

AWK-3131Aシリーズ

産業用IEEE 802.11a/b/g/n 無線AP/ブリッジ/クライアント



機能とメリット

- IEEE 802.11a/b/g/n AP/ブリッジ/クライアントサポート
- AeroMagを使った簡単なセットアップ
- ミリ秒レベルクライアントベースのTurbo Roaming¹
- AeroLink保護による完全な冗長性
- ネットワークアドレス変換（NAT）を使用した簡単なネットワーク設定
- アンテナと電源の統合絶縁
- -40～75°Cの幅広い動作温度範囲（-Tモデル）
- 5 GHz DFSチャネルサポート

認証



製品紹介

AWK-3131A 3-in-1産業用ワイヤレスAP/ブリッジ/クライアントは、最大300 MbpsのネットデータレートでIEEE 802.11n技術をサポートすることで、増大する高速データ転送に対するニーズを満たしています。AWK-3131Aは、動作温度、電源入力電圧、サージ、ESD、振動において産業規格および認証に準拠しています。AWK-3131Aは2つの冗長DC電源入力により電源の信頼性が高められており、PoE経由により電力を供給することができるため容易に導入することができます。AWK-3131Aは、2.4または5 GHz帯域のいずれかで動作することができ、既存の802.11a/b/g機器と下位互換性があります。

先進的な802.11n産業用無線ソリューション

- 802.11a/b/g/nに準拠したAP/ブリッジ/クライアントによる柔軟な導入
- 最大1 kmの視線と外部ハイゲイン・アンテナによる長距離無線通信に最適化されたソフトウェア（5 GHzでのみ使用可能）
- 60台のクライアントの同時接続に対応
- DFSチャネルサポートにより、既存の無線インフラストラクチャからの干渉を回避するために、より広範囲の5 GHzチャネル選択が可能

先進的なワイヤレス技術

- 導入時のエラーを軽減する産業用アプリケーションの基本的なWLAN設定のためのAeroMag
- AP間のローミング切り替え時間が150ms未満となるTurbo Roaming¹
- APとクライアント間の冗長ワイヤレスリンク（リカバリ時間300ミリ秒未満）を作成するAeroLink

産業用の耐久性

- 外部からの電氣的干渉に対して500 V絶縁保護を提供するよう設計が行われた統合型のアンテナと絶縁電源
- Class I Div. IIおよびATEX Zone 2認証を取得
- 過酷な環境でもスムーズな無線通信を実現する-40～75°Cの広い動作温度モデル（-T）

仕様

WLAN Interface

WLAN Standards	802.11a/b/g/n 802.11i Wireless Security
Modulation Type	DSSS OFDM MIMO-OFDM

1. The Turbo Roaming Recovery Timeは、干渉のない20MHz RFチャネル、WPA2-PSKセキュリティ、およびデフォルトのTurbo Roamingパラメータで設定されたAPIに全体にわたり、最適化された条件で記録されたテスト結果の平均です。クライアントは、100 Kbpsのトラフィック負荷で3チャネルローミングが設定されています。他の条件もまた、ローミング性能に影響を及ぼす可能性があります。Turbo Roamingパラメータ設定の詳細については、製品マニュアルを参照してください。

