

UC-5100 系列

Arm Cortex-A8 1 GHz IIoT 閘道器，具有無線模組專用的 1 個 mPCIe 擴充插槽、4 個串列埠、2 個 CAN 埠、4 個 DI、4 個 DO



特色與優點

- Armv7 Cortex-A8 1 GHz 處理器
- 兩個自動感應 10/100 Mbps 乙太網路連接埠
- 4 個軟體可切換的 RS-232/422/485 串列埠
- 支援工業 CAN 2.0 A/B 通訊協定的雙 CAN 埠
- 適用於 Wi-Fi/LTE 模組的 mPCIe 插槽
- 用於儲存裝置擴充的 SD 卡插槽
- -40 至 85°C 寬溫範圍設計，啟用 LTE 時溫度範圍為 -40 至 70°C
- 符合嚴苛工業環境的 IEC 61000-6-2/6-4 標準
- 長期支援 Linux 至 2027 年；包括錯誤修復和安全修補

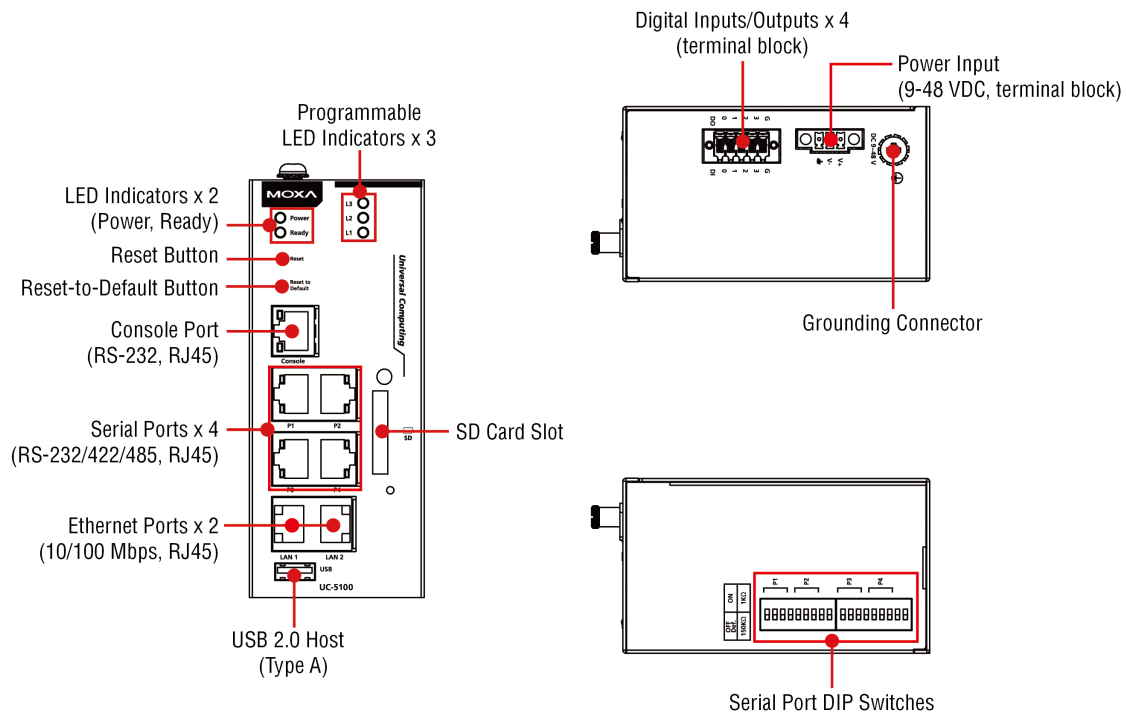
