

AWK-4262A 系列

進階戶外工業級 Wi-Fi 6 (802.11ax) 無線 AP/橋接器/用戶端



特色與優點

- IEEE 802.11ax Wi-Fi 6 AP/橋接器/用戶端
- 同時雙頻 Wi-Fi 技術，支援高達 1.775Gbps 的總數據傳輸速率
- Wi-Fi 6 OFDMA 技術支援與多個用戶端同時通訊，以應對高密度環境
- 最新 WPA3 加密技術，可提升無線網路安全性
- 毫秒等級的用戶端 Turbo Roaming 漫遊¹
- 支援 802.11k/v/r² 這些通訊協定旨在實現快速且無縫的用戶端漫遊
- 內建 2.4 GHz 和 5 GHz 頻段濾波器，實現更可靠的無線連接
- 通用 (UN) 型號可設定國家或地區碼，以進行更具有彈性的部署
- IP68 等級防風雨外殼專為戶外應用以及 -40 至 75°C 的寬廣操作溫度範圍所設計

認證



簡介

AWK-4262A 系列 3 合 1 工業無線 AP/橋接器/用戶端的設計透過 IEEE802.11ax 技術，總數據傳輸速率高達 1.775Gbps，滿足日益增長的資料傳輸需求。在操作溫度、電源輸入電壓、突波、ESD 和震動方面，AWK-4262A 符合工業標準及規定。兩個備援直流電源輸入提升電源供應的可靠性，而且 AWK-4262A 可透過 PoE 獲得供電，使部署更具有彈性。

AWK-4262A 可以在 2.4 或 5GHz 頻段上同時操作，並向下相容現有 802.11a/b/g/n/ac 無線標準，以保障您對無線網路的未來投資。

先進 802.11ax 工業無線解決方案

- 802.11a/b/g/n/ac/ax 相容的 AP/橋接器/用戶端，提供彈性的布署方式
- DFS 頻道支援提供更廣泛的 5 GHz 頻道選擇，避免現有無線基礎設施的干擾
- Wi-Fi 6 OFDMA (正交分頻多重存取) 技術可同時與多個用戶端通訊，以改善網路效率
- Wi-Fi 6 空間重複使用技術透過允許在密集環境中進行更多同時傳輸來增加網路容量

先進無線技術

- 基於用戶端的 Turbo Roaming 快速漫遊，達到無縫漫遊的目的。¹ 在 AP 間的漫遊復原時間 < 150 毫秒（用戶端模式）
- 故障排除 SSID 功能透過在用戶端模式中，當與 AP 的連線遺失時，啟用一個臨時 SSID 來進行無線診斷
- 自動頻道選擇會根據即時分析自動掃描並選取最佳操作頻道，以最大限度地減少干擾並提升無線效能
- 透過 AeroMesh 實現易於擴展和自我修復的 Wi-Fi 網路

工業級耐用性

- IP68 等級防風雨外殼，專為室外應用所設計
- -40 至 75°C 的寬廣操作溫度，可在惡劣環境中提供順暢的無線通訊

1. 此處所指的 Turbo Roaming 快速漫遊復原時間是在最佳狀態下，配置無干擾 20 MHz RF 頻道、WPA2-PSK 安全性和預設的 Turbo Roaming 快速漫遊參數，所得到的測試結果平均值。用戶端設定為在 100 Kbps 流量負載下 3 個頻道漫遊。其他情況也有可能影響漫遊的效能。若想了解更多關於 Turbo Roaming 快速漫遊的參數設定，請參閱產品手冊。