Frequency Band for US (20 MHz operating channels)	2.412 to 2.462 GHz (11 channels) 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels) ² 5.500 to 5.700 GHz (11 channels) ² 5.745 to 5.825 GHz (5 channels)			
Frequency Band for EU (20 MHz operating channels)	2.412 to 2.472 GHz (13 channels) 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels) ² 5.500 to 5.700 GHz (11 channels) ²			
Frequency Band for JP (20 MHz operating channels)	2.412 to 2.484 GHz (14 channels) 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels) ² 5.500 to 5.700 GHz (11 channels) ²			
Wireless Security	WEP encryption (64-bit and 128-bit) WPA/WPA2-Enterprise (IEEE 802.1X/RADIUS, TKIP, AES) WPA/WPA2-Personal			
Transmission Rate	802.11b: 1 to 11 Mbps 802.11a/g: 6 to 54 Mbps 802.11n: 6.5 to 300 Mbps			
Transmitter Power for 802.11a	23±1.5 dBm @ 6 to 24 Mbps 21±1.5 dBm @ 36 Mbps 20±1.5 dBm @ 48 Mbps 18±1.5 dBm @ 54 Mbps			
Transmitter Power for 802.11n (5 GHz)	23±1.5 dBm @ MCS0/8 20 MHz 18±1.5 dBm @ MCS7/15 20 MHz 23±1.5 dBm @ MCS0/8 40 MHz 17±1.5 dBm @ MCS7/15 40 MHz			
Transmitter Power for 802.11b	26±1.5 dBm @ 1 Mbps 26±1.5 dBm @ 2 Mbps 26±1.5 dBm @ 5.5 Mbps 25±1.5 dBm @ 11 Mbps			
Transmitter Power for 802.11g	23±1.5 dBm @ 6 to 24 Mbps 21±1.5 dBm @ 36 Mbps 19±1.5 dBm @ 48 Mbps 18±1.5 dBm @ 54 Mbps			
Transmitter Power for 802.11n (2.4 GHz)	23±1.5 dBm @ MCS0/8 20 MHz 18±1.5 dBm @ MCS7/15 20 MHz 23±1.5 dBm @ MCS0/8 40 MHz 17±1.5 dBm @ MCS7/15 40 MHz			
Transmitter Power				
	2.4 GHz	26 dBm	18 dBm	18 dBm
	5 GHz (UNII-1)	23 dBm	21 dBm	21 dBm
	5 GHz (UNII-2)	23 dBm	21 dBm	21 dBm
	5 GHz (UNII-2e)	23 dBm	23 dBm	23 dBm
	5 GHz (UNII-3)	23 dBm	–	–
	Note: Based on regional regulations, the maximum transmission power allowed on the UNII bands is restricted in the firmware, as indicated above.			
Receiver Sensitivity for 802.11a (measured at 5.680 GHz)	Typ. -90 @ 6 Mbps Typ. -88 @ 9 Mbps Typ. -88 @ 12 Mbps Typ. -85 @ 18 Mbps			

2. DFS (Dynamic Frequency Selection) channel support: In AP mode, when a radar signal is detected, the device will automatically switch to another channel. However, according to regulations, after switching channels, a 60-second availability check period is required before starting the service.

	Typ. -81 @ 24 Mbps Typ. -78 @ 36 Mbps Typ. -74 @ 48 Mbps Typ. -72 @ 54 Mbps Note ³
Receiver Sensitivity for 802.11n (5 GHz; measured at 5.680 GHz)	Typ. -69 dBm @ MCS7 20 MHz Typ. -71 dBm @ MCS15 20 MHz Typ. -63 dBm @ MCS7 40 MHz Typ. -68 dBm @ MCS15 40 MHz Note ³
Receiver Sensitivity for 802.11b (measured at 2.437 GHz)	Typ. -93 dBm @ 1 Mbps Typ. -93 dBm @ 2 Mbps Typ. -93 dBm @ 5.5 Mbps Typ. -88 dBm @ 11 Mbps
Receiver Sensitivity for 802.11g (measured at 2.437 GHz)	Typ. -88 dBm @ 6 Mbps Typ. -86 dBm @ 9 Mbps Typ. -85 dBm @ 12 Mbps Typ. -85 dBm @ 18 Mbps Typ. -85 dBm @ 24 Mbps Typ. -82 dBm @ 36 Mbps Typ. -78 dBm @ 48 Mbps Typ. -74 dBm @ 54 Mbps
Receiver Sensitivity for 802.11n (2.4 GHz; measured at 2.437 GHz)	Typ. -70 dBm @ MCS7 20 MHz Typ. -69 dBm @ MCS15 20 MHz Typ. -67 dBm @ MCS7 40 MHz Typ. -67 dBm @ MCS15 40 MHz
WLAN Operation Mode	Access point, Client, Client-Router, Master, Slave, Sniffer
Antenna	External, 2/2 dBi, Omni-directional
Antenna Connectors	2 RP-SMA female

Ethernet Interface

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3af for PoE IEEE 802.1Q for VLAN Tagging IEEE 802.1X for authentication IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol
PoE Ports (10/100/1000BaseT(X), RJ45 connector)	1

Ethernet Software Features

Management	DHCP Server/Client, DNS, HTTP, IPv4, LLDP, Proxy ARP, SMTP, SNMPv1/v2c/v3, Syslog, TCP/IP, Telnet, UDP, VLAN, Wireless Search Utility, MXview, MXconfig
Routing	Port forwarding, Static Route, NAT
Redundancy Protocols	RSTP, STP
Security	HTTPS/SSL, RADIUS, SSH
Time Management	SNTP Client

Firewall

Filter	ICMP, MAC address, IP protocol, Port-based
--------	--

3. Due to a limitation in the receiver sensitivity performance for channels 153 and 161, it is recommended to avoid using these channels in your critical applications.