認證



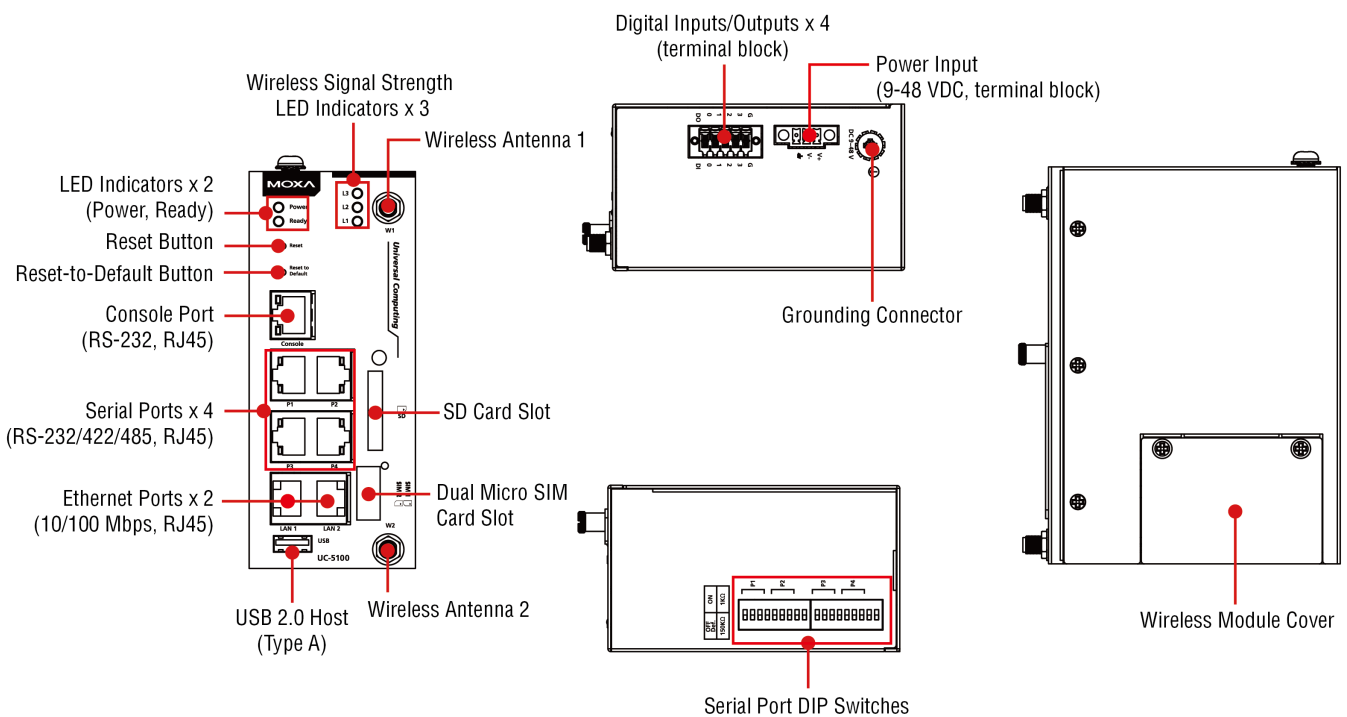
簡介

UC-5100 系列嵌入式電腦專為工業自動化應用所設計。電腦具有 4 個 RS-232/422/485 全訊號序列埠 (配備可調上拉/下拉電阻)、2 個 CAN 埠、2 個乙太網路連接埠、4 個數位輸入通道、4 個數位輸出通道、USB 介面以及一個 SD 卡插槽，全部整合在一個精簡、可從前端存取的機殼中。為了滿足各種工業應用需求，UC-5100 系列運算平台提供了包含 2 個 CAN 埠和 mini PCIe 插槽的型號，可用於無線連接，並採用雙 SIM 卡設計以實現網路備援。UC-5100 採用垂直 DIN 軌道外形尺寸，使其易於安裝在小型機櫃中。這種節省空間的解決方案也方便了接線，使 UC-5100 成為工業應用中前端嵌入式控制器的絕佳選擇。此外，所有型號均配備 Moxa 工業級 Linux，該系統提供 10 年的長期支援以及最佳化軟體功能。

