

UC-3100 系列

搭載 Arm Cortex-A8 1 GHz 處理器的 IIoT 閘道器，內建 LTE Cat.1 與 Wi-Fi 模組



特色與優點

- Armv7 Cortex-A8 1000 Mhz 處理器
- 整合式 Wi-Fi 802.11a/b/g/n 與 LTE Cat.1，適用於美國，歐洲與亞太地區
- 藍牙 4.2 支援
- 支援 LTE 並通過 Verizon/AT&T 認證，具備 CE/FCC/UL 工業級認證
- 支援工業 CAN 2.0 A/B 通訊協定
- -40°C 至 70°C 操作溫度範圍
- 符合工業 EMC 應用的 EN 61000-6-2 與 EN 61000-6-4 標準
- 提供 Linux 長期支援至 2027 年；包括錯誤修復和安全修補

認證



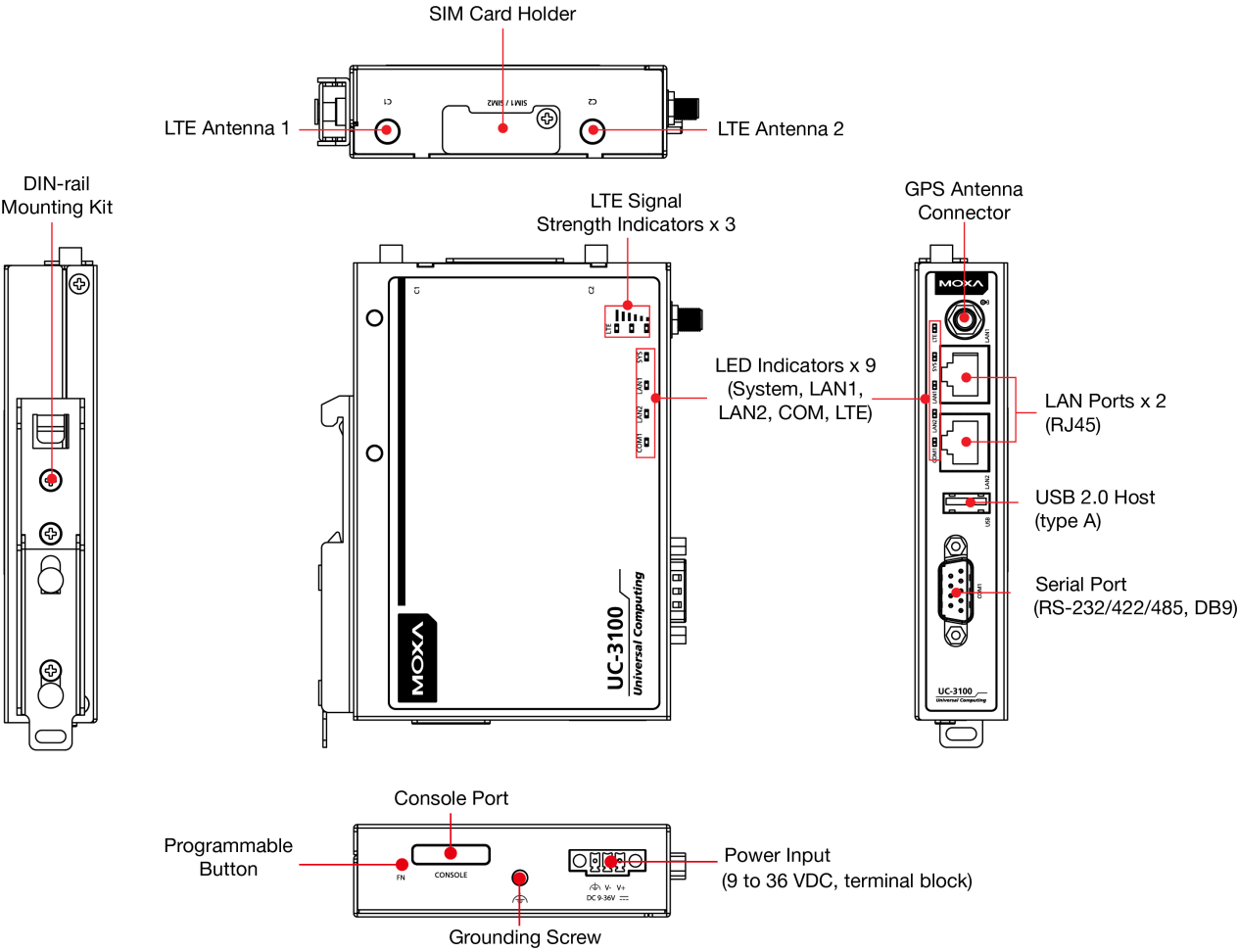
簡介

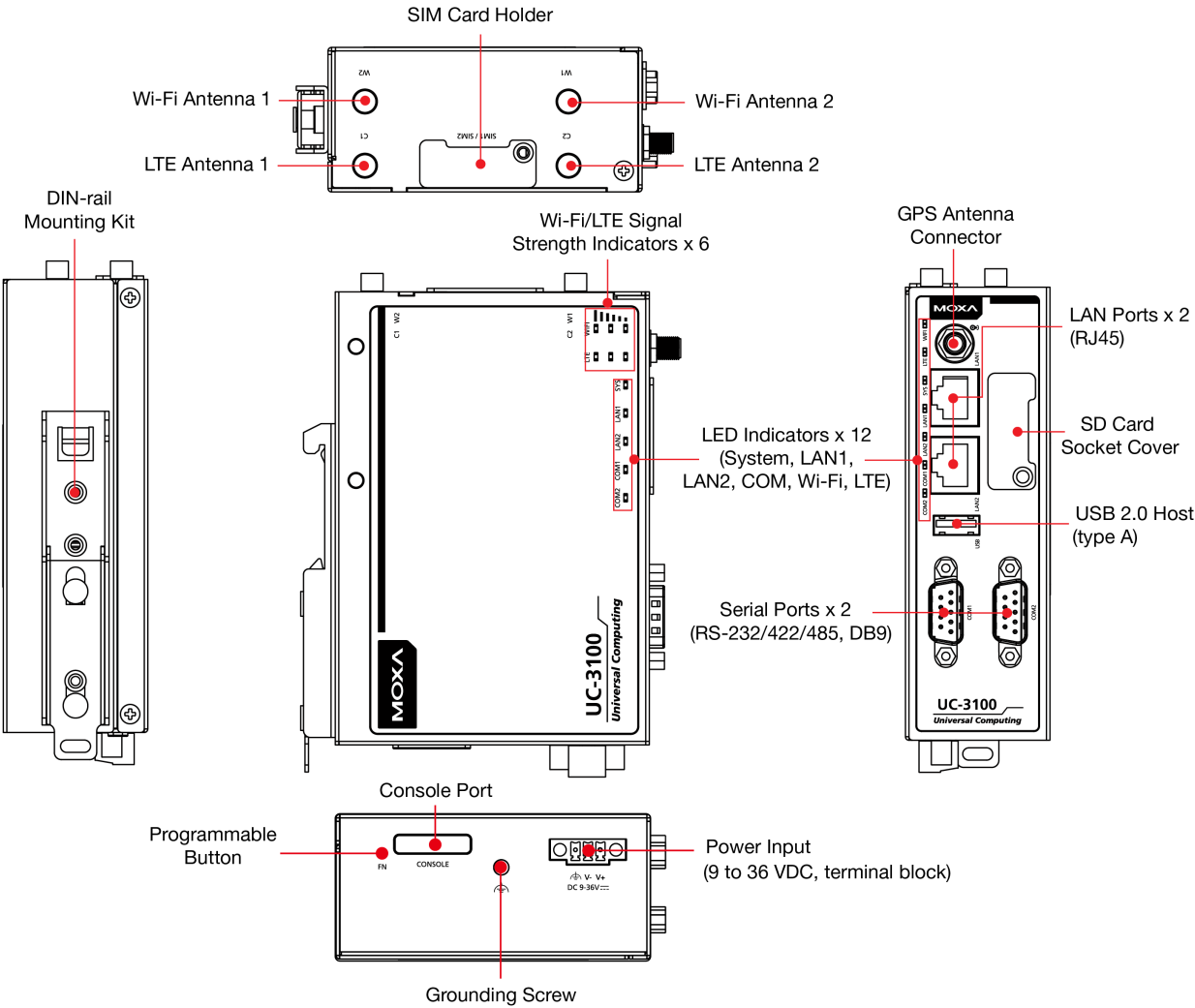
Moxa 的 UC-3100 系列電腦可作為現場智慧閘道器使用，實現數據預先處理與傳輸功能，並適用於其他嵌入式數據採集應用。本系列包含多種型號，每一種均支援不同的無線選項與通訊協定。UC-3100 的進階散熱設計確保可於 -40 至 70°C 環境中穩定運作。Wi-Fi 與 LTE 可於極冷與高溫環境下同時穩定運作，讓您在嚴苛的操作環境中最大化應用的數據預先處理與傳輸功能。

