-1100 enables wireless users to access network resources. AWK-1100 can authenticate and authorize wireless users by IEEE802.1X and RADIUS, and communicate with a back-end RADIUS (Remote Authentication Dial-In User Service) server to see if a wireless user is allowed to access the wireless network.

AWK-1100 is rated to operate at temperatures ranging from 0 to 60°C and is rugged enough for any harsh industrial environment. Installation is easy, with either DIN-Rail mounting or distribution boxes. The DIN-rail mounting ability, wide operating temperature range, and IP30 case with LED indicators make AWK-1100 a convenient plug-and-play, yet reliable solution for your industrial wireless applications.

#### IEEE802.1X/RADIUS

When configured for AP/Bridge mode, AWK-1100 can authenticate wireless users and distribute encryption keys dynamically by IEEE802.1X Port-Based Network Access

Control and RADIUS (Remote Authentication Dial-In User Service). The following authentication methods are supported: EAP-MD5/EAP-TLS/EAP-TTLS/PEAP.

#### WPA (Wi-Fi Protected Access)

AWK-1100 supports the WPA standard proposed by the Wi-Fi Alliance (<http://www.wi-fi.org>). Both WPA-PSK (Pre-Shared Key) mode and full WPA mode are supported. WPA

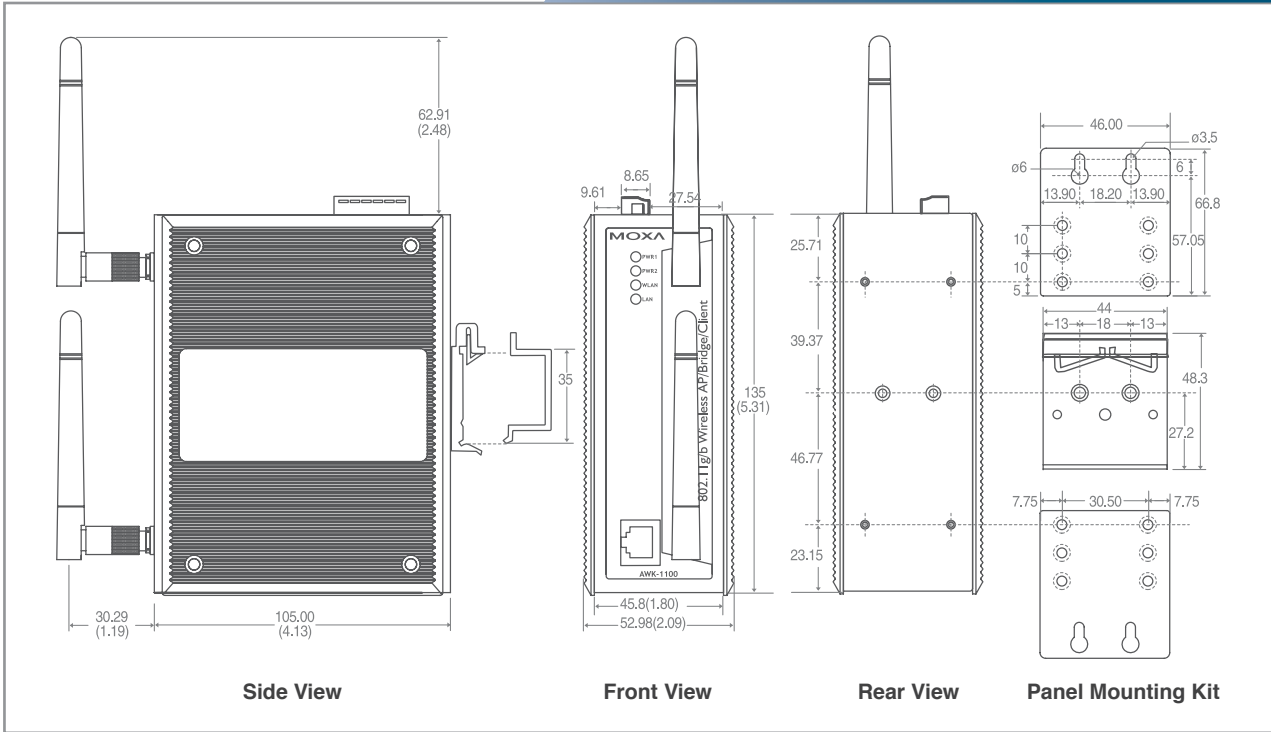
is composed of TKIP (Temporal Key Integrity Protocol) and IEEE802.1X and serves as a successor to WEP for better WLAN security.

## Redundant Power Inputs

AWK-1100 provides two power inputs that can be connected simultaneously to live DC power sources. If one of the power

inputs fails, the other source acts as a backup to provide power automatically.

## Dimensions (unit = mm)



## Specifications

### WLAN

#### Standards:

IEEE802.11g/b for Wireless LAN,  
IEEE802.3u 10/100BaseTX for Ethernet LAN,  
IEEE802.3af for Power-over-Ethernet

#### Frequency Range:

2.4-2.4835 GHz, Direct Sequence Spread Spectrum (DSSS)

#### Data Rate & Modulation:

OFDM@54 Mbps, CCK@11/5.5 Mbps, DQPSK@2 Mbps, and DBSK@1 Mbps

#### Operating Channels:

USA: 1-11 (FCC)

Europe: 1-13 (ETSI)

#### Security:

64-bit and 128-bit WEP encryption, WPA (IEEE802.1X/  
RADIUS and TKIP)

