

UC-2100 系列

Arm Cortex-A8 600 MHz 掌上型 IIoT 閘道器，含 1 個 Mini PCIe 無線模組擴充插槽



特色與優點

- Armv7 Cortex-A8 600-1000 MHz 處理器
- 掌上型，50 x 80 x 28 公釐
- Moxa 工業 Linux，提供 10 年長期支援
- MXview 支援集中監控設備和運算狀態
- 整合 APIs 和推式通訊，僅在需要時擷取資料
- 1 個或 2 個自動感應 10/100 Mbps 乙太網路連接埠
- 支援 Gigabit 乙太網路 (UC-2112)
- 多達 2 個 RS-232/422/485 連接埠，可透過軟體選擇，支援所有訊號
- 支援 Wi-Fi/行動通訊模組的 Mini PCIe 插槽 (UC-2104)
- -40 至 75 °C 的寬溫度型號符合嚴苛環境的規範認證

認證



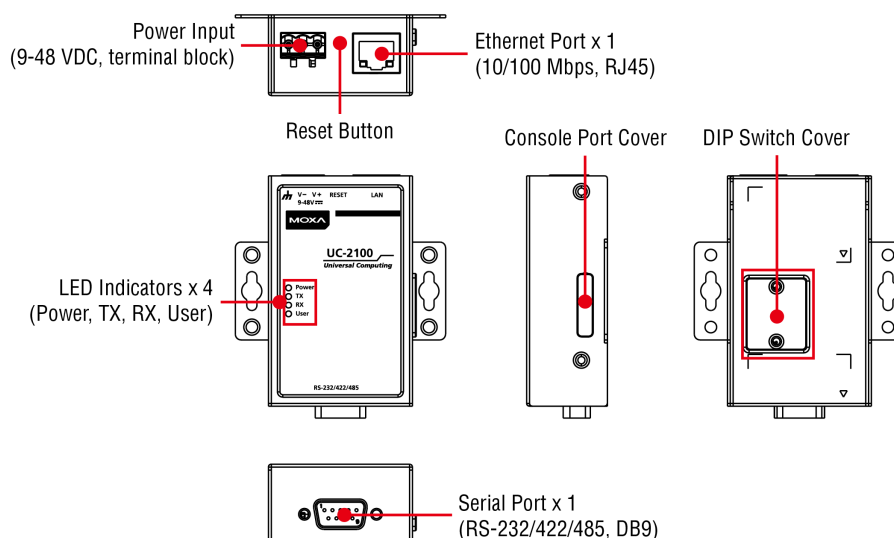
簡介

UC-2100 系列運算平台專為嵌入式資料擷取和處理應用而設計。電腦配備多達 2 個可透過軟體選擇的 RS-232/422/485 全訊號串列連接埠和單或雙乙太網路連接埠。這款以 Arm 為基礎的掌上型運算平台系列包括多種型號，可滿足各種介面要求，例如單或雙串列和乙太網路連接埠、Gigabit 乙太網路和無線連線。這些多樣化的通訊功能可供使用者有效地將 UC-2100 應用在各類複雜的通訊解決方案。

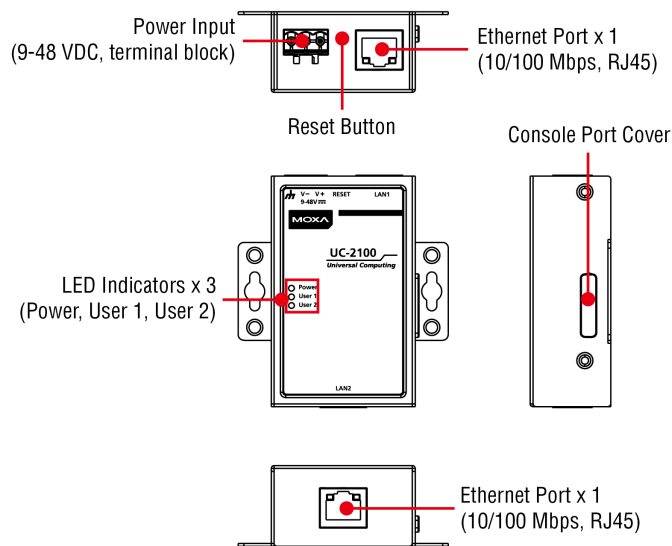
UC-2100 系列內建以 Cortex-A8 Arm 為基礎的處理器，針對各種工業解決方案進行了優化。這款小型的嵌入式電腦具備彈性的介面選項，是可靠且安全的閘道器，可協助您在現場進行資料擷取並進行處理，同時也是適用於其他許多大規模部署的實用通訊平台。為寬溫度應用設計的型號，適合極端環境應用，例如石油和天然氣產業的應用。此外，所有型號均使用 Moxa 工業級 Linux 平台，該平台提供優化的軟體功能和長期支援。