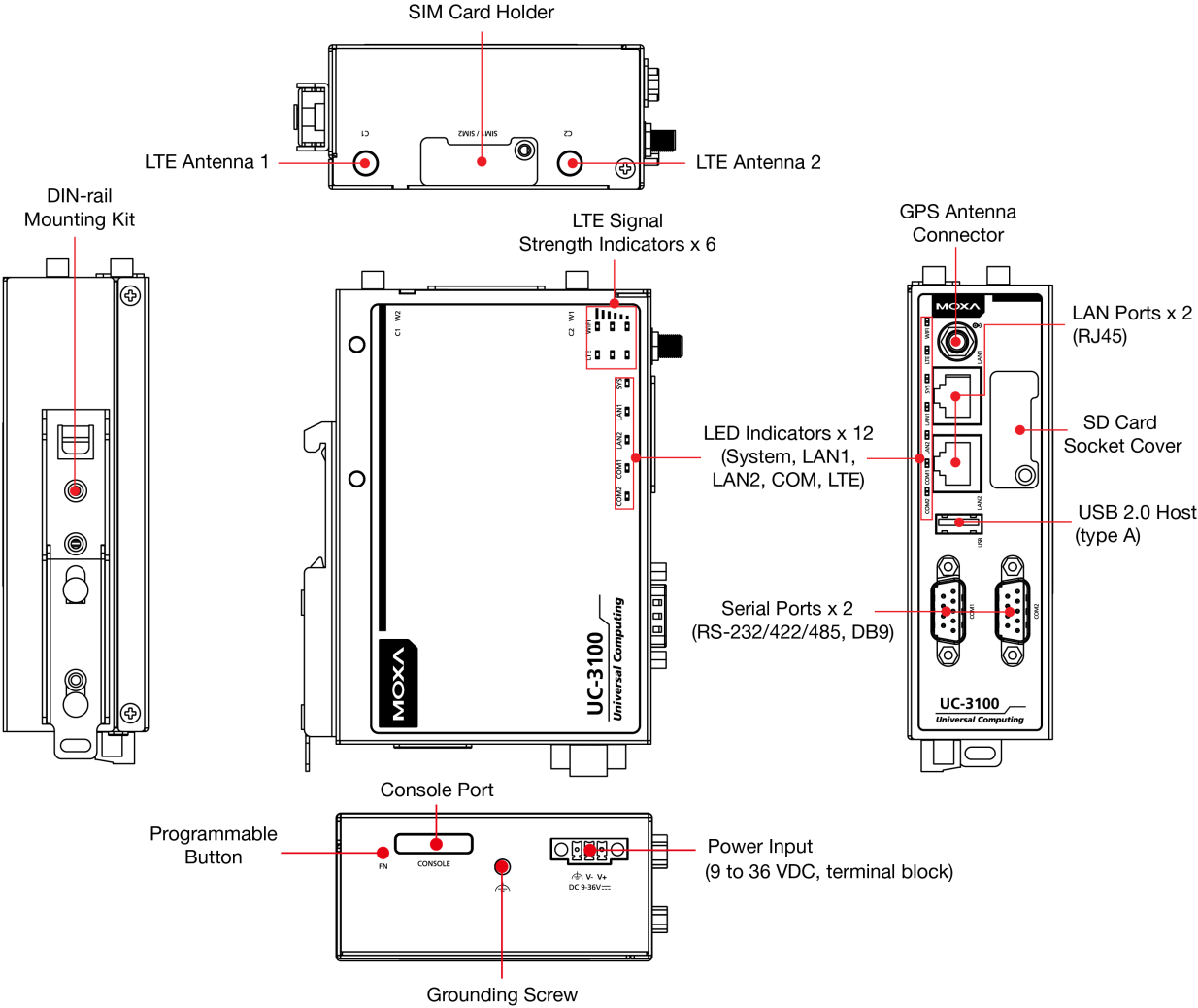
UC-3100 不只是單純硬體解決方案。為提升 Moxa Arm 架構電腦的使用者體驗，UC-3100 系列搭載 Moxa Industrial Linux 作業系統，這是由 Moxa 自行研發的高效能工業級 Linux 發行版本，並提供長期支援。

