

UC-3400A 系列

具有無線擴充功能的 Arm Cortex-A53 四核心 64 位元電腦



特色與優點

- Armv8 Cortex-A53 1.4 GHz 處理器
- 整合式 4G LTE Cat.4 模組，含雙 SIM 並通過 AT&T 認證
- 內建 Wi-Fi 6
- 2 個自動感應 10/100/1000 Mbps 乙太網路連接埠
- CAN 連接埠，提供 2-kV 隔離保護
- Moxa 工業 Linux，提供 10 年超長期間支援
- 符合 IEC 62443-4-2 安全等級 2 要求
- 通過 CE/FCC/UL 認證
- -40°C 至 70°C 操作溫度範圍

認證



簡介

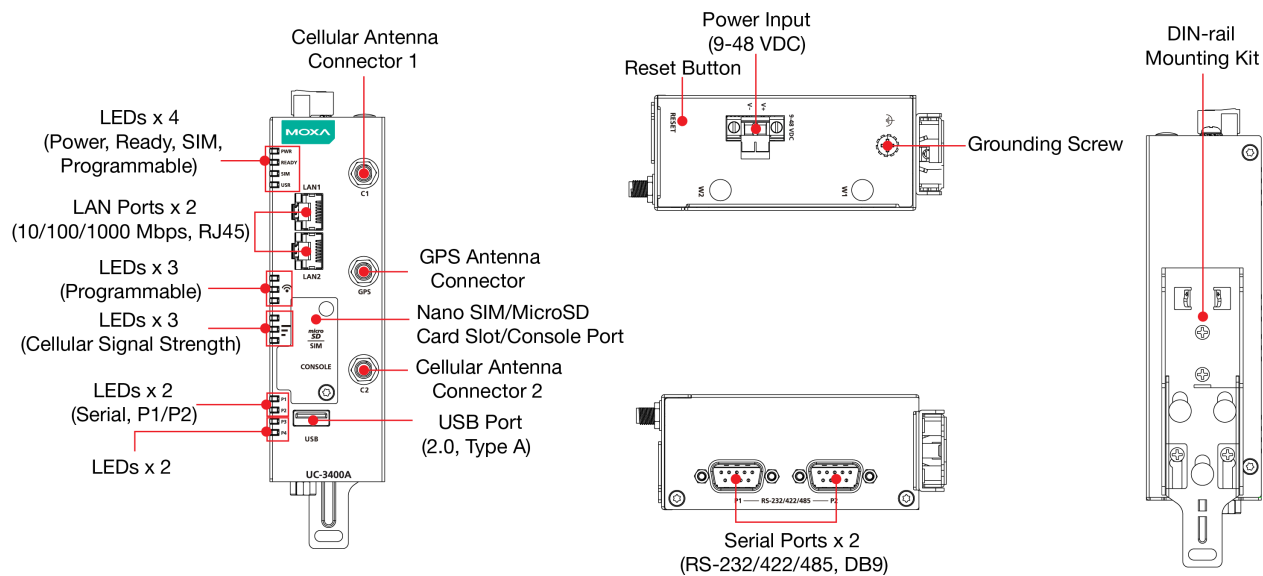
Moxa 的 UC-3400A 系列電腦可作為資料預先處理與傳輸的現場邊緣閘道器使用，也可用於其他嵌入式資料擷取應用。該系列包含多種型號，每一個型號都支援不同的無線選項與通訊協定。UC-3400A 的進階散熱設計使其適用於從 -40 到 70°C 的溫度範圍。事實上，Wi-Fi 與 LTE 連線可同時在冷熱環境中使用，以最大化嚴苛環境應用中資料預先處理與傳輸的能力。

UC-3400A 不僅僅只是硬體解決方案。為了提供 Moxa Arm 架構電腦的最佳使用者體驗，UC-3400A 配備了 Moxa 工業 Linux 系統，這是一種由 Moxa 開發並長期支援的高效能工業等級 Linux。