外觀

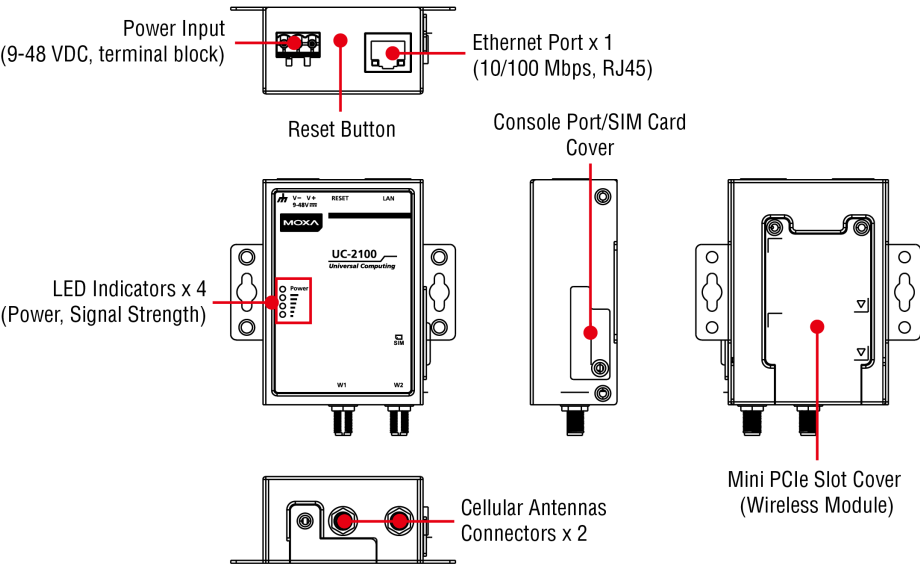
UC-2101



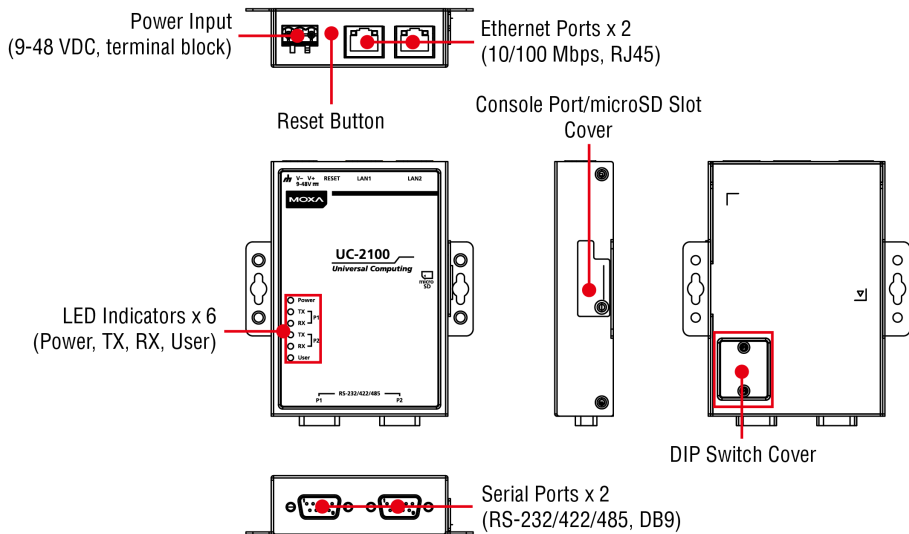
UC-2102

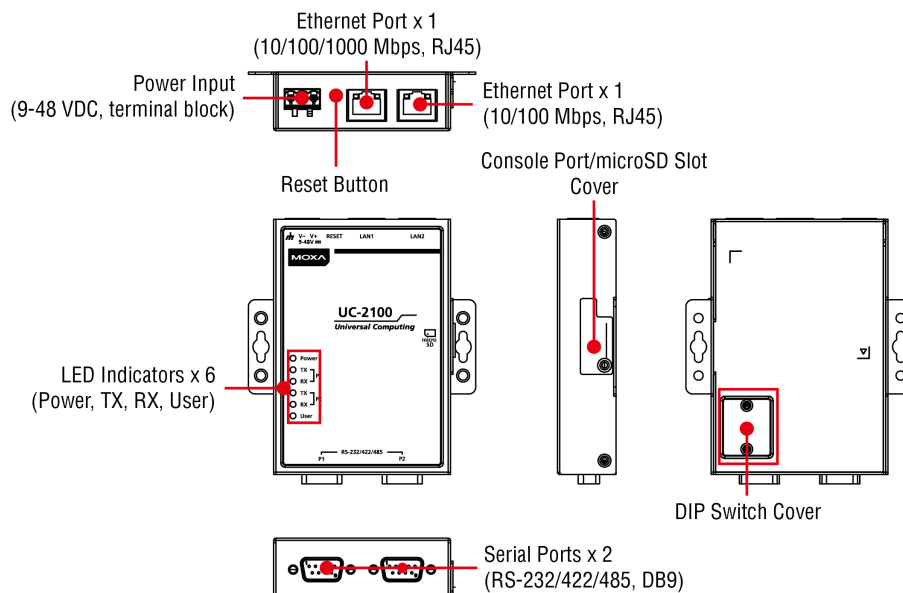


UC-2104



UC-2111





規格

Computer

CPU	UC-2101-LX: Armv7 Cortex-A8 600 MHz UC-2102-LX: Armv7 Cortex-A8 600 MHz UC-2104-LX: Armv7 Cortex-A8 600 MHz UC-2111-LX: Armv7 Cortex-A8 600 MHz UC-2112-LX: Armv7 Cortex-A8 1 GHz UC-2112-T-LX: Armv7 Cortex-A8 1 GHz
DRAM	UC-2101-LX: 256 MB DDR3 UC-2102-LX: 256 MB DDR3 UC-2104-LX: 256 MB DDR3 UC-2111-LX: 512 MB DDR3 UC-2112-LX: 512 MB DDR3 UC-2112-T-LX: 512 MB DDR3
Pre-installed OS	Moxa Industrial Linux (Debian 9, Kernel 4.4) See www.moxa.com/MIL
Storage Pre-installed	8 GB eMMC
Storage Slot	UC-2111-LX: Micro SD slots x 1 UC-2112-LX: Micro SD slots x 1 UC-2112-T-LX: Micro SD slots x 1

Computer Interface

Ethernet Ports	UC-2101-LX: Auto-sensing 10/100 Mbps ports (RJ45 connector) x 1 UC-2102-LX: Auto-sensing 10/100 Mbps ports (RJ45 connector) x 2 UC-2104-LX: Auto-sensing 10/100 Mbps ports (RJ45 connector) x 1 UC-2111-LX: Auto-sensing 10/100 Mbps ports (RJ45 connector) x 2 UC-2112-LX: Auto-sensing 10/100 Mbps ports (RJ45 connector) x 1, Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 1 UC-2112-T-LX: Auto-sensing 10/100 Mbps ports (RJ45 connector) x 1, Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 1
Serial Ports	UC-2101-LX: RS-232/422/485 ports x 1, software selectable (DB9 male) UC-2111-LX: RS-232/422/485 ports x 2, software selectable (DB9 male) UC-2112-LX: RS-232/422/485 ports x 2, software selectable (DB9 male) UC-2112-T-LX: RS-232/422/485 ports x 2, software selectable (DB9 male)
Console Port	RS-232 (Tx, Rx, GND), 4-pin header output (115200, n, 8, 1)
Expansion Slots	UC-2104-LX: mPCIe slot x 1

