

UC-8600A 系列

Arm Cortex-A72 雙核心 1.5 GHz 64 位元嵌入式電腦，具備豐富的介面組合，支援 -40 至 75°C 的操作溫度



特色與優點

- Arm Cortex-A72 雙核心 1.5 GHz 處理器
- 4 個自動感應 10/100/1000 Mbps 乙太網路埠
- 8 個 RS-232/422/485 串列埠
- 2 個 CAN 埠 (CAN 2.0A/CAN 2.0B)，具有 3 kV 隔離保護
- M.2 M key SSD 插槽和 Micro SD 卡插槽，用於擴充儲存容量
- 透過擴充插槽支援蜂巢式網路和 Wi-Fi 6E
- Moxa 工業 Linux，提供 10 年超長期間支援
- 符合 EN 18031-1 標準的無線網路安全
- 符合 IEC 62443-4-2 安全等級 2 的要求
- -40 至 75°C 操作溫度範圍 (啟用蜂巢式網路時為 -40 至 70°C)

認證



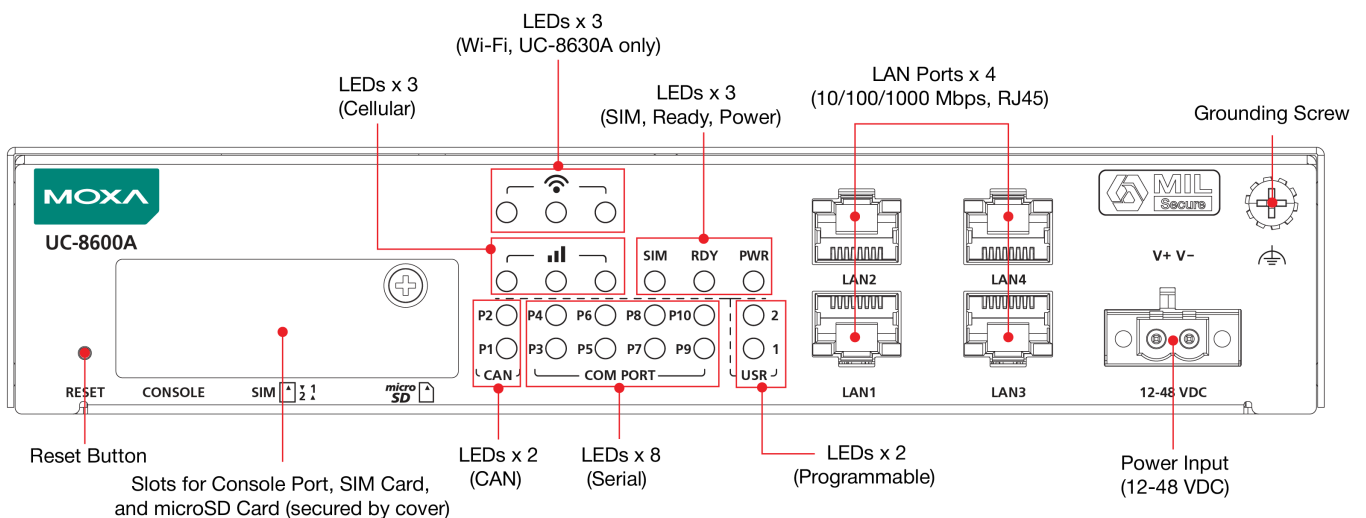
簡介

UC-8600A 系列 Arm 架構盒式運算平台，專為嵌入式資料擷取與邊緣運算應用所設計。

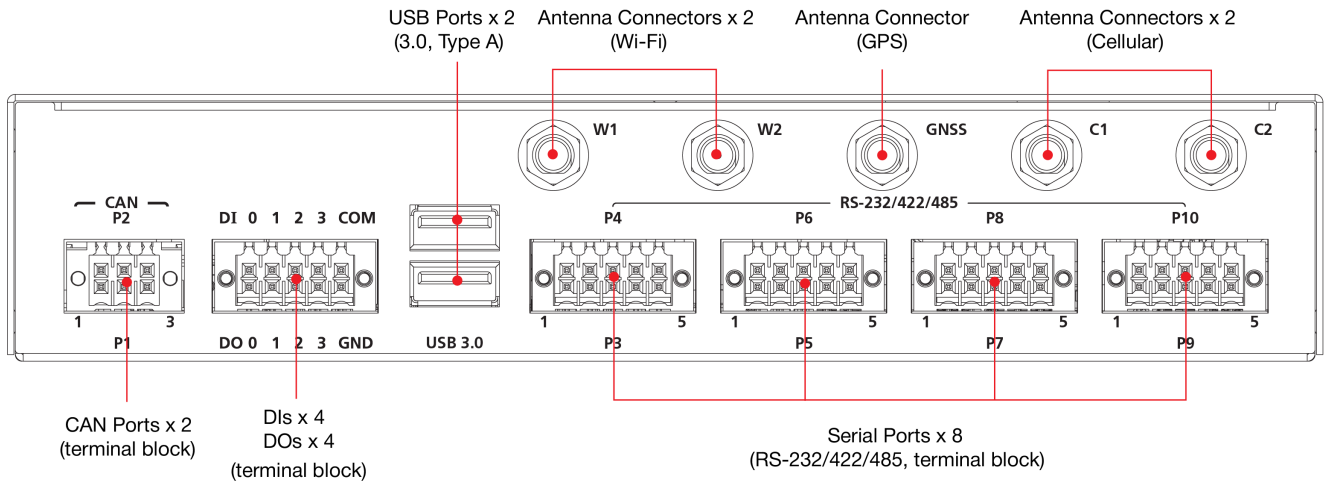
UC-8600A 配備 4 個 10/100/1000 乙太網路埠、8 個 RS-232/422/485 序列埠、4 個 DI/DO 通道及兩個 CAN 埠，可為多種現場裝置提供強大的連線能力。UC-8600A 也支援透過 M.2 M key 插槽 (用於 SSD) 和 Micro SD 卡插槽進行儲存擴充。此外，支援 Wi-Fi 6E 和蜂巢式網路模組的無線擴充插槽可為遠端應用提供可靠的無線通訊。UC-8600A 系列具有多功能通訊和擴充能力，可高效部署於各種工業環境中。

外觀

前視圖



後視圖



規格

Computer

CPU	Arm Cortex-A72 dual-core 1.5 GHz
DRAM	4 GB LPDDR4 SDRAM
Storage Pre-installed	32 GB eMMC
Storage Slot	microSD sockets x 1 M.2 M-key 2242 sockets x 1, PCIe
Supported OS	Moxa Industrial Linux 4 (Debian 13, kernel 6.12), 2033 EOL See www.moxa.com/MIL

Computer Interface

Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 4
Serial Channels	RS-232/422/485 ports x 8 (software-selectable, terminal-block connector)
Digital Input	DIs x 4
Digital Output	DOs x 4
CAN Ports	CAN 2.0 A/B x 2 (3-pin terminal block)