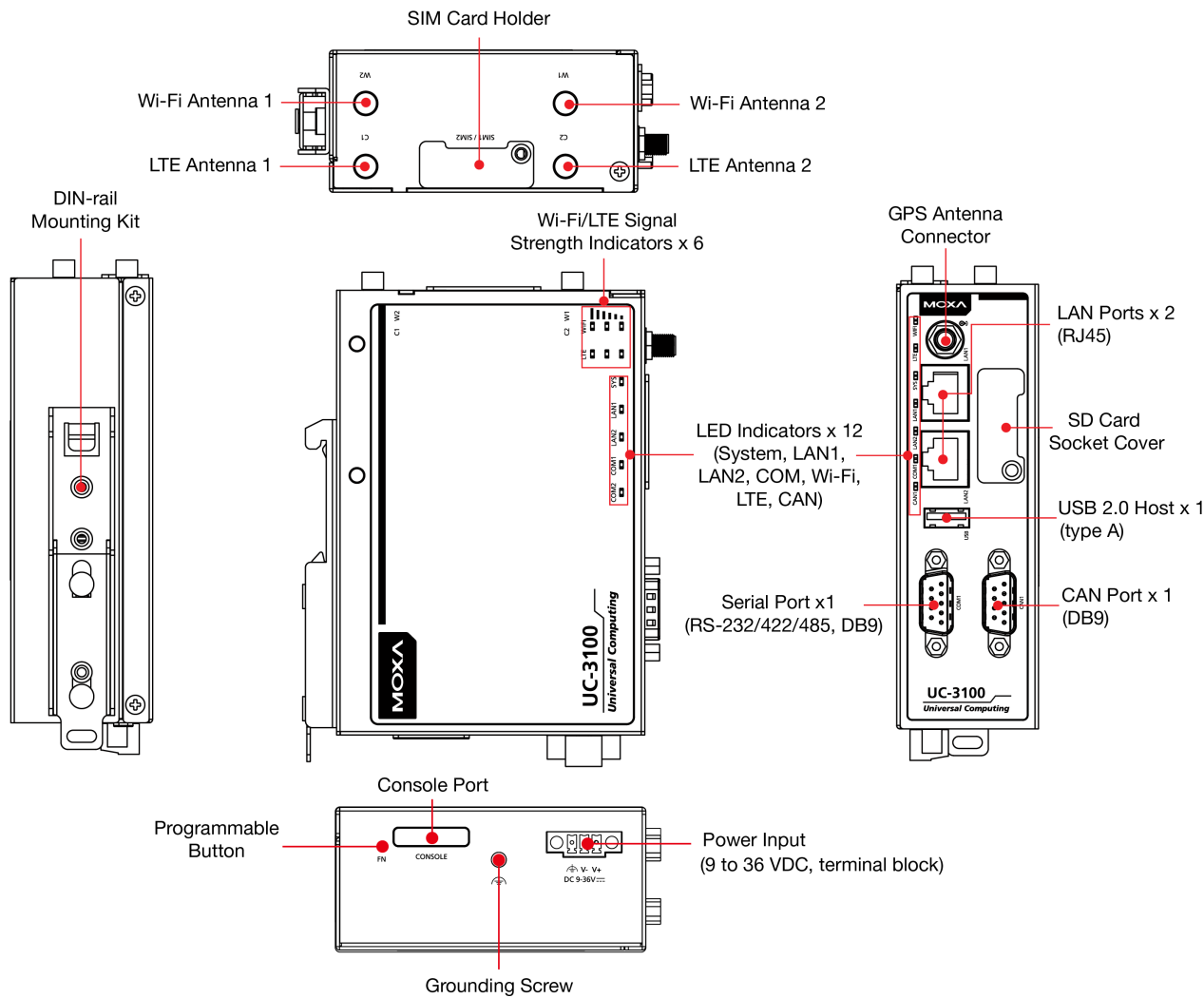
應用

- 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









規格

Computer	
CPU	Armv7 Cortex-A8 1 GHz
DRAM	1 GB 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	UC-3111/3121 models: SD slots x 1

Computer Interface	
Ethernet Ports	Auto-sensing 10/100 Mbps ports (RJ45 connector) x 2
Serial Channels	UC-3101/3121 models: RS-232/422/485 ports x 1, software-selectable (DB9 male) UC-3111 models: RS-232/422/485 ports x 2, software-selectable (DB9 male)
CAN Ports	UC-3121 models: CAN 2.0 A/B x 1 (DB9 male)