2. 802.11k/v 在用戶端模式中不受支援，

規格

WLAN Interface

WLAN Standards	2.4 GHz: 802.11ax with 1024 QAM support, 20/40 MHz 5 GHz: 802.11ax with 1024 QAM support, 20/40/80 MHz WMM for QoS
Frequency Band for US (20 MHz operating channels)	AWK-4262A US Models Only: 2.412 to 2.462 GHz (11 channels) 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels) ³ 5.500 to 5.700 GHz (11 channels) ³ 5.745 to 5.825 GHz (5 channels)
Frequency Band for UN (20 MHz operating channels)	AWK-4262A UN Models Only: 2.412 to 2.472 GHz (13 channels) 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels) ³ 5.500 to 5.700 GHz (11 channels) ³ 5.745 to 5.825 GHz (5 channels) Available channels change depending on the selected country or region code.
Wireless Security	WEP encryption (64-bit and 128-bit) WPA/WPA2/WPA3-Enterprise (IEEE 802.1X/RADIUS, TKIP, AES) WPA/WPA2/WPA3-Personal
Wireless Roaming	Turbo Roaming ⁴ 802.11k/v/r ⁵
Transmission Rate	2.4 GHz: Up to 573.5 Mbps 5 GHz: Up to 1,201 Mbps
Transmitter Power for 802.11a (Dual Chain)	26±1.5 dBm @ 6 Mbps 24.5±1.5 dBm @ 54 Mbps
Transmitter Power for 802.11n (5 GHz, Dual Chain)	25.5±1.5 dBm @ MCS0 20 MHz 21±1.5 dBm @ MCS7 20 MHz 24.5±1.5 dBm @ MCS0 40 MHz 22±1.5 dBm @ MCS7 40 MHz
Transmitter Power for 802.11ac (Dual Chain)	25.5±1.5 dBm @ MCS0 20 MHz 21±1.5 dBm @ MCS8 20 MHz 24.5±1.5 dBm @ MCS0 40 MHz 21±1.5 dBm @ MCS9 40 MHz 25±1.5 dBm @ MCS0 80 MHz 21±1.5 dBm @ MCS9 80 MHz
Transmitter Power for 802.11ax (Dual Chain)	25±1.5 dBm @ MCS0 20 MHz 19±1.5 dBm @ MCS11 20 MHz 24.5±1.5 dBm @ MCS0 40 MHz 19±1.5 dBm @ MCS11 40 MHz 25±1.5 dBm @ MCS0 80 MHz 19±1.5 dBm @ MCS11 80 MHz
Transmitter Power for 802.11b (Dual Chain)	29±1.5 dBm @ 1 Mbps 29±1.5 dBm @ 11 Mbps
Transmitter Power for 802.11g (Dual Chain)	27±1.5 dBm @ 6 Mbps 26±1.5 dBm @ 54 Mbps
Transmitter Power for 802.11n (2.4 GHz, Dual Chain)	26±1.5 dBm @ MCS0 20 MHz 24±1.5 dBm @ MCS7 20 MHz 26±1.5 dBm @ MCS0 40 MHz 24±1.5 dBm @ MCS7 40 MHz
Transmitter Power for 802.11ac (2.4 GHz, Dual Chain)	26±1.5 dBm @ MCS0 20 MHz

3. 支援 DFS (動態頻率選擇) 頻道：在 AP 模式下，當設備偵測到一個雷達信號，會自動切換到另一個頻道。然而，根據規定，當頻道切換後，若要重啟服務，需要 60 秒的可用性檢查期。
4. 此處所指的 Turbo Roaming 快速漫遊復原時間是在最佳狀態下，配置無干擾 20 MHz RF 頻道、WPA2-PSK 安全性和預設的 Turbo Roaming 快速漫遊參數，所得到的測試結果平均值。用戶端設定為在 100 Kbps 流量負載下 3 個頻道漫遊。其他情況也有可能會影響漫遊的效能。若想了解更多關於 Turbo Roaming 快速漫遊的參數設定，請參閱產品手冊。
5. 802.11k/v 在用戶端模式下不受支援。

	23±1.5 dBm @ MCS8 20 MHz 26±1.5 dBm @ MCS0 40 MHz 22±1.5 dBm @ MCS9 40 MHz
Transmitter Power for 802.11ax (2.4 GHz, Dual Chain)	26±1.5 dBm @ MCS0 20 MHz 20±1.5 dBm @ MCS11 20 MHz 26±1.5 dBm @ MCS0 40 MHz 20±1.5 dBm @ MCS11 40 MHz
Receiver Sensitivity for 802.11a (measured at 5.680 GHz)	Typ. -90 @ 6 Mbps Typ. -72 @ 54 Mbps
Receiver Sensitivity for 802.11ac (5 GHz)	Typ. -88 dBm @ MCS0 20 MHz Typ. -65 dBm @ MCS8 20 MHz Typ. -85 dBm @ MCS0 40 MHz Typ. -61 dBm @ MCS9 40 MHz Typ. -82 dBm @ MCS0 80 MHz Typ. -58 dBm @ MCS9 80 MHz
Receiver Sensitivity for 802.11ax (5 GHz)	Typ. -89 dBm @ MCS0 20 MHz Typ. -59 dBm @ MCS11 20 MHz Typ. -86 dBm @ MCS0 40 MHz Typ. -56 dBm @ MCS11 40 MHz Typ. -83 dBm @ MCS0 80 MHz Typ. -53 dBm @ MCS11 80 MHz
Receiver Sensitivity for 802.11b	Typ. -96 dBm @ 1 Mbps Typ. -88 dBm @ 11 Mbps
Receiver Sensitivity for 802.11g	Typ. -91 dBm @ 6 Mbps Typ. -74 dBm @ 54 Mbps
Receiver Sensitivity for 802.11n (2.4 GHz)	Typ. -89 dBm @ MCS0 20 MHz Typ. -71 dBm @ MCS7 20 MHz Typ. -86 dBm @ MCS0 40 MHz Typ. -68 dBm @ MCS7 40 MHz
Receiver Sensitivity for 802.11ac (2.4 GHz)	Typ. -89 dBm @ MCS0 20 MHz Typ. -67 dBm @ MCS8 20 MHz Typ. -86 dBm @ MCS0 40 MHz Typ. -63 dBm @ MCS9 40 MHz
Receiver Sensitivity for 802.11ax (2.4 GHz)	Typ. -91 dBm @ MCS0 20 MHz Typ. -59 dBm @ MCS11 20 MHz Typ. -87 dBm @ MCS0 40 MHz Typ. -56 dBm @ MCS11 40 MHz
WLAN Operation Mode	Access point Client Client-Router Master Slave Sniffer Mesh
Antenna	External, 3/6 dBi Omni-directional
Antenna Connectors	2 x N-type female