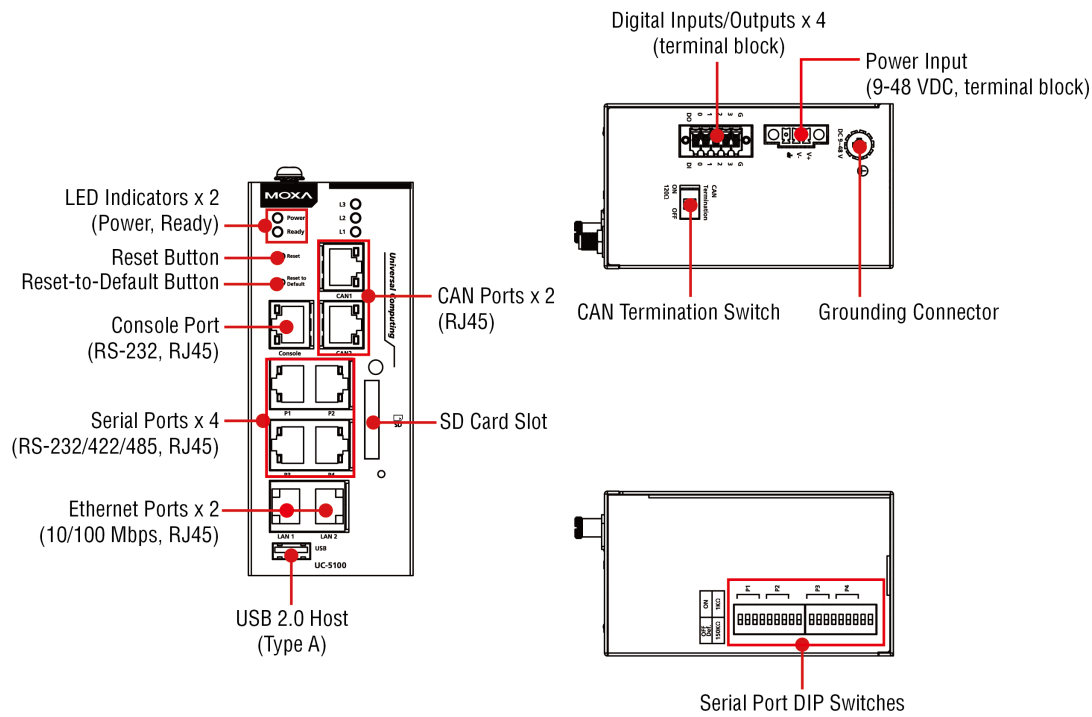
UC-5101



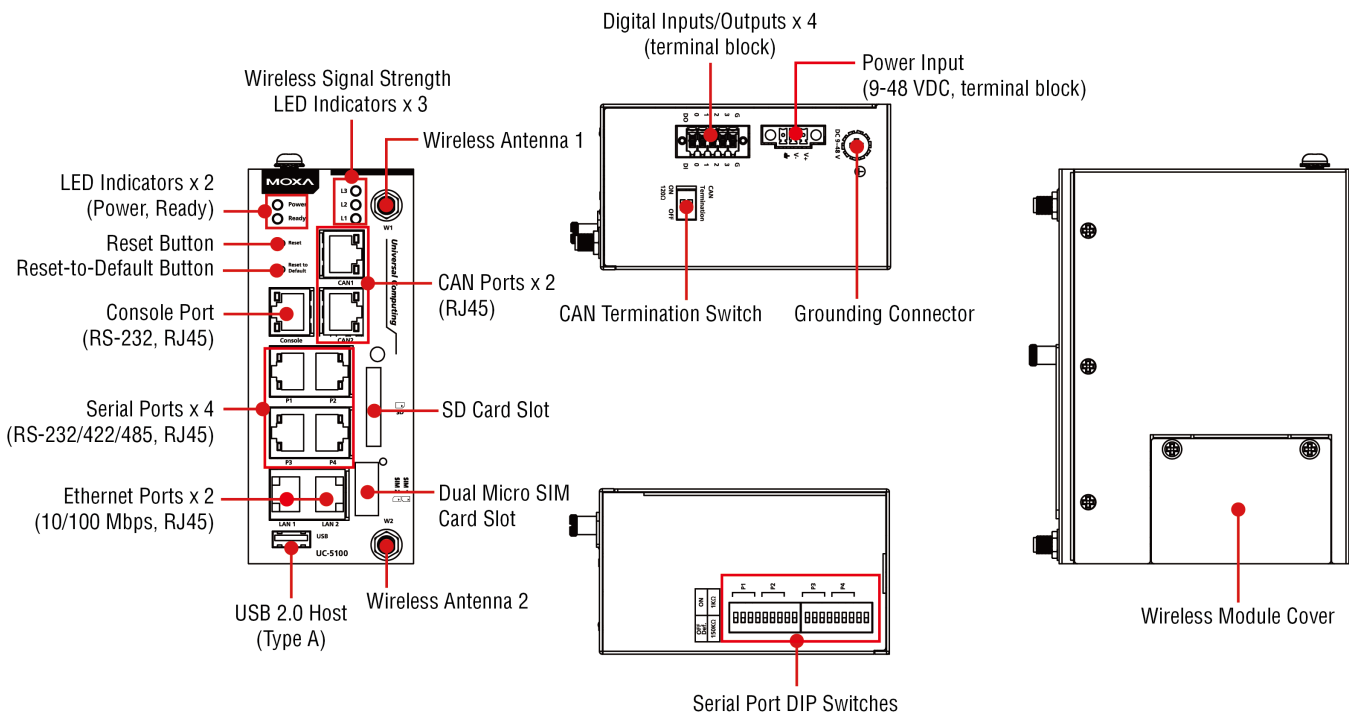
UC-5102



UC-5111



UC-5112



規格

Computer	
CPU	Armv7 Cortex-A8 1 GHz
DRAM	512 MB DDR3
Supported OS	Moxa Industrial Linux 1 (Debian 9, kernel 4.4), 2027 EOL See www.moxa.com/MIL
Storage Pre-installed	8 GB eMMC