Wi-Fi Antenna Connector	UC-3111/UC-3121 models: RP-SMA x 2
Cellular Antenna Connector	SMA x 2
SIM Format	Nano
Number of SIMs	2
GPS Antenna Connector	SMA x 1
USB 2.0	USB 2.0 hosts x 1, type-A connectors
Console Port	RS-232 (TxD, RxD, GND), 4-pin header output (115200, n, 8, 1)
TPM	TPM v2.0

Ethernet Interface

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

No. of Ports	UC-3101/3121 models: 1 UC-3111 models: 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 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-3121 models: 1
Baudrate	10 to 1000 kbps
Connector	DB9 male
Isolation	2 kV (built-in)
Signals	CAN_H, CAN_L, CAN_GND, CAN_SHLD, CAN_V+, GND

Cellular Interface

Band Options	US Band: LTE Bands: Band 2 (1900 MHz) / Band 4 (1700 MHz) / Band 5 (850 MHz) / Band 12 (700 MHz) / Band 13 (700 MHz) / Band 14 (700 MHz) / Band 66 (1700 MHz) / Band 71 (600 MHz) UMTS Bands: 2 (1900 MHz) / Band 4 (1700 MHz) / Band 5 (850 MHz) Carrier Approval: Verizon, AT&T EU Band: LTE Bands: Band 1 (2100 MHz) / Band 3 (1800 MHz) / Band 7 (2600 MHz) / Band 8 (900 MHz) / Band 20 (800 MHz) / Band 28A (700 MHz) UMTS Bands: Band 1 (2100 MHz) / Band 3 (1800 MHz) / Band 8 (900 MHz) APAC Bands: LTE Bands: Band 1 (2100 MHz) / 3 (1800 MHz) / Band 5 (850 MHz) / Band 8 (900 MHz) / Band 9 (1700 MHz) / Band 18 (850 MHz) / Band 19 (850 MHz) / Band 26 (850 MHz) / Band 28 (700 MHz) UMTS Bands: 1 (2100 MHz) / Band 5 (850 MHz) / Band 6 (800 MHz) / Band 8 (900 MHz) / Band 19 (800 MHz)
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WLAN Interface

Frequency Band	UC-3111-T-LX/UC-3121-T-LX: 2.4 GHz/5 GHz
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LED Indicators

System	Power x 1
CAN	UC-3121 models: 1 per port (Tx, Rx)
Serial	1 per port (Tx, Rx)
LAN	1 per port (10/100 Mbps)
Wireless Signal Strength	UC-3101 models: Cellular x 3 UC-3111/UC-3121 models: Cellular x 3 and Wi-Fi x 3

Power Parameters

Input Current	UC-3101 models: 0.75 A @ 9 VDC, 0.18 A @ 36 VDC UC-3111 models: 0.87 A @ 9 VDC, 0.21 A @ 36 VDC UC-3121 models: 0.83 A @ 9 VDC, 0.21 A @ 36 VDC
Input Voltage	9 to 36 VDC
Power Consumption	UC-3101 models: 6.75 W UC-3111 models: 7.83 W UC-3121 models: 7.56 W

Physical Characteristics

Housing	Metal
Dimensions (without ears)	UC-3101 models: 128.5 x 89.1 x 26 mm (5.06 x 3.51 x 1.02 in) UC-3111/UC-3121 models: 128.5 x 89.1 x 41 mm (5.06 x 3.51 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 61000-6-2/-6-4 EN 55032/35 UKCA RCM UC-3101 models: 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: 10 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: 10 V IEC 61000-4-8 PFMF
Cybersecurity	EN 18031-1
Radio Frequency	CE FCC UKCA RCM UC-3101 models: KC
Carrier Approvals	UC-3101/3111/3121-T-US-LX: AT&T, Verizon, and PTCRB
International Approval	CE FCC UKCA RCM UC-3101 models: KC UC-3111 models: ANATEL ENACOM IFETEL/NOM NBTC SUBTEL WPC
Safety	IEC 60950-1 UL 60950-1 IEC 62368-1 UL 62368-1
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-64 2 grms @ 5 to 500 Hz, random wave, 1 hr per axis (without USB devices attached)
Hazardous Locations	Class I Division 2 ATEX IECEx
Green Product	RoHS, CRoHS, WEEE

MTBF

Time	UC-3101-T-US-LX: 702,846 hrs UC-3101-T-EU-LX/T-AP-LX: 585,775 hrs UC-3111-T-US-LX: 465,569 hrs UC-3111-T-EU-LX/T-AP-LX: 416,081 hrs UC-3121-T-US-LX: 474,796 hrs UC-3121-T-EU-LX/T-AP-LX: 428,931 hrs
Standards	Telcordia (Bellcore) Standard

