

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，資料傳輸速率最高可達 1.775 Gbps
- Wi-Fi 6 OFDMA 與空間複用技術可在高密度環境中實現多用戶端通訊
- 透過 AeroMesh 技術，實現具備自組網、自癒能力且無須控制器的適應性網狀網路
- 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
- 內建 2.4 GHz 和 5 GHz 帶通濾波器，可實現更可靠的無線連接
- 具備電源與天線埠隔離功能，可增強 ESD/突波保護，並提升極端環境下的耐用性

認證



簡介

AWK-4262A 系列專為採礦、石油與天然氣以及交通運輸等嚴苛戶外環境，提供可靠的無線連線所設計。其堅固的外殼可針對環境因素提供卓越保護，並結合天線與電源隔離設計，以防止 ESD 與電源突波。內建的 2.4/5 GHz 帶通濾波器能將頻帶外干擾降至最低，而 Wi-Fi 6 OFDMA 與空間複用技術則確保在擁擠的網路中維持穩定連線。

AWK-4262A 系列具備 AeroMesh 技術，可在佈線不便或成本過高的環境中簡化網路部署。自組網與自癒無線路徑可加速高度動態應用中的部署與設定，同時將停機時間降至最低。

客製化工業級無線網路技術

- 自動頻道選擇功能可根據即時分析自動掃描並選擇最佳運作頻道，可最大程度地減少干擾並提升無線效能
- 基於用戶端的 Turbo Roaming 快速漫遊，支援不限 AP 類型實現無縫漫遊，¹ 在 AP 間的漫遊復原時間小於 150 毫秒（用戶端模式）
- 802.11k/v/r Fast Roaming 快速漫遊能夠實現更快速、更可靠的 Wi-Fi 用戶端漫遊，並提升與第三方裝置的互通性
- DFS 頻道支援提供更廣泛的 5 GHz 頻道範圍，避免現有無線基礎設施的干擾
- 基於 AP 的用戶端中斷連線機制可協助不具備漫遊智慧的無線用戶端獲得最佳 AP 服務。
- 通用 (UN) 型號，具有可配置的國家設定，可實現更加靈活的全球部署
- 專用的 MXview 無線網路管理軟體，具備動態拓撲視圖、互動式漫遊記錄播放功能，以及詳細的裝置資訊與效能指標圖表
- 針對用戶端運作模式的 SSID 功能進行故障排除時，若連線到 AP 以執行無線診斷，系統會啟動一個臨時 SSID
- 最新的 WPA3 加密技術可增強無線網路安全性

工業合規性與認證

- 已通過 CC-Link IE TSN 認證，具備將無線裝置整合到先進工廠自動化網路所必需的時間敏感效能
- 符合 EN 18031-1 標準，確保符合歐盟法規並增強對網路威脅的防護能力

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。

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) ² 5.500 to 5.700 GHz (11 channels) ² 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) ² 5.500 to 5.700 GHz (11 channels) ² 5.745 to 5.825 GHz (5 channels) Available channels change depending on the selected country or region code.
Wireless Security	WPA/WPA2/WPA3-Enterprise (IEEE 802.1X/RADIUS, TKIP, AES) WPA/WPA2/WPA3-Personal
Wireless Roaming	Turbo Roaming ³ 802.11k/v/r ⁴
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 23±1.5 dBm @ MCS8 20 MHz

2. 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。
3. 此處所指出的快速漫遊復原時間是在最佳化條件下記錄的平均測試結果，其中包含無干擾的 20 MHz RF 頻道、WPA2-PSK 安全性和預設快速漫遊參數。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。
4. 用戶端模式不支援 802.11k/v。

	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	Typ. -90 dBm @ 6 Mbps Typ. -72 dBm @ 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 IEEE 802.1Q for VLAN Tagging
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 MXview One MXview Wireless Turbo Roaming Analyzer
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, 2.4Ghtz, 5Ghtz, 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 to 48 VDC, 2 to 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	-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

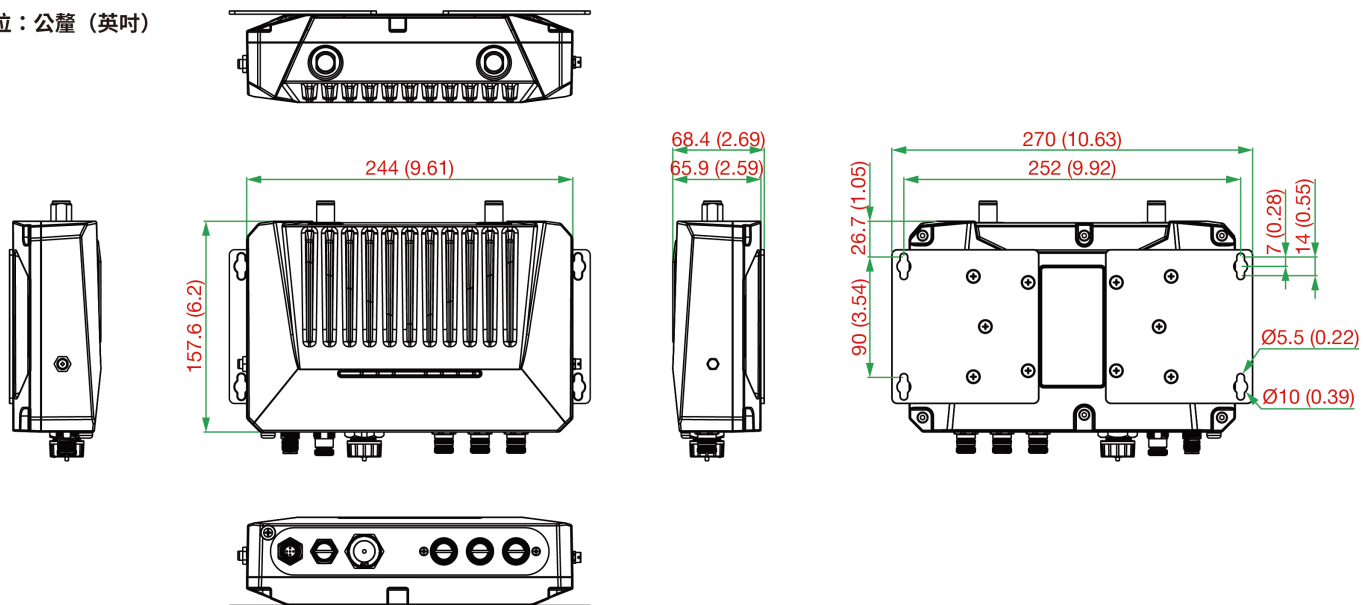
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

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-NMNM-LL4-900	N-type (male) to N-type (male) LMR-400 Lite cable, 9 m
A-CRF-NMNM-LL4-600	N-type (male) to N-type (male) LMR-400 Lite cable, 6 m
A-CRF-NMNM-LL4-300	N-type (male) to N-type (male) LMR-400 Lite cable, 3 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
CBL-M12(FF5P)/OPEN-100 IP67	A-coded female M12-to-5-pin open wire cable, black, IP67-rated, 1 m

Mounting Kits

PK-DC2DOF	Pole mounting kit for outdoor AWK Series access points
PK-DC2DOF-02	Pole mounting kit for outdoor AWK Series access points, supports pole diameters 2" to 6"

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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