USB 3.0	USB 3.0 hosts x 2, type-A connectors
Expansion Slots	UC-8620A/UC-8630A: mPCIe slots x 1 (for LTE) UC-8630A: M.2 E-key sockets x 1 (for Wi-Fi)
Cellular Antenna Connector	SMA x 2
Number of SIMs	2
SIM Format	Nano
Wi-Fi Antenna Connector	UC-8630A: RP-SMA x 2
GPS Antenna Connector	SMA x 1
Console Port	RS-232 (Tx/D, Rx/D, GND), 3-pin header output (115200, n, 8, 1)

Buttons	Programmable button
TPM	TPM v2.0
Ethernet Interface	
Magnetic Isolation Protection	1.5 kV (built-in)
Serial Interface	
No. of Ports	8
Baudrate	50 bps to 921.6 kbps
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	RTS/CTS XON/XOFF for RS-232 ADDC (automatic data direction control) for RS-485
Serial Signals	
RS-232	TxD, RxD, RTS, CTS, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND
CAN Interface	
No. of Ports	2
Connector	3-pin spring-type terminal block
Baudrate	10 Kbps to 1 Mbps
Industrial Protocols	CAN 2.0A CAN 2.0B
Isolation	3 kV (built-in)
Signals	CAN_H, CAN_L, CAN_GND
Digital Inputs	
No. of Channels	4
Connector	Spring-type Euroblock terminal
Sensor Type	Dry contact Wet contact (NPN)
Dry Contact	Logic 0: Close to GND Logic 1: Open
Wet Contact (DI to COM)	Logic 0: 10 to 30 VDC (COM to DI) Logic 1: 0 to 3 VDC
Isolation	1.5 kV

Digital Outputs

No. of Channels	4
Connector	Spring-type Euroblock terminal
Current Rating	200 mA per channel
I/O Type	Sink
Voltage	0 to 30 VDC
Isolation	1.5 kV