Storage Slot	SD slots x 1
Expansion Slots	UC-5102-LX/5102-T-LX, UC-5112-LX/5112-T-LX: mPCIe slots x 1

Computer Interface

Ethernet Ports	Auto-sensing 10/100 Mbps ports (RJ45 connector) x 2
Serial Ports	RS-232/422/485 ports (software-selectable, RJ45 connector) x 4
Digital Input	DIs x 4
Digital Output	DOs x 4
USB 2.0	USB 2.0 hosts x 1, type-A connectors
Number of SIMs	2
SIM Format	Micro
Buttons	Reset button DIP switch for serial and CAN port configuration
Console Port	RS-232 (TxD, RxD, GND), RJ45 output (115200, n, 8, 1)

Ethernet Interface

Magnetic Isolation Protection	1.5 kV (built-in)
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Serial Interface

Baudrate	50 bps to 921.60 kbps
Data Bits	7, 8
Stop Bits	1, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	RTS/CTS, XON/XOFF ADDC (automatic data direction control) for RS-485 RTS Toggle (RS-232 only)

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

CAN Interface

No. of Ports	UC-5111-LX: 2 UC-5111-T-LX: 2 UC-5112-LX: 2 UC-5112-T-LX: 2
Signals	UC-5111-LX: CAN_L, CAN_H, CAN Signal GND UC-5111-T-LX: CAN_L, CAN_H, CAN Signal GND UC-5112-LX: CAN_L, CAN_H, CAN Signal GND UC-5112-T-LX: CAN_L, CAN_H, CAN Signal GND
Terminator	UC-5111-LX: N/A, 120 ohms (by DIP) UC-5111-T-LX: N/A, 120 ohms (by DIP) UC-5112-LX: N/A, 120 ohms (by DIP) UC-5112-T-LX: N/A, 120 ohms (by DIP)

Digital Inputs

Voltage	0 to 0.8 VDC 2.0 to 5.5 VDC
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Digital Outputs

Current Rating	24 mA per channel
Voltage	0 to 0.55 VDC 2.5 to 3.3 VDC

LED Indicators

System	Power x 1 System ready x 1
LAN	2 per port (10/100 Mbps)
Serial	2 per port (Tx, Rx)
CAN	UC-5102-LX/5102-T-LX, UC-5112-LX/UC-5112-T-LX: 2 per port (Tx, Rx)
Wireless Signal Strength	UC-5102-LX/5102-T-LX, UC-5112-LX/UC-5112-T-LX: Cellular/Wi-Fi x 3

Physical Characteristics

Dimensions	57 x 136 x 100 mm (2.24 x 5.35 x 3.94 in)
Weight	600 g (1.32 lb)
Housing	Metal
Installation	DIN-rail mounting Wall mounting (with optional kit)

Power Parameters

Input Voltage	9 to 48 VDC
Input Current	0.95 A @ 9 VDC, 0.23 A @ 48 VDC
Power Consumption	11 W

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: Product only: -40 to 85°C (-40 to 185°F) With LTE accessory: -40 to 70°C (-40 to 158°F) With Wi-Fi accessory: -10 to 70°C (14 to 158°F)
Storage Temperature	Standard models: -20 to 70°C (-4 to 158°F) Wide temp. models: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Vibration	2 Grms @ IEC 60068-2-64, random wave, 5-500 Hz, 1 hr per axis (without USB devices attached)
Shock	IEC 60068-2-27

Standards and Certifications

EMC	EN 55032/35 EN 61000-6-2/-6-4 UKCA VCCI
EMI	EN 55032 Class A EN 61000-6-4 Class A FCC Part 15B Class A ICES-003 Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m; 1.4 GHz to 6 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: line to line: 1 kV; line to PE: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
International Approval	CE FCC UKCA VCCI
Safety	EN 62368-1 IEC 62368-1 UL 62368-1
Green Product	RoHS, CRoHS, WEEE

