

AWK-4252A 系列

戶外工業級 IEEE 802.11a/b/g/n/ac 無線 AP/橋接器/用戶端



特色與優點

- IEEE 802.11a/b/g/n/ac Wave 2 AP/橋接器/用戶端
- 並行雙頻 Wi-Fi，聚合資料傳輸速率高達 1.267 Mbps
- 最新的 WPA3 加密增強無線網路安全性
- 具有可配置國碼或區碼的通用 (UN) 型號，部署更彈性
- 透過網路位址轉譯 (NAT) 輕鬆設定網路
- 毫秒等級的用戶端 Turbo Roaming 漫遊¹
- 內建 2.4 GHz 和 5 GHz 具有通濾波器，無線連線更可靠
- 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
- 整合式天線隔離

認證



簡介

AWK-4252A 系列三合一工業無線 AP/橋接器/用戶端透過 IEEE 802.11ac 技術滿足日益增長的加速資料傳輸需求，聚合資料傳輸速率高達 1.267 Gbps。在操作溫度、電源輸入電壓、突波、ESD 和震動方面，AWK-4252A 符合工業標準及規定。兩個備援直流電源輸入提升電源的可靠性，而且 AWK-4252A 可透過 PoE 獲得供電，部署更方便。AWK-4252A 目前可以在 2.4 和 5 GHz 頻段上操作，並相容現有的 802.11a/b/g/n 部署。

進階 802.11ac 工業無線解決方案

- 802.11a/b/g/n 相容的 AP/橋接器/用戶端，提供彈性的部署方式
- 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

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。² 在 AP 間的漫遊復原時間 < 150 毫秒（用戶端模式）

工業級耐用性

- -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
- 增強型天線連線埠隔離保護的設計可承受高達 30 kV ESD 和 6 kV 突波保護

規格

WLAN Interface

WLAN Standards	2.4 GHz: 802.11b/g/n with 256 QAM support 5 GHz: 802.11a/n/ac Wave 2 with 256 QAM support
Frequency Band for US (20 MHz operating channels)	AWK-4252A US Models Only: 2.412 to 2.462 GHz (11 channels) 5.180 to 5.240 GHz (4 channels)

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。
2. 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。

	5.260 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-4252A UN Models Only: 2.412 to 2.484 GHz (14 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
Transmission Rate	2.4 GHz: 802.11b: 1 to 11 Mbps 802.11g: 6 to 54 Mbps 802.11n: 6.5 to 400 Mbps 5 GHz: 802.11a: 6 to 54 Mbps 802.11n: 6.5 to 300 Mbps 802.11ac: 6.5 to 867 Mbps
Transmitter Power for 802.11a (Dual Chain)	24±1.5 dBm @ 6 Mbps 22±1.5 dBm @ 54 Mbps
Transmitter Power for 802.11n (5 GHz, Dual Chain)	24±1.5 dBm @ MCS0 20 MHz 21±1.5 dBm @ MCS7 20 MHz 23±1.5 dBm @ MCS0 40 MHz 21±1.5 dBm @ MCS7 40 MHz
Transmitter Power for 802.11ac (Dual Chain)	23.5±1.5 dBm @ MCS0 20 MHz 20.5±1.5 dBm @ MCS8 20 MHz 23.5±1.5 dBm @ MCS0 40 MHz 20±1.5 dBm @ MCS9 40 MHz 22.5±1.5 dBm @ MCS0 80 MHz 20±1.5 dBm @ MCS9 80 MHz
Transmitter Power for 802.11b (Dual Chain)	27.5±1.5 dBm @ 1 Mbps 28±1.5 dBm @ 11 Mbps
Transmitter Power for 802.11g (Dual Chain)	28±1.5 dBm @ 6 Mbps 25±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 24.5±1.5 dBm @ MCS7 40 MHz
Receiver Sensitivity for 802.11a (measured at 5.680 GHz)	Typ. -88 @ 6 Mbps Typ. -71 @ 54 Mbps
Receiver Sensitivity for 802.11n (5 GHz; measured at 5.680 GHz)	Typ. -87 dBm @ MCS0 20 MHz Typ. -68 dBm @ MCS7 20 MHz Typ. -83 dBm @ MCS0 40 MHz Typ. -66 dBm @ MCS7 40 MHz
Receiver Sensitivity for 802.11ac	Typ. -87 dBm @ MCS0 20 MHz Typ. -64 dBm @ MCS8 20 MHz Typ. -84 dBm @ MCS0 40 MHz Typ. -59 dBm @ MCS9 40 MHz Typ. -81 dBm @ MCS0 80 MHz Typ. -56 dBm @ MCS9 80 MHz
Receiver Sensitivity for 802.11b (measured at 2.437 GHz)	Typ. -93 dBm @ 1 Mbps Typ. -86 dBm @ 11 Mbps