Ethernet Interface

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3bz for 2.5GBaseX IEEE 802.3at for PoE IEEE 802.3bt for PoE IEEE 802.3az for Energy-Efficient Ethernet IEEE 802.1X for authentication
PoE Ports (10/100/1000/2500BaseT(X), M12 connector)	1
10/100/1000BaseT(X) Ports (M12 connector)	1

Ethernet Software Features

Management	DHCP Server DHCP Client DNS HTTP IPv4/IPv6 LLDP SMTP SNMPv1/v2c/v3 Syslog TCP/IP Telnet UDP VLAN MXconfig
Routing	Port forwarding Static Route NAT
Security	HTTPS/SSL RADIUS SSH Certificate Management
Time Management	SNTP Client

Firewall

Filter	ICMP MAC address IP protocol Port-based Wi-Fi ACL Client Isolation
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Serial Interface

Console Port	RS-232 5 pin M12
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USB Interface

Storage Port	USB Type A (for ABC-02 use only)
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LED Interface

LED Indicators	PWR, LAN1, LAN2, 2.4Ghz, 5Ghz, SYS
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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
Dimensions	65.9 x 157.6 x 244 mm (2.59 x 6.20 x 9.61 in)
IP Rating	IP68
Weight	1,980 g (4.37 lb)
Installation	Wall mounting DIN-rail mounting (with optional kit) Pole mounting (with optional kit)

Power Parameters

Input Current	12-48 VDC, 2-0.5 A
Input Voltage	12 to 48 VDC Redundant dual inputs 48 VDC Power-over-Ethernet
Power Connector	M12 A-coded 5-pin male connector
Power Consumption	24 W (max.)

Environmental Limits

Operating Temperature	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 EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 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: 10 V/m IEC 61000-4-8 PFMF: 30 A/m
Safety	IEC 62368-1 UL 62368-1
Cybersecurity	EN 18031-1
Vibration	IEC 60068-2-6
Radio	EN 300 328, EN 301 489-1/17, EN 301 893, FCC, MIC, NCC, RCM, SRRC, KC