Cellular Antenna Connector	UC-2104-LX: SMA x 2
Number of SIMs	UC-2104-LX: 1
SIM Format	UC-2104-LX: Standard
Buttons	Reset button, DIP switch for serial port configuration

Ethernet Interface

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

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)
Baudrate	50 bps to 921.6 kbps
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
ESD Protection	4 kV, for all signals

Serial Signals

RS-232	TxD, Rx D, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND

LED Indicators

System	Power x 1
LAN	2 per port (10/100 Mbps) UC-2112-LX, UC-2112-T-LX: 2 per port (10/100/1000 Mbps)
Serial	UC-2101-LX: 2 per port (Tx, Rx) UC-2111-LX: 2 per port (Tx, Rx) UC-2112-LX: 2 per port (Tx, Rx) UC-2112-T-LX: 2 per port (Tx, Rx)
User Programmable	UC-2101-LX: User x 1 UC-2102-LX: User x 2 UC-2111-LX: User x 1 UC-2112-LX: User x 1 UC-2112-T-LX: User x 1
Wireless Signal Strength	UC-2104-LX: Cellular/Wi-Fi x 3

Physical Characteristics

Housing	Metal
Installation	Wall mounting, DIN-rail mounting (with optional kit)
Weight	UC-2101-LX: 190 g (0.42 lb) UC-2102-LX: 190 g (0.42 lb) UC-2104-LX: 220 g (0.49 lb) UC-2111-LX: 290 g (0.64 lb) UC-2112-LX: 290 g (0.64 lb)

	UC-2112-T-LX: 290 g (0.64 lb)
Dimensions (with ears)	UC-2101-LX: 73 x 80 x 28 mm (2.87 x 3.15 x 1.10 in) UC-2102-LX: 73 x 80 x 28 mm (2.87 x 3.15 x 1.10 in) UC-2104-LX: 80 x 80 x 30.8 mm (3.15 x 3.15 x 1.21 in) UC-2111-LX: 99 x 111 x 25.5 mm (3.90 x 4.37 x 1.00 in) UC-2112-LX: 99 x 111 x 25.5 mm (3.90 x 4.37 x 1.00 in) UC-2112-T-LX: 99 x 111 x 25.5 mm (3.90 x 4.37 x 1.00 in)
Dimensions (without ears)	UC-2101-LX: 50 x 80 x 28 mm (1.97 x 3.15 x 1.10 in) UC-2102-LX: 50 x 80 x 28 mm (1.97 x 3.15 x 1.10 in) UC-2104-LX: 57 x 80 x 30.8 mm (2.24 x 3.15 x 1.21 in) UC-2111-LX: 77 x 111 x 25.5 mm (3.03 x 4.37 x 1.00 in) UC-2112-LX: 77 x 111 x 25.5 mm (3.03 x 4.37 x 1.00 in) UC-2112-T-LX: 77 x 111 x 25.5 mm (3.03 x 4.37 x 1.00 in)

Environmental Limits

Operating Temperature	UC-2101-LX: -10 to 60°C (14 to 140°F) UC-2102-LX: -10 to 60°C (14 to 140°F) UC-2104-LX: -10 to 70°C (14 to 158°F) UC-2111-LX: -10 to 60°C (14 to 140°F) UC-2112-LX: -10 to 60°C (14 to 140°F) UC-2112-T-LX: -40 to 75°C (-40 to 167°F)
Storage Temperature	UC-2101-LX: -20 to 70°C (-4 to 158°F) UC-2102-LX: -20 to 70°C (-4 to 158°F) UC-2104-LX: -20 to 70°C (-4 to 158°F) UC-2111-LX: -20 to 70°C (-4 to 158°F) UC-2112-LX: -20 to 70°C (-4 to 158°F) UC-2112-T-LX: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Shock	IEC 60068-2-27
Vibration	2 Grms @ IEC 60068-2-64, random wave, 5-500 Hz, 1 hr per axis (without USB devices attached)