Serial Interface

Console Port	RS-232, 8-pin RJ45
--------------	--------------------

LED Interface

LED Indicators	PWR1, PWR2, PoE, FAULT, STATE, SIGNAL, WLAN, LAN
----------------	--

Input/Output Interface

Digital Inputs	2 Max. input current: 8 mA +13 to +30 V for state 1 +3 to -30 V for state 0
Alarm Contact Channels	Relay output with current carrying capacity of 1 A @ 24 VDC
Buttons	Reset button

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	52.7 x 135 x 105 mm (2.08 x 5.32 x 4.13 in)
Weight	860 g (1.9 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Power Parameters

Input Current	0.6 A @ 12 VDC, 0.15 A @ 48 VDC
Input Voltage	12 to 48 VDC, Redundant dual inputs, 48 VDC Power-over-Ethernet
Power Connector	1 removable 10-contact terminal block(s)
Power Consumption	7.2 W (max.)
Reverse Polarity Protection	Supported

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 (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 61000-6-2/-6-4
EMI	CISPR 32, FCC Part 15B Class B
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF
Hazardous Locations	ATEX, Class I Division 2, IECEx
Radio	EN 300 328, EN 301 489-1/17, EN 301 893, FCC ID SLE-WAPN008, ANATEL, MIC, NCC, RCM, SRRC, WPC, KC, RCM

Safety	EN 60950-1, UL 60950-1
Vibration	IEC 60068-2-6

MTBF

Time	570,854 hrs
Standards	Telcordia SR332

Warranty

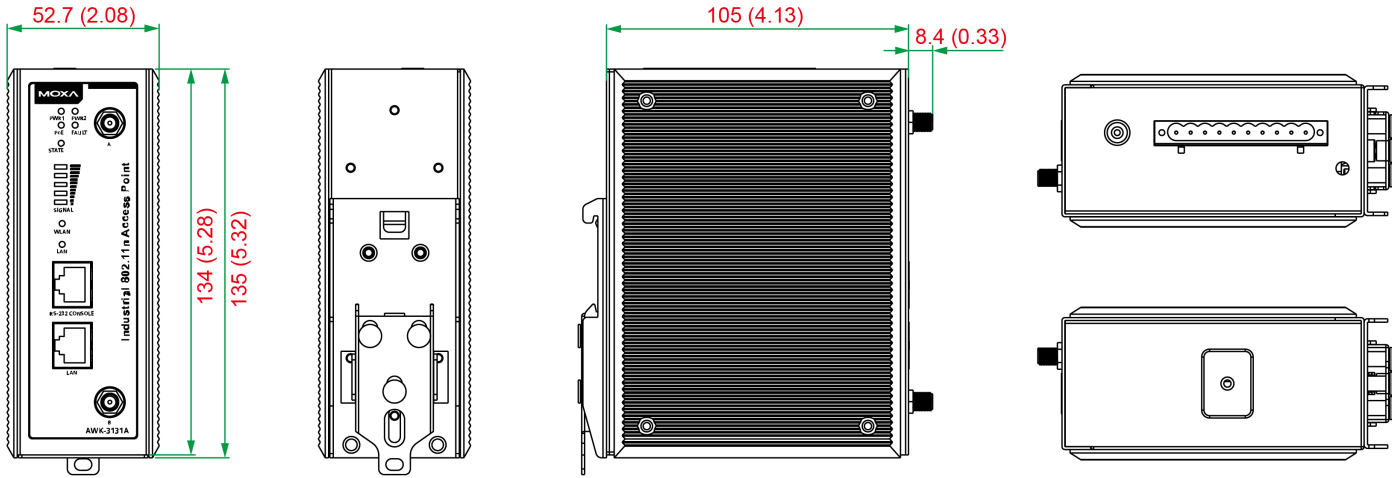
Warranty Period	5 years
Details	See www.moxa.com/jp/warranty

Package Contents

Device	1 x AWK-3131A Series wireless AP/bridge/client
Installation Kit	2 x cap, plastic, for RJ45 port 1 x cable holder with screw 1 x DIN-rail kit
Antenna	2 x 2.4/5 GHz antenna
Documentation	1 x quick installation guide 1 x warranty card