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。

	Note: Concurrent USB read/write activity on the device may generate interference and may mildly affect receiver sensitivity performance. It is recommended to avoid USB activity on the device in mission-critical applications.
Receiver Sensitivity for 802.11g (measured at 2.437 GHz)	Typ. -88 dBm @ 6 Mbps Typ. -71 dBm @ 54 Mbps Note: Concurrent USB read/write activity on the device may generate interference and may mildly affect receiver sensitivity performance. It is recommended to avoid USB activity on the device in mission-critical applications.
Receiver Sensitivity for 802.11n (2.4 GHz; measured at 2.437 GHz)	Typ. -87 dBm @ MCS0 20 MHz Typ. -68 dBm @ MCS7 20 MHz Typ. -84 dBm @ MCS0 40 MHz Typ. -66 dBm @ MCS7 40 MHz Note: Concurrent USB read/write activity on the device may generate interference and may mildly affect receiver sensitivity performance. It is recommended to avoid USB activity on the device in mission-critical applications.
WLAN Operation Mode	Access point Client Client-Router Master Slave Sniffer
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 802.3af for PoE IEEE 802.3at for PoE IEEE 802.1Q for VLAN Tagging IEEE 802.1X for authentication
10/100/1000BaseT(X) Ports (RJ45 connector)	1
PoE Ports (10/100/1000BaseT(X), RJ45 connector)	1

Ethernet Software Features

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

Firewall

Filter	ICMP MAC address IP protocol Port-based
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Serial Interface

Console Port	RS-232 8-pin RJ45
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USB Interface

Storage Port	USB Type A
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LED Interface

LED Indicators	PWR, LAN1, LAN2, 2.4G, 5G, 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	66.5 x 157.6 x 244 mm (2.56 x 6.20 x 9.61 in)
IP Rating	IP68
Weight	2024 g (4.7 lb)
Installation	Wall mounting DIN-rail mounting (with optional kit) Pole mounting (with optional kit)

Power Parameters

Input Current	12-48 VDC, 2.2-0.55 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	28.4 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: 1 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 60950-1 IEC 62368-1 UL 62368-1
Vibration	IEC 60068-2-6
Radio	EN 300 328, EN 301 489-1/17, EN 301 893, ANATEL, FCC, MIC, NCC, RCM, SRRC, WPC, KC, IC

MTBF

Time	746,471 hrs
Standards	Telcordia SR332

Warranty

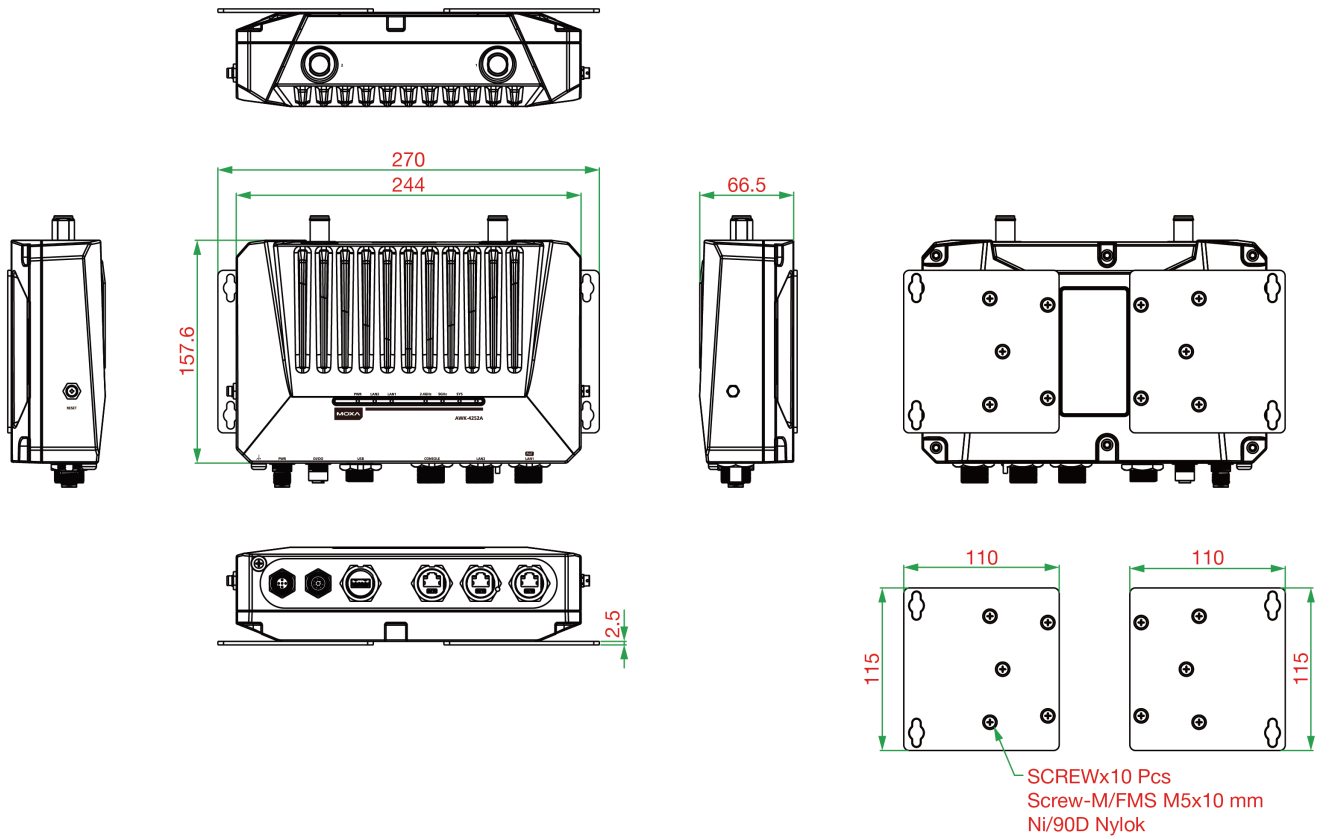
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x AWK-4252A Series wireless AP/bridge/client
Installation Kit	2 x cap, plastic, for N-type connector 4 x cap, metal, for Console/USB/LAN1/LAN2 1 x cap, metal, for DI/DO port 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



訂購資訊

Model Name	Band	Standards	Operating Temp.
AWK-4252A-UN-T	UN	802.11a/b/g/n/ac Wave 2	-40 to 75°C
AWK-4252A-US-T	US	802.11a/b/g/n/ac Wave 2	-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-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
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A-SA-NFNF-02	0 to 6 GHz, N-type (female) to N-type (female) surge arrester
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Wireless Terminating Resistors

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

PK-DC2DOF	Pole mounting kit
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PK-DC2DOF-02	PK-DC2DOF-02
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Wireless Connector Caps

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