Power Parameters

Input Voltage	9 to 48 VDC
Input Current	0.45 A @ 9 VDC, 0.084 A @ 48 VDC
Power Consumption	4 W

MTBF

Time	UC-2101-LX: 1,360,496 hrs UC-2102-LX: 1,652,339 hrs UC-2104-LX: 1,577,995 hrs UC-2111-LX: 985,911 hrs UC-2112-LX: 982,882 hrs UC-2112-T-LX: 982,882 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Reliability

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

Standards and Certifications

Safety	IEC 60950-1, UL 60950-1
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B 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: 1 kV; Signal: 0.5 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
Hazardous Locations	UC-2112-LX, UC-2112-T-LX: Class I Division 2, ATEX Zone 2
Green Product	RoHS, CRoHS, WEEE

Warranty

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

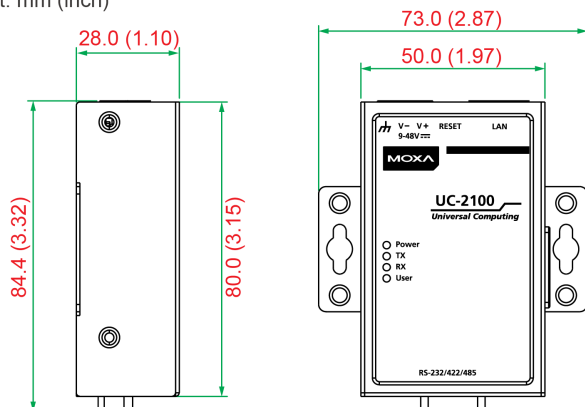
Package Contents

Device	1 x UC-2100 Series computer
Installation Kit	1 x power jack
Cable	1 x console cable
Documentation	1 x quick installation guide 1 x warranty card

尺寸

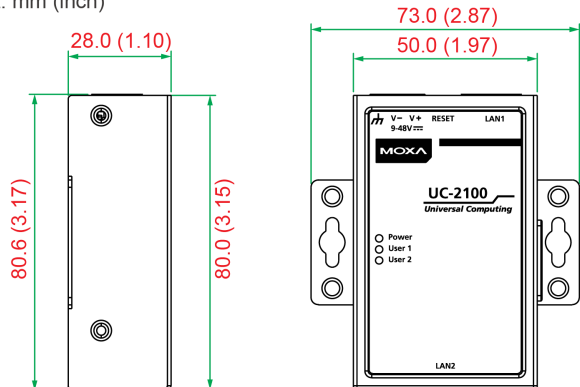
UC-2101

Unit: mm (inch)



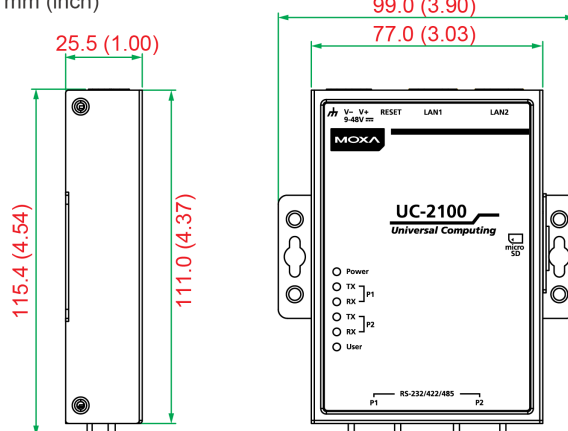
UC-2102

Unit: mm (inch)