#### Data Rates:

1 Mbps, 2 Mbps, 5.5 Mbps, 6 Mbps, 9 Mbps, 11 Mbps, 12  
Mbps, 18 Mbps, 24 Mbps, 36 Mbps, 48 Mbps, 54 Mbps

#### Transmit Power:

**802.11b:** ≥17 dBm

**802.11g:** 6/9 Mbps ≥ 17 dBm, 12/18 Mbps ≥ 15 dBm, 24 Mbps  
≥14 dBm, 36 Mbps ≥ 14 dBm, 48 Mbps ≥ 12 dBm, 54 Mbps ≥  
12 dBm

#### Receiver Sensitivity:

##### 802.11b:

8% FER@1 Mbps ≤ -91 dBm, 8% FER@2 Mbps ≤ -88 dBm  
8% FER@5.5 Mbps ≤ -85 dBm, 8% FER@11 Mbps ≤ -83 dBm

##### 802.11g:

10% PER@6 Mbps ≤ -88 dBm, 10% PER@9 Mbps ≤ -87 dBm  
10% PER@12 Mbps ≤ -84 dBm, 10% PER@18 Mbps ≤ -82 dBm  
10% PER@24 Mbps ≤ -79 dBm, 10% PER@36 Mbps ≤ -75 dBm  
10% PER@48 Mbps ≤ -69 dBm, 10% PER@54 Mbps ≤ -68 dBm

#### Software Features

**Protocols:** HTTP, DHCP, TCP/IP, RADIUS, DNS, NetBIOS,  
AppleTalk, and IPX/SPX

**Configuration:** Web-based management

**Client OS Support:** Windows 95/98/2000/ME/NT/XP, Unix,  
and Macintosh

#### Interface

**Antenna:** 2 dBi diversity antenna with an R-SMA connector

**RJ45 Port:** 10/100BaseT(X) auto negotiation speed

**LED Indicators:** PWR1, PWR2, WLAN, LAN (Link/ACT)

#### Power

**Input Voltage:** 12 to 45 VDC, redundant dual DC power inputs  
or Power-over-Ethernet

**Input Current (@24V):** 0.3A

**Overload Current Protection:** 1.6A

**Connection:** Removable Terminal Block  
**Reverse Polarity Protection:** Present

**Mechanical**

**Casing:** IP30 protection, metal case  
**Dimensions (W x H x D):** 53.6 x 135 x 105 mm  
 2.11 x 5.31 x 4.13 in.

**Weight:** 800 g  
**Installation:** DIN-Rail or Wall Mounting (optional kit)

**Environmental**

**Operating temperature:** 0 to 60°C (32 to 140°F)

**Storage temperature:** -20 to 70°C (-4 to 158°F)  
**Ambient Relative Humidity:** 5% to 95% (non-condensing)

**Regulatory Approvals**

**Safety:** EN 60950-1:2001, UL 60950  
**Certifications:** FCC, CE  
**MTBF:** 126360 hrs  
 Data Base: Telcordia (Bellcore), GB

**Warranty**

5 years

**Ordering Information**

**AWK-1100-US:** IEEE802.11g Wireless AP/Bridge/AP Client, 0 to 60°C, US band.  
**AWK-1100-EU:** IEEE802.11g Wireless AP/Bridge/AP Client, 0 to 60°C, Euro band.

**Optional Accessories**

**DR-4524:** 45W/2A DIN-Rail 24 VDC Power Supply with universal 85 to 264 VAC input  
**DR-75-24:** 75W/3.2A DIN-Rail 24 VDC Power Supply with universal 85 to 264 VAC input  
**DR-120-24:** 120W/5A DIN-Rail 24 VDC Power Supply with 88 to 132 VAC/176 to 264 VAC input by switch  
**WK-46:** Wall Mounting kit

# IEEE802.11g/b Omni & Directional Antennas

**2.4 GHz Omni-directional Antenna**

**Frequency Range:** 2.4-2.5 GHz  
**Antenna Type:** Omni-directional  
**Antenna Gain:** 9 dBi  
**Impedance:** 50 Ohms  
**Polarization:** Vertical  
**Radiation Angle:** 360° horizontal, 12° vertical

**SWR (Standing Wave Ratio):** ≤ 1.5:1  
**Connector:** N-Female  
**Dimensions:** 390 mm (H)  
**Weight:** 370 g  
**Installation:** U-bolt installation kit



**2.4 GHz Directional Antenna**

**Frequency Range:** 2.4-2.5 GHz  
**Antenna Type:** Directional, Flat Panel  
**Antenna Gain:** 12 dBi  
**Impedance:** 50 Ohms  
**Polarization:** Vertical  
**Radiation Angle:** 50° horizontal, 30° vertical

**SWR (Standing Wave Ratio):** ≤ 1.5:1  
**Connector:** N-Female  
**Dimensions:** 90 x 275 x 30 mm (WxHxD)  
**Weight:** 500 g  
**Installation:** wall mounting or swivel mounting kit (optional)



**Ordering Information**

**ANT-1-O-09:** 2.4 GHz, omni-directional, 9 dBi Antenna, N-Female connector  
**ANT-1-D-12:** 2.4 GHz, directional, 12 dBi Antenna, N-Female connector  
**CRF- N0117SA-3M:** CFD200 cable, N-Male to RP SMA Male connector, 3 meters

\*This cable is necessary for AWK-1100 to connect with optional antenna

**Optional Accessories**

**HA-1002SU:** Swivel Mounting Kit, swivel angle 90° horizontal, 40° vertical

\*Supports ANT-1-D-12 by adjusting the angle for use with different wireless applications.