Security Functions

Hardware-based Security	TPM 2.0 Hardware Root of Trust Secure Boot
Intrusion Detection	Host-based Intrusion Detection
Security Tools	Security Diagnostic Tool Security Event Auditing Secure Update
Disk Protection	LUKS Disk Encryption
Recovery	One-step recovery to the last known secure state Dual-system design with automatic failback
Reliability	Network Keep Alive Network Failover and Failback

LED Indicators

System	Power x 1 System ready x 1 SIM card indicator x 1 Programmable x 2
LAN	4 ports, 2 per port (10/100/1000 Mbps)
CAN	2 ports, 1 per port (Tx, Rx)
Wireless Signal Strength	Wi-Fi x 3 Cellular x 3

Power Parameters

Input Current	UC-8620A-T: 1.34 A @ 12 V UC-8630A-T: 1.58 A @ 12 V
Input Voltage	12 to 48 VDC
Power Connector	Screw-fastened Euroblock terminal
Power Consumption	UC-8620A-T: 15 W UC-8630A-T: 17 W

Reliability

Automatic Reboot Trigger	External WDT (watchdog timer)
Alert Tools	External RTC (real-time clock)

Physical Characteristics

Housing	Metal
IP Rating	IP30

Weight	1,000 g (2.21 lb)
Dimensions	200 x 120 x 40.5 mm (7.87 x 4.72 x 1.59 in)
Installation	Wall mounting (standard) DIN-rail mounting (with optional kit)

Environmental Limits

Operating Temperature	Without accessories: UC-8620A-T: -40 to 75°C UC-8630A-T: -40 to 70°C With LTE and Wi-Fi -30 to 65°C With Wi-Fi only: -30 to 70°C With LTE only: -40 to 70°C
Storage Temperature	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/35 EN 61000-6-2/-6-4 UKCA RCM KC
EMI	FCC Part 15B Class A ICES-003 Class A EN 55032 Class A EN 61000-6-4 Class A
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF
Cybersecurity	EN 18031-1
Safety	IEC 62368-1, EN 62368-1, UL 62368-1
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6 IEC 60068-2-64
International Approval	CE FCC ISED UKCA RCM KC

Declaration

Green Product	RoHS, CRoHS, WEEE
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MTBF

Time	UC-8630A-T: 1,023,992 hrs UC-8620A-T: 1,152,015 hrs
Standards	Telcordia (Bellcore), GB

