



# AWK-3131

Industrial Grade Wireless AP Bridge Client  
IEEE 802.11a/b/g

The AWK-3131 AP Bridge Client is ideal for industrial, hard to wire applications, and keeping wireless costs under control. Installation is easy and convenient with either DIN-rail mounting or distribution boxes. Secure IP30 housing is rugged enough for the harshest industrial environments and operating in extreme temperatures.



## KEY FEATURES

- Integrates with existing equipment
- Over 392,200 failure-free hours
- Redundant DC power inputs
- Long-distance data transmission (>10 km)
- Integrated DI/DO for on-site monitoring and warnings
- Signal strength LEDs for easy deployment and antenna alignment
- Powerful filters for access control
- 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 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 - *optional*

### Environmental Limits

#### Operating Temperatures

Standard: 0 to 60°C (32 to 140°F)  
 Wide Temp: -40 to 75°C (-40 to 167°F)  
 Storage: -40 to 85°C (-40 to 185°F)  
 Humidity: 5% to 95%, non-condensing

### Power Requirements

Input Voltage: 12 to 48 VDC, redundant dual DC power inputs or 48 VDC PoE (IEEE 802.3af compliant)\*  
 Connector: 10-pin removable terminal block  
 Consumption: 12 to 48 VDC, 0.121 to 0.494 A

### Certifications

Safety: UL 60950-1  
 EN 60950-1  
 Hazardous: UL/cUL Class I Division 2, ATEX Zone 2  
 EMC: FCC Part 15 Subpart B Class B  
 EN 301 489-1/17  
 EN 55022/55024  
 Radio: EN 300 328, EN 301 893, DSPR (Japan)  
 Rail Traffic: EN 50155, EN 50121-1/4



# Specifications - AWK-3131

## Interface

### Default Antennas

AWK-3131 and AWK-3131-SSC: 2 dual-band omni-directional antenna, 2 dBi, RP-SMA (male)

### External Antennas\*

AWK-3131 and AWK-3131-SSC: RP-SMA (female)  
AWK-3131-M12 QMA (female)

### RJ45 Ports

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

### Fiber Ports

1, 100BaseFX port (SC connector) M12 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

PWR1, PWR2, PoE\*, Fault, State, signal strength,  
Client Mode, Bridge Mode, Wlan, 10/100 (TP port),  
100M (fiber port), LAN (M12 port)

### Alarm Contact

1 relay output with current carrying capacity of  
1 A @ 24 VDC

### Digital Inputs

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 802.3u for 100BaseT(X)  
IEEE 802.3af for PoE\*  
IEEE 802.1D for Spanning Tree Protocol  
IEEE 802.1w for Rapid STP  
IEEE 802.1Q VLAN

### Spread Spectrum and Modulation (typical)

- D888 with DBPSK, DQPSK, CCK
- OFDM with BPSK, QPSK, 16QAM, 64QAM 802.11b: z  
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, SNMP,  
TCP, UDP, RADIUS, SNMP, PPPoE, DHCP

## 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

## Optical Fiber\*\*

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

- ◆ 2 dual-band omni-directional antennas only available for AWK-3131 and AWK-3131-SSC models.
- \* PoE available for AWK-3131 and AWK-3131-M12 only.
- \*\* Optical Fiber available for AWK-3131-SSC only.



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