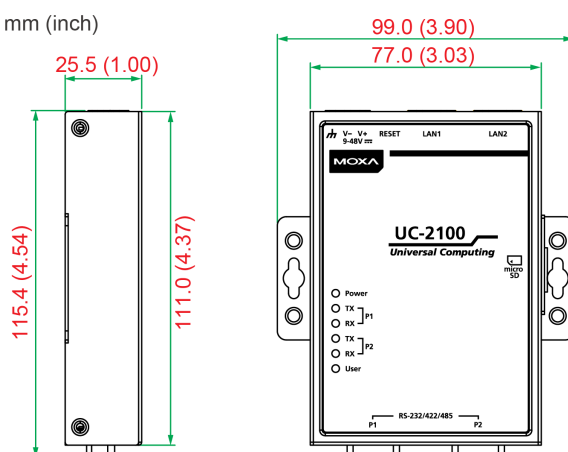
UC-2111

Unit: mm (inch)



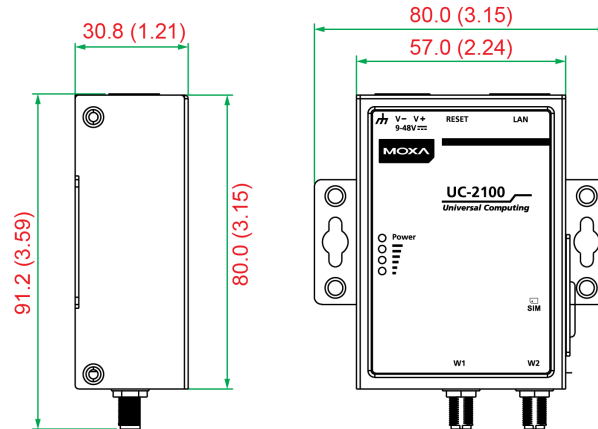
UC-2112

Unit: mm (inch)



UC-2104

Unit: mm (inch)



訂購資訊

Model Name	CPU	RAM	Storage	Serial	Ethernet	MicroSD	Mini PCIe	Operating Temp.
UC-2101-LX	600 MHz	256 MB	8 GB	1	1	–	–	-10 to 60°C
UC-2102-LX	600 MHz	256 MB	8 GB	–	2	–	–	-10 to 60°C
UC-2104-LX	600 MHz	256 MB	8 GB	–	1	–	1	-10 to 60°C
UC-2111-LX	600 MHz	512 MB	8 GB	2	2	1	–	-10 to 60°C
UC-2112-LX	1000 MHz	512 MB	8 GB	2	2 (1 Giga LAN)	1	–	-10 to 60°C
UC-2112-T-LX	1000 MHz	512 MB	8 GB	2	2 (1 Giga LAN)	1	–	-40 to 75°C

配件 (選購)

Power Adapters

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

Cellular Wireless Modules

UC-LTE-CAT1-AP	LTE cellular module with 2 M2 and 2 M2.5 mounting screws for APAC bands 1, 3, 5, 8, 9, 18(26), 19, 28
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
UC-LTE-CAT4-CN	LTE cellular module with 2 M2 and 2 M2.5 mounting screws for LTE (FDD) bands B1, B3, B8 and LTE (TDD) bands B39, B40, B41(38)

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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Antennas

ANT-WDB-ARM-0202 plus ADP	2.4/5 GHz omni-directional antenna, 2/2 dBi, RP-SMA-type (male) connector
ANT-LTE-OSM-03-3m BK	700-2700 MHz, multi-band antenna, specifically designed for 2G, 3G, and 4G applications, 3 m cable

ANT-LTE-ASM-04 BK	704-960/1710-2620 MHz, LTE omni-directional stick antenna, 4.5 dBi
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
A-ADP-SM-RF Golden	SMA adapter for UC-2104 and UC-5100 Series
ANT-LTEUS-ASM-01	GSM/GPRS/EDGE/UMTS/HSPA/LTE, omni-directional rubber duck antenna, 1 dBi

DIN-Rail Mounting Kits

DK35A	DIN-rail mounting kit, 35 mm
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