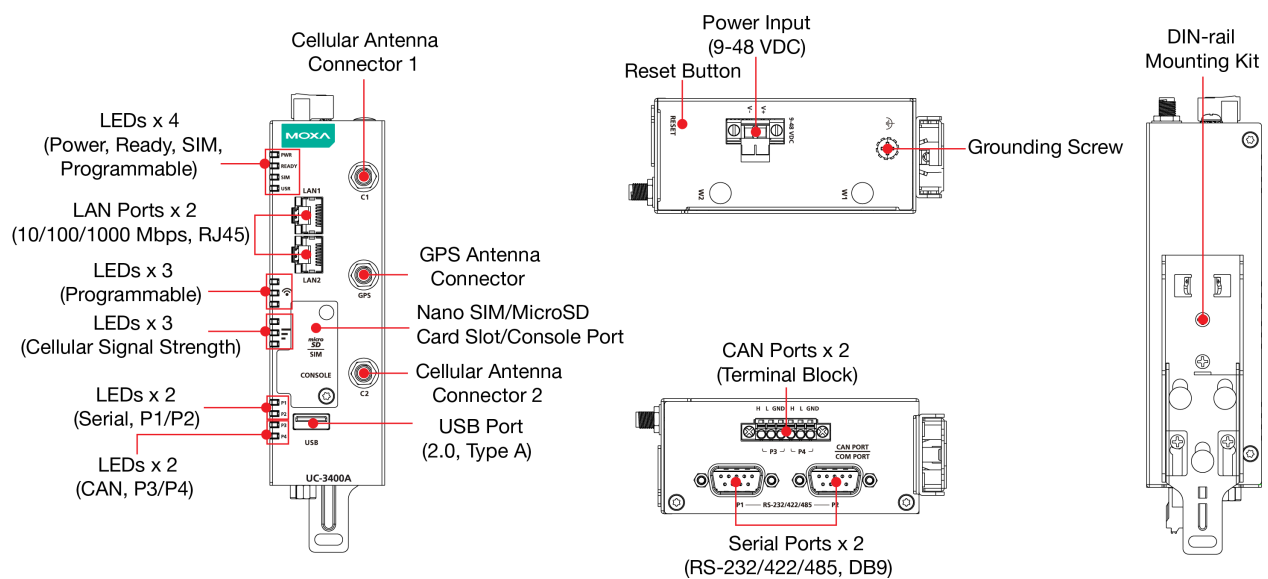
應用

- 遠端終端裝置 (RTU)
- 資料擷取
- M2M 通訊 (智慧閘道)
- 數位看板
- 工廠自動化
- 車載監控/數據記錄器 (交通運輸)
- 可編程路由器
- 能源使用最佳化
- 預測性維護
- 資產管理

UC-3420A-T-LTE



UC-3424A-T-LTE



規格

Computer

CPU	Arm Cortex-A53 quad-core 1.4 GHz
DRAM	4 GB DDR4
Supported OS	Moxa Industrial Linux 3 (Debian 11, kernel 5.10), 2031 EOL See www.moxa.com/MIL
Storage Pre-installed	16 GB eMMC
Expansion Slots	microSD socket x 1

Computer Interface

Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 2
Serial Ports	RS-232/422/485 ports x 2 (software-selectable, DB9 male connector)
CAN Ports	UC-3424A-T-LTE: CAN 2.0 A/B x 2 (DB9 male)
USB 2.0	USB 2.0 hosts x 1, type-A connectors
Cellular Antenna Connector	SMA x 2
SIM Format	Nano
Number of SIMs	2
GPS Antenna Connector	SMA x 1
Wi-Fi Antenna Connector	RP-SMA x 2
Console Port	RS-232 (TxD, RxD, GND), 3-pin header output (115200, n, 8, 1)
TPM	TPM v2.0

Ethernet Interface

No. of Ports	2
Magnetic Isolation Protection	1.5 kV (built-in)

Serial Interface

No. of Ports	2
Baudrate	50 bps to 921.60 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 ADDC (automatic data direction control) for RS-485

Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, 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	UC-3424A-T-LTE: 2
Baudrate	10 to 1000 kbps
Industrial Protocols	CAN 2.0A CAN 2.0B
Connector	6-pin terminal block
Isolation	2 kV (built-in)
Signals	CAN_H, CAN_L, CAN_GND, CAN_SHLD, CAN_V+, GND

Cellular Interface

Band Options	LTE bands: Band 1 (2100 MHz) / Band 2 (1900 MHz) / Band 3 (1800 MHz) / Band 4 (1700 MHz) / Band 5 (850 MHz) / Band 7 (2600 MHz) / Band 8 (700 MHz) / Band 9 (1800 MHz) / Band 12 (700 MHz) / Band 13 (700 MHz) / Band 14 (700 MHz) / Band 18 (850 MHz) / Band 19 (850 MHz) / Band 20 (800 MHz) / Band 25 (1900 MHz) / Band 26 (850 MHz) / Band 28 (700 MHz) 3G bands: Band 1 (2100 MHz) / Band 2 (1900 MHz) / Band 4 (1700 MHz) / Band 5 (850 MHz) / Band 6 (800 MHz) / Band 8 (700 MHz) / Band 19 (850 MHz) 2G bands: Band 2 (1900 MHz) / Band 3 (1800 MHz) / Band 5 (850 MHz) / Band 8 (700 MHz)
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GPS Interface

Receiver Types	GPS/GLONASS/BeiDou/Galileo/QZSS
Accuracy	Position: < 2.0 m @CEP50
Time to First Fix (TTFF)	Hot start: 1.1 s Warm start: 22.1 s Cold start: 29.9 s
Sensitivity	Tracking: -160 dBm Acquisition: -147 dBm Cold starts: -145 dBm
Update Rate	Minimum 1 Hz

WLAN Interface

WLAN Standards	802.11a/b/g/n/ac/ax
Frequency Band	2.4 GHz / 5 GHz

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 fallback
Reliability	Network Keep Alive Network Failover and Failback

LED Indicators

System	Power x 1 READY (device bootup) x 1 SIM card indicator x 1
User Programmable	1
LAN	P1, P2: TX, RX per port (10/100/1000 Mbps)
CAN	UC-3424A-T-LTE: P3, P4: 1 per port for 2 CAN ports
Wireless Signal Strength	UC-3420A-T-LTE/UC-3424A-T-LTE: Cellular x 3

Power Parameters

Input Current	1.09 A @ 9 VDC, 0.21 A @ 48 VDC
Input Voltage	9 to 48 VDC
Power Consumption	10.8 W (max.)

Reliability

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

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	130 x 92 x 41 mm (5.12 x 3.62 x 1.61 in)
Weight	Product only: 550 g (1.22 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	-40 to 70°C (-40 to 158°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 55032/35 EN 61000-6-2/-6-4 UKCA RCM
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: 10 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 1 kV, Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF: 30 A/m
Radio Frequency	All models: CE (RED) FCC ISED UKCA RCM NCC UC-342x models: TELEC
Safety	EN 62368-1 UL 62368-1
Vibration	IEC 60068-2-64 2 grms @ 5 to 500 Hz, random wave, 1 hr per axis (without USB devices attached)
Shock	IEC 60068-2-27

Carrier Approvals	AT&T Verizon (approval expected in Q1 2025) PTCRB
International Approval	CE (RED) FCC ISED UKCA RCM NCC UC-342x models: TELEC
Hazardous Locations	Expected completion in Q1, 2025 Class I Division 2 ATEX
Green Product	RoHS, CRoHS, WEEE