Warranty

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

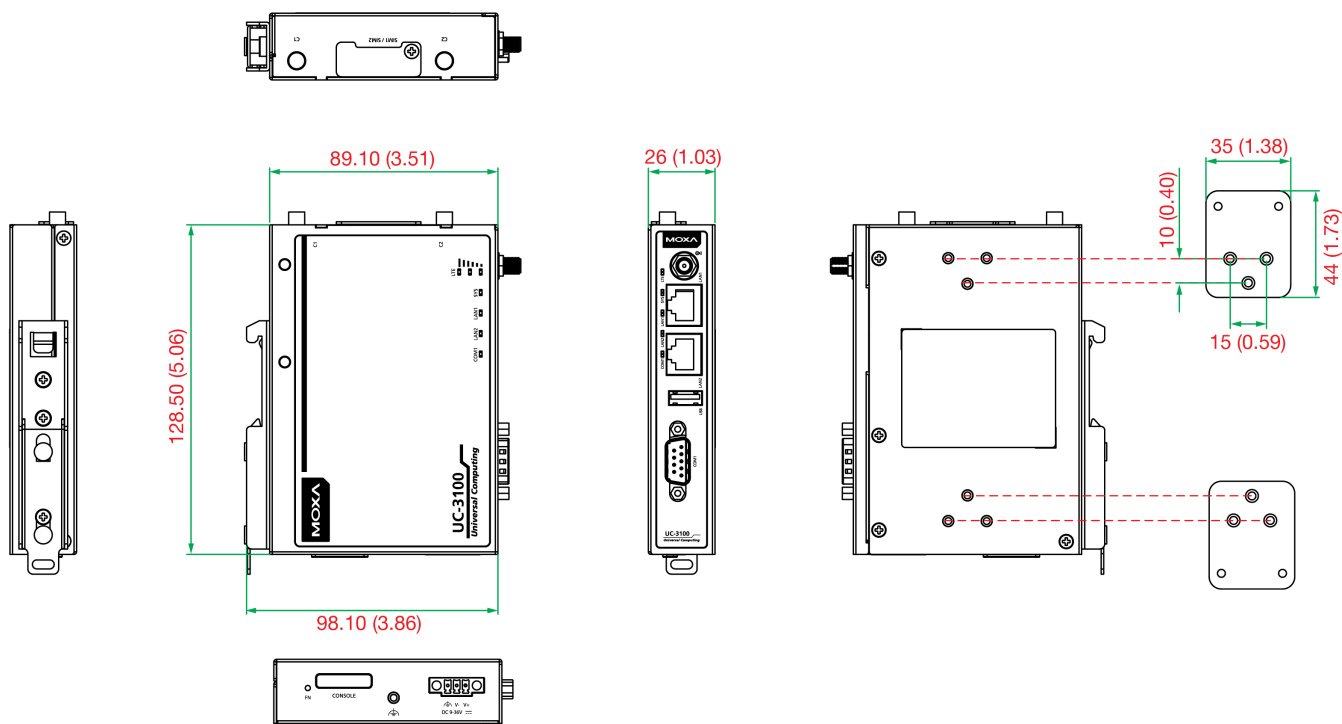
Package Contents

Device	1 x UC-3100 Series computer
Cable	1 x terminal block to power jack converter
Documentation	1 x quick installation guide 1 x warranty card

