AWK-4131

Industrial Grade Wireless AP Bridge Client

The AWK-4131 is ideal for outdoor wireless industrial applications where hard wiring is not feasible or cost effective, or preexisting mobile equipment connects to a TCP/IP network providing reliable and stable, long distance connectivity.

Robust construction with dust-tight and weatherproof protective housing is IP68-rated, allowing for extending existing indoor wired networks outdoors, even in extreme environments. The AWK-4131 is compliant with essential EN 50155 sections covering operating temperature, power input voltage, surge, ESD, and vibration. Redundant DC power inputs ensure reliability of the power supply, and can be powered via PoE for easy deployment.

KEY FEATURES

- Over 364,500 failure free hours
- Easy installation
- Integrates with existing mobile equipment
- Advanced security
- Operates in extreme conditions
- Transmission up to 10 km
- Reverse polarity protection
- 1-year warranty

Specifications

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)

Physical

Housing	Metal, providing IP68 protection
Weight	1.5 kg
Dimensions	224 x 147.7 x 64.5 mm (8.82 x 5.82 x 2.54 in)
Installation	Wall mounted - ***standard***; DIN-rail mounted - optional; Pole mounted - optional

Environmental Limits

Standard	-40 to 75°C (-40 to 167°F)
Wide Temp	-40 to 75°C (-40 to 167°F)
Storage	-40 to 85°C (-40 to 185°F)
Humidity	5% to 100% non-condensing

Power Requirements

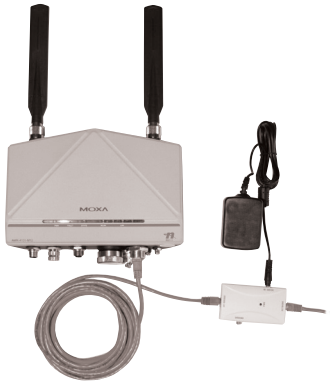
Input Voltage	12 to 48 VDC, redundant dual DC power inputs or 48 VDC Power-over-Ethernet (IEEE 802.3af compliant)*
Connector	M12 male connector with A-coding
Consumption	12 to 48 VDC, 0.121 to 0.494 A; 24 VDC, 0.3 A

Certifications

Safety	UL 60950-1, EN 60950-1
Hazardous	UL/cUL Class I Division 2, ATEX Zone 2
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

Ward™ Telematics and Fuel Control

Specifications - AWK-4131



Model

AWK-4131-US-T

IEEE 802.11a/b/g IP68 wireless AP/bridge/client, US band

Interface

Default Antennas

2 dual-band omni-directional antennas, 5 dBi at 2.4 GHz,

2 dBi at 5 GHz, N-type (male)

Connector for External Antennas

N-type (female)

RJ45 Ports

1, 10/100BaseT(X), auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection

Console Port

RS-232 (RJ45-type)

LED Indicators

PWR, FAULT, STATE, WLAN, LAN

Alarm Contact

Digital output, M12 female connector: 1 relay output with current carrying capacity of 1 A @ 24 VDC

Digital Inputs

M12 female connector
2 electrically isolated inputs
state 1: +13 to +30 V
state 0: +3 to -30 V
Max input current 8 mA

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 100BaseT(X)
IEEE 802.3af for Power-over-Ethernet
IEEE 802.1D for Spanning Tree Protocol
IEEE 802.1w for Rapid STP
IEEE 802.1Q for VLAN

Spread Spectrum and Modulation - *typical*

- D888 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)

2.412 to 2.462 GHz (11 channels)

Protocol Support

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

AP-only Protocols: ARP, BOOTP, DHCP, STP/RSTP (IEEE 802.1D/w)

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 (hardware revision 1.1)

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 (hardware revision 1.1)

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

PS AWK-4131 (05/19)

Contact

www.ejward.com/contact