MTBF

Time	1,461,405 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Warranty

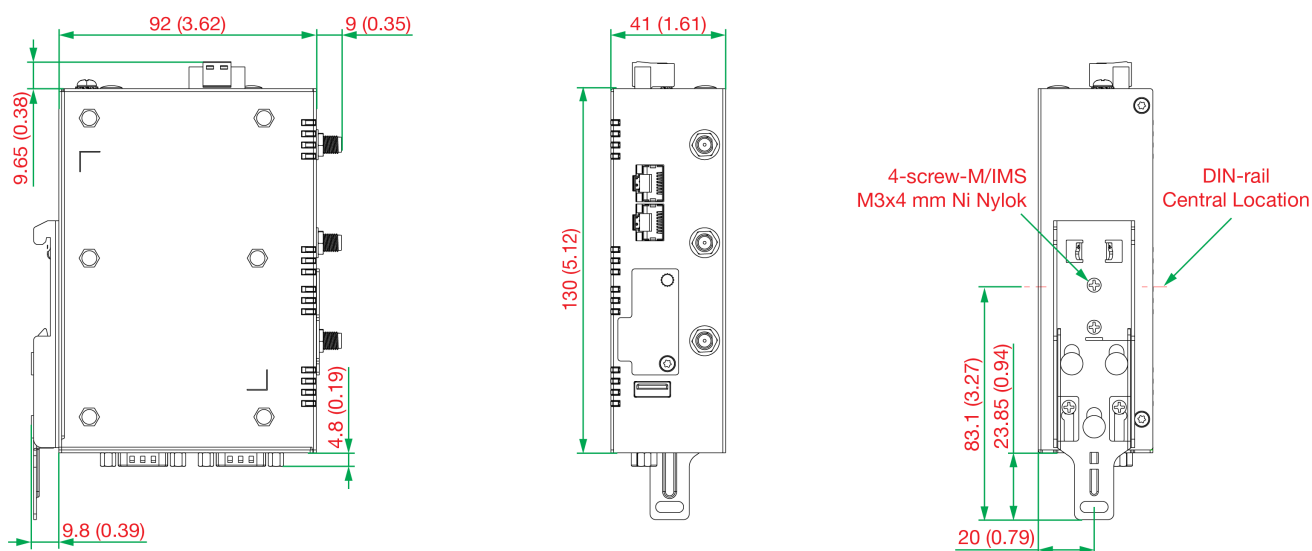
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x UC-3400A Series computer
Documentation	1 x quick installation guide 1 x warranty card

尺寸

單位：公釐（英吋）



訂購資訊

Model Name	OS	CPU	CAN	LTE	Wi-Fi
UC-3420A-T-LTE	Default: MIL3 Standard Order MIL3 Secure through UC-3400A (CTO)	Arm Cortex-A53 quad-core 1.4 GHz	–	Cat. 4	–
UC-3424A-T-LTE	Default: MIL3 Standard Order MIL3 Secure through UC-3400A (CTO)	Arm Cortex-A53 quad-core 1.4 GHz	2	Cat. 4	–

配件（選購）

Power Adapters

PWR-12150-CN-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, CN plug, -40 to 75°C operating temperature
PWR-12150-EU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, EU plug, -40 to 75°C operating temperature
PWR-12150-UK-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, UK plug, -40 to 75°C operating temperature
PWR-12150-AU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, AU plug, -40 to 75°C operating temperature
PWR-12150-USJP-SA-T	Locking barrel plug, 12 VDC 1.5 A, 100 to 240 VAC, US/JP plug, -40 to 75°C operating temperature

Cables

CBL-F9DPF1x4-BK-100	Console cable with 4-pin connector, 1 m
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DIN-Rail Mounting Kits

DK-107-01	DK-107-01
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Wall-Mounting Kits

WK-71-01	WK-71-01
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Antennas

ANT-LTEUS-ASM-01	GSM/GPRS/EDGE/UMTS/HSPA/LTE, 1 dBi, omnidirectional rubber-duck antenna
ANT-LTEUS-OSM-02	698 to 960/1710 to 2700 MHz, 1/4 λ omnidirectional 1.5 dBi antenna with SMA (male) connector
ANT-WDB-ARM-02	2 dBi at 2.4 GHz or 2 dBi at 5 GHz, RP-SMA (male) omnidirectional rubber-duck antenna
ANT-WDB-ASM-03 BK	2 dBi at 2.4 GHz or 2 dBi at 5 GHz, RP-SMA (male) omnidirectional rubber-duck antenna
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

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