

AIG-300 系列

具有 Arm® Cortex™-A7 雙核心 1 GHz 處理器、1 個 CAN 連接埠、4 個 DI、4 個 DO、ThingsPro Edge 軟體的進階 IIoT 閘道器，工作溫度 -40 至 70°C



特色與優點

- ThingsPro Edge 軟體簡化資料採集和裝置管理
- ThingsPro Edge 和 Azure IoT Edge 的無縫整合可實現簡單、可靠且安全的雲端連線
- 支援使用 ThingsPro Proxy 工具程式輕鬆部署裝置
- 提供強大的 OTA 功能，防止軟體升級過程中出現系統故障
- 配備安全啟動以防惡意軟體注入攻擊

認證

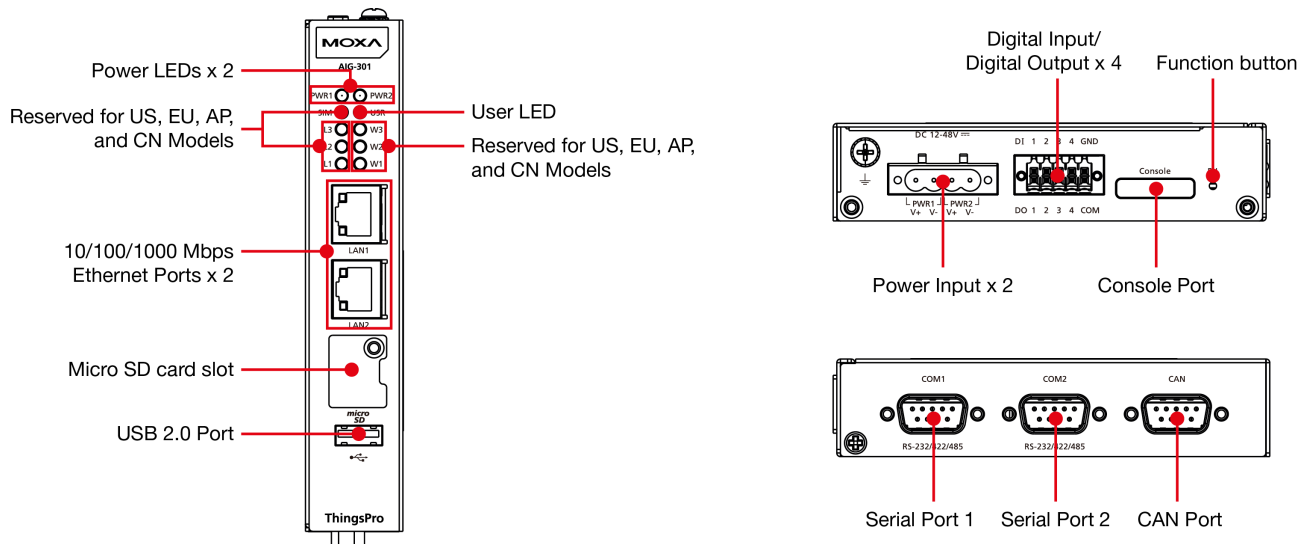


簡介

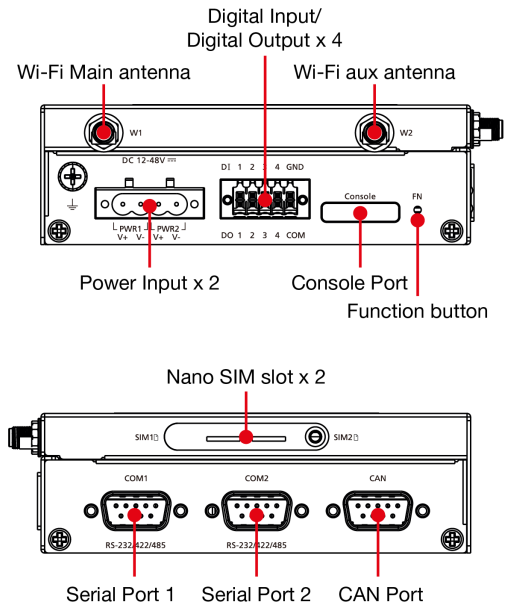