MTBF

Time	2,376,815 hrs
Standards	Telcordia Standard SR-332

Warranty

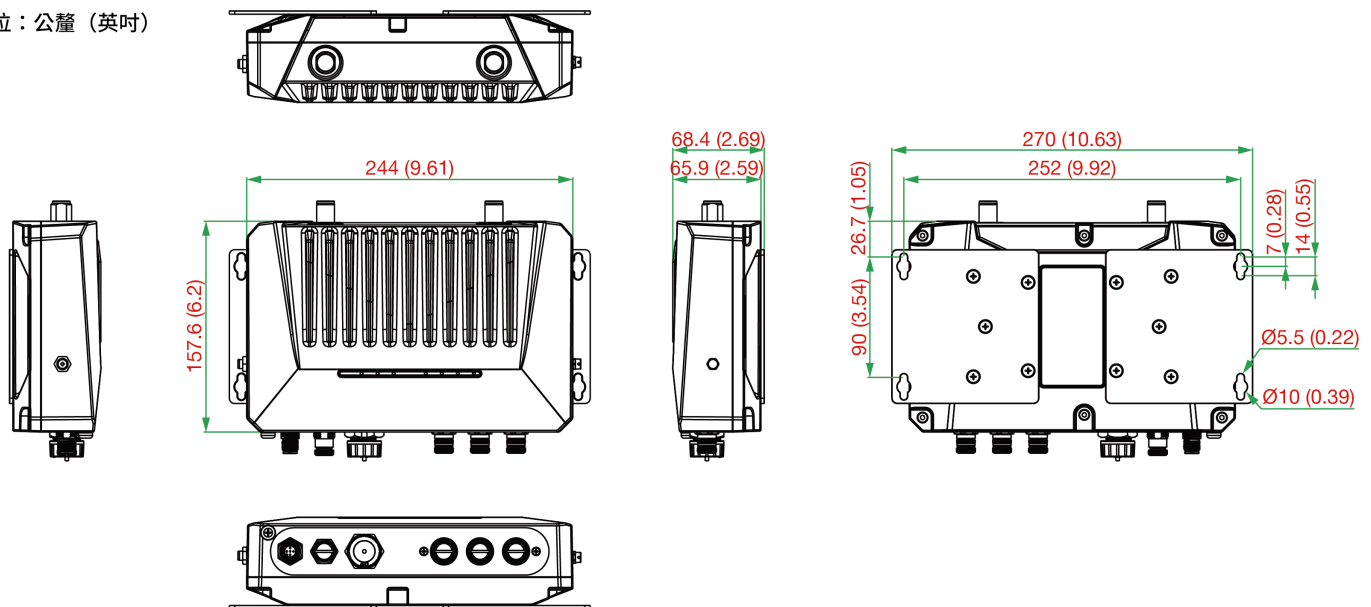
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x AWK-4262A Series wireless AP/bridge/client
Installation Kit	5 x cap, power, metal, for console/LAN1/LAN2/DI DO (for M12 type) 1 x cap, metal, for USB port 1 x field-installable plug, for power 1 x wall-mounting kit
Antenna	2 x 2.4/5 GHz antenna
Documentation	1 x quick installation guide 1 x warranty card

尺寸

單位：公釐（英吋）



訂購資訊

Model Name	Band	Standards	Operating Temp.
AWK-4262A-UN-T	UN	802.11a/b/g/n/ac/ax	-40 to 75°C
AWK-4262A-US-T	US	802.11a/b/g/n/ac/ax	-40 to 75°C

配件（選購）

Antennas

ANT-WSB-PNF-12-02	12 dBi at 2.4 GHz, N-type (female), single-band directional antenna
ANT-WSB5-PNF-16	16 dBi at 5 GHz, N-type (female), single-band directional antenna
ANT-WDB-ONM-0707	07 dBi at 2.4 GHz and 07 dBi at 5 GHz, N-type (male), dual-band omnidirectional antenna
ANT-WDB-PNF-1011	10 dBi at 2.4 GHz and 11 dBi at 5 GHz, N-type (female), dual-band directional antenna

ANT-WDB-ONF-0709	7 dBi at 2.4 GHz or 9 dBi at 5 GHz, N-type (female), dual-band, omnidirectional antenna
ANT-WDB-ANM-0306	3 dBi at 2.4 GHz or 6 dBi at 5 GHz, N-type (male), omnidirectional antenna
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-WDB-ANM-0502	5 dBi at 2.4 GHz or 2 dBi at 5 GHz, N-type (male), omnidirectional antenna

Wireless Antenna Cables

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

Surge Arrestors

A-SA-NMNF-02	0 to 6 GHz, N-type (male) to N-type (female) surge arrester
A-SA-NFNF-02	0 to 6 GHz, N-type (female) to N-type (female) surge arrester

Wireless Terminating Resistors

A-TRM-50-NM	50-ohm termination resistor with N-type male connector
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Cables

CBL-M12BMM5PF9-BK-150-IP68	B-coded male M12-to-5-pin DB9 console cable, black, IP68-rated, 1.5 m
CBL-M12XMM8PRJ45-BK-200-IP67	M12-to-RJ45 Cat-5E UTP gigabit Ethernet cable, 8-pin X-coded male connector, IP67, 2 m

Mounting Kits

PK-DC2DOF	Pole mounting kit
PK-DC2DOF-02	PK-DC2DOF-02

Connectors

M12A-5P-IP68-SCREW	Field-installable A-coded M12 screw-in 5-pin (female) connector, IP68
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Wireless Connector Caps

A-CAP-M12M-M	Metal cap for M12 male connector
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