Reliability

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

MTBF

Time	UC-5101-LX/UC-5101-T-LX: 778,595 hrs UC-5102-LX/UC-5102-T-LX: 729,538 hrs UC-5111-LX/UC-5111-T-LX: 706,021 hrs UC-5112-LX/UC-5112-T-LX: 665,486 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Warranty

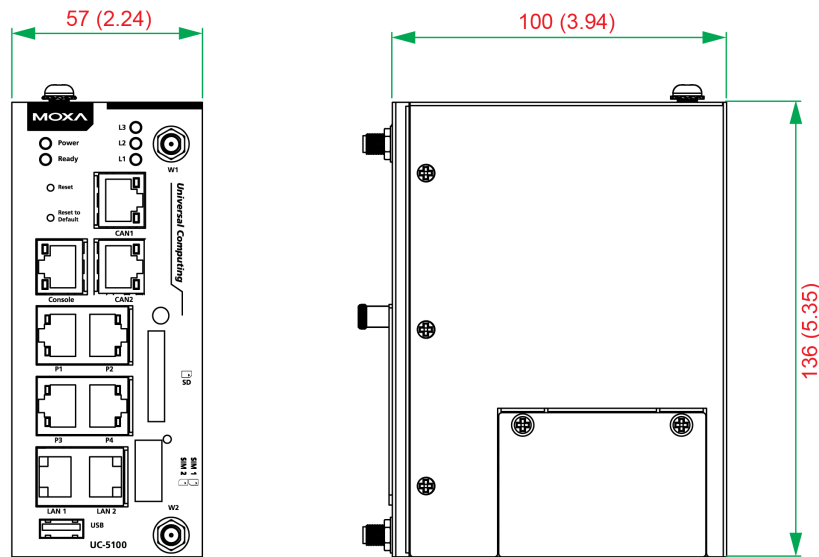
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x UC-5100 Series computer
Documentation	1 x quick installation guide 1 x warranty card
Installation Kit	1 x DIN-rail kit (preinstalled) 1 x power jack
Cable	1 x RJ45-to-DB9 console cable

尺寸

單位：公釐（英吋）



訂購資訊

Model Name	CPU	RAM	Storage	Ethernet	Serial	CAN	SD	USB	Mini PCIe	Operating Temp.
UC-5101-LX	1 GHz	512 MB	8 GB	2	4	–	1	1	–	-10 to 60°C
UC-5102-LX	1 GHz	512 MB	8 GB	2	4	–	1	1	1 (dual-SIM socket)	-10 to 60°C
UC-5111-LX	1 GHz	512 MB	8 GB	2	4	2	1	1	–	-10 to 60°C
UC-5112-LX	1 GHz	512 MB	8 GB	2	4	2	1	1	1 (dual-SIM socket)	-10 to 60°C
UC-5101-T-LX	1 GHz	512 MB	8 GB	2	4	–	1	1	–	-40 to 85°C
UC-5102-T-LX	1 GHz	512 MB	8 GB	2	4	–	1	1	1 (dual-SIM socket)	-40 to 85°C
UC-5111-T-LX	1 GHz	512 MB	8 GB	2	4	2	1	1	–	-40 to 85°C
UC-5112-T-LX	1 GHz	512 MB	8 GB	2	4	2	1	1	1 (dual-SIM socket)	-40 to 85°C

配件（選購）

Power Adapters

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
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-CN-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, CN plug, -40 to 75°C operating temperature

Wi-Fi Wireless Modules

UC-WiFi-USB	802.11 a/b/g/n/ac, 2.4/5 GHz Wi-Fi module with 2 each of M2 and M2.5 screws
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Cellular Wireless Modules

UC-LTE-CAT1-EU	LTE cellular module with 2 M2 and 2 M2.5 mounting screws for EMEA bands 1, 3, 7, 8, 20, 28A
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Antennas

ANT-WDB-ARM-0202 plus ADP	2.4/5 GHz omni-directional antenna, 2/2 dBi, RP-SMA-type (male) connector
ANT-LTE-ASM-05 BK	704-960/1710-2620 MHz, LTE stick antenna, 5 dBi
ANT-LTE-OSM-06-3m BK MIMO	Multiband antenna with screw-fastened mounting option for 700-2700/2400-2500/5150-5850 MHz frequencies

DIN-Rail Mounting Kits

DK-UC-5000	DIN-rail mounting kit with screws for the UC-5000 Series
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Wall-Mounting Kits

WM-UC-5000	Wall-mounting kit with screws for the UC-5000 Series
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