寸法

単位：mm（インチ）



前面図

背面図

側面図

上面図と底面図

注文情報

Model Name	Band	Standards	Operating Temp.
AWK-3131A-EU	EU	802.11a/b/g/n	-25 to 60°C
AWK-3131A-EU-T	EU	802.11a/b/g/n	-40 to 75°C
AWK-3131A-JP	JP	802.11a/b/g/n	-25 to 60°C
AWK-3131A-JP-T	JP	802.11a/b/g/n	-40 to 75°C
AWK-3131A-US	US	802.11a/b/g/n	-25 to 60°C
AWK-3131A-US-T	US	802.11a/b/g/n	-40 to 75°C

アクセサリ（別売）

Antennas

ANT-WDB-ANF-0407	2.4/5 GHz, omni-directional antenna, 4/7 dBi, N-type (female)
ANT-WDB-ANF-0609	2.4/5 GHz, omni-directional antenna, 6/9 dBi, N-type (female)
ANT-WDB-ANM-0306	2.4/5 GHz, omni-directional antenna, 3/6 dBi, N-type (male)
ANT-WDB-ANM-0407	2.4/5 GHz, dual-band omni-directional antenna, 4/7 dBi, N-type (male)
ANT-WDB-ANM-0502	2.4/5 GHz, omni-directional antenna, 5/2 dBi, N-type (male)
ANT-WDB-ANM-0609	2.4/5 GHz, omni-directional antenna, 6/9 dBi, N-type (male)
ANT-WDB-ARM-02	2.4/5 GHz, omni-directional rubber duck antenna, 2 dBi, RP-SMA (male)
ANT-WDB-ARM-0202	2.4/5 GHz, panel antenna, 2/2 dBi, RP-SMA (male)
ANT-WDB-PNF-1518	2.4/5 GHz, panel antenna, 15/18 dBi, N-type (female)
MAT-WDB-CA-RM-2-0205	2.4/5 GHz, ceiling antenna, 2/5 dBi, MIMO 2x2, RP-SMA-type (male)
MAT-WDB-DA-RM-2-0203-1m	2.4/5 GHz, desktop antenna, 2/3 dBi, MIMO 2x2, RP-SMA-type (male), 1 m cable
MAT-WDB-PA-NF-2-0708	2.4/5 GHz, panel antenna, 7/8 dBi, MIMO 2x2, N-type (female)
ANT-WSB5-ANF-12	5 GHz, omni-directional antenna, 12 dBi, N-type (female)
ANT-WSB5-PNF-18	5 GHz, directional panel antenna, 18 dBi, N-type (female)
ANT-WSB-ANF-09	2.4 GHz, omni-directional antenna, 9 dBi, N-type (female)
ANT-WSB-PNF-12	2.4 GHz, directional panel antenna, 12dBi, N-type (female)
ANT-WSB-PNF-18	2.4 GHz, directional panel antenna, 18 dBi, N-type (female)
ANT-WSB-AHRM-05-1.5m	2.4 GHz, omni-directional/dipole antenna, 5 dBi, RP-SMA (male), 1.5 m cable

Wireless Antenna Cables

A-CRF-RFRM-R4-150	RF magnetic stand, RP-SMA (male) to RP-SMA (female), RG-174/U cable, 1.5 m
A-CRF-RFRM-S2-60	SS402 cable, RP-SMA (male) to RP-SMA (female)
A-CRF-RMNM-L1-300	N-type (male) to RP SMA (male), LMR-195 Lite cable, 3 m
A-CRF-RMNM-L1-600	N-type (male) to RP SMA (male), LMR-195 Lite cable, 6 m
A-CRF-RMNM-L1-900	N-type (male) to RP SMA (male), LMR-195 Lite cable, 9 m
CRF-N0117SA-3M	N-type (male) to RP SMA (male), CFD200 cable, 3 m

Surge Arrestors

A-SA-NMNF-01	Surge arrester, N-type (female) to N-type (male)
A-SA-NFNF-01	Surge arrester, N-type (female) to N-type (female)

Wireless Terminating Resistors

A-TRM-50-NM	Terminating Resistor, 50 ohm, RP-SMA Male
-------------	---

Wireless Adapters

A-ADP-RJ458P-DB9F-ABC01	DB9 female to RJ45 connector for the ABC-01
-------------------------	---

Wall-Mounting Kits

WK-51-01	Wall-mounting kit, 2 plates, 6 screws, 51.6 x 67 x 2 mm
----------	---

© Moxa Inc. All rights reserved.2020年3月11日更新。

Moxa Inc.の明白な許可を書面で取得しない限り、本書およびその一部の複製や使用はいかなる方法やいかなる場合でも許可されません。製品の仕様は予告なく変更されることがあります。最新の製品情報については当社のWebサイトをご覧ください。