尺寸

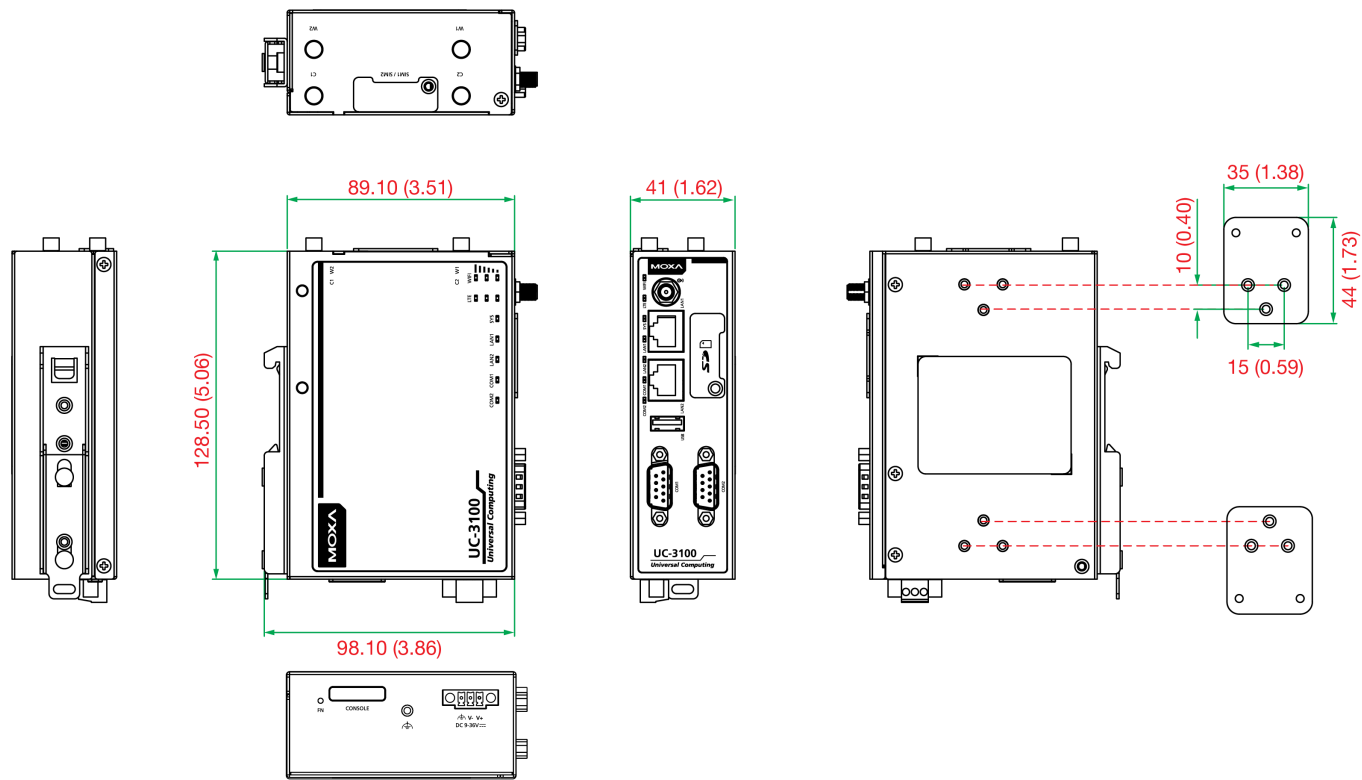
UC-3101

單位：公釐（英吋）



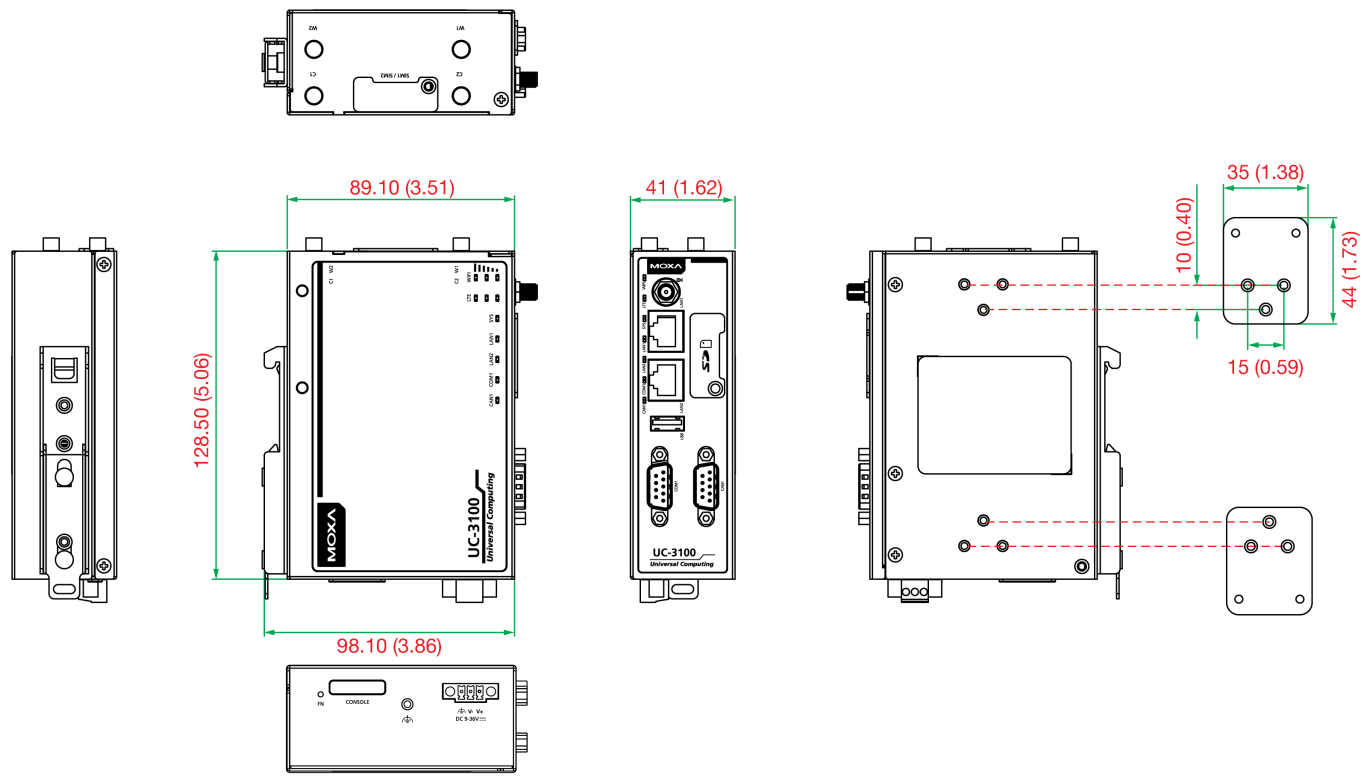
UC-3111

單位：公釐（英吋）



UC-3121

單位：公釐（英吋）



訂購資訊

Model Name	Carrier Approval	CPU	SD Slot	Serial	CAN	LTE	Wi-Fi	BLT
UC-3101-T-US-LX	AT&T, Verizon	Arm Cortex-A8 1 GHz	–	1	–	Cat. 1	–	–
UC-3111-T-US-LX	AT&T, Verizon	Arm Cortex-A8 1 GHz	1	2	–	Cat. 1	√	√
UC-3111-T-US-LX-NW	AT&T, Verizon	Arm Cortex-A8 1 GHz	1	2	–	Cat. 1	–	–
UC-3121-T-US-LX	AT&T, Verizon	Arm Cortex-A8 1 GHz	1	1	1	Cat. 1	√	√
UC-3101-T-EU-LX	–	Arm Cortex-A8 1 GHz	–	1	–	Cat. 1	–	–
UC-3111-T-EU-LX	–	Arm Cortex-A8 1 GHz	1	2	–	Cat. 1	√	√
UC-3111-T-EU-LX-NW	–	Arm Cortex-A8 1 GHz	1	2	–	Cat. 1	–	–
UC-3121-T-EU-LX	–	Arm Cortex-A8 1 GHz	1	1	1	Cat. 1	√	√
UC-3101-T-AP-LX	–	Arm Cortex-A8 1 GHz	–	1	–	Cat. 1	–	–
UC-3111-T-AP-LX	–	Arm Cortex-A8 1 GHz	1	2	–	Cat. 1	√	√
UC-3111-T-AP-LX-NW	–	Arm Cortex-A8 1 GHz	1	2	–	Cat. 1	–	–
UC-3121-T-AP-LX	–	Arm Cortex-A8 1 GHz	1	1	1	Cat. 1	√	√

配件 (選購)

Power Adapters

PWR-12150-CN-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, China (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, Continental Europe (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, United Kingdom (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, Australia (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, United States/Japan (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

UC-3100 DIN-Rail Kit	DIN-rail kit with screws
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Wall-Mounting Kits

UC-3100 Wall-Mounting Kit	Wall-mounting kit with screws
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Antennas

ANT-LTE-ASM-02	GPRS/EDGE/UMTS/HSPA/LTE, omni-directional rubber duck antenna, 2 dBi
ANT-WDB-ARM-02	2.4/5 GHz, omni-directional rubber duck antenna, 2 dBi, RP-SMA (male)

ANT-LTEUS-ASM-01	GSM/GPRS/EDGE/UMTS/HSPA/LTE, omni-directional rubber duck antenna, 1 dBi
UC-3100 Antenna Set	4 dBi at 1575 MHz to 1610 MHz, SMA (male), active GPS/GLONASS, adhesive-type antenna with 20-cm cable; 2 x 4 dBi at 2.4 GHz or 5 dBi at 5 GHz, RP-SMA (female), omnidirectional antennas; 2 x 1.5 dBi 698 to 960 MHz or 1710 to 2700 MHz, SMA (male), LTE, swivel-type omnidirectional portable antennas

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