Warranty

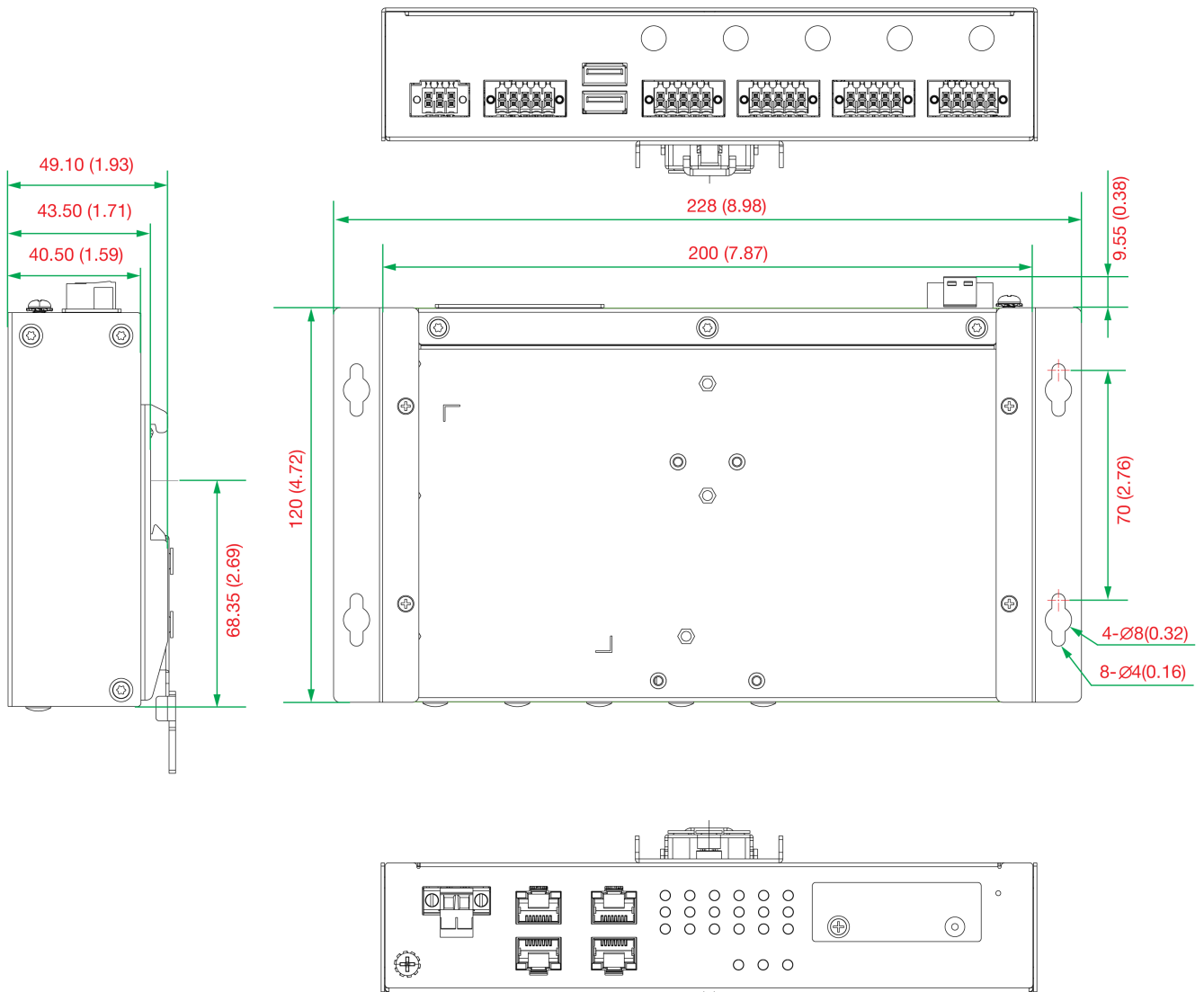
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x UC-8600A Series computer
Installation Kit	1 x wall-mounting kit
Documentation	1 x quick installation guide 1 x warranty card

尺寸

單位：公釐（英吋）



訂購資訊

Model Name	CPU	Operating System	mPCIe Slot	M.2 E Key Slot	Operating Temp.
UC-8620A-T	Arm Cortex-A72 dual-core 1.5 GHz	MIL4 Standard (default) CTO: Order MIL4 Secure via UC-8600A (CTO)	Reserved for LTE	-	-40 to 75°C
UC-8630A-T	Arm Cortex-A72 dual-core 1.5 GHz	MIL4 Standard (default) CTO: Order MIL4 Secure via UC-8600A (CTO)	Reserved for LTE	Reserved for Wi-Fi 6	-40 to 70°C

配件 (選購)

Antennas

ANT-WDB6-ARM-05	2 dBi at 2.4 GHz or 2 dBi at 5 GHz or 3 dBi at 6 GHz, tri-band dipole antenna with RP-SMA (female) connector
ANT-5G-OSM-04	4 dBi LTE/5G NR dipole antenna with SMA (male) connector
ANT-GPS-CSM-04-3m BK	20 dBi at 1575 to 1605 MHz, SMA (male), right-hand circular polarization (RHCP), active GPS antenna, 3-meter cable

Cables

CBL-F9DPF1x4-BK-100	Console cable with 4-pin connector, 1 m
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Cellular Wireless Modules

UC-8620A-LTE	Telit LE910C4-WWxD LTE Cat. 4 mPCIe card package for the UC-8620A models
UC-8630A-LTE	Telit LE910C4-WWxD LTE Cat. 4 mPCIe card package for the UC-8630A models

Wi-Fi Wireless Modules

UC-8600A-WLAN	EMWICOM WMX7205-1 Wi-Fi 6E M.2 card package for the UC-8600A Series
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DIN-Rail Mounting Kits

UC-8600A Din-rail Kit	DIN-rail mounting kit with 1 plate (90 x 45 mm), 1 extension bracket (25 x 16 mm), 5 M3 x 4 mm screws for the UC 8600A Series
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Thermal Kits

UC-8620A-M.2 SSD	M.2 SSD thermal package with 3 thermal pads, 1 heat sink, 5 screws for the UC-8620A models
UC-8630A-M.2 SSD	M.2 SSD thermal package with 1 thermal pad, 1 screw for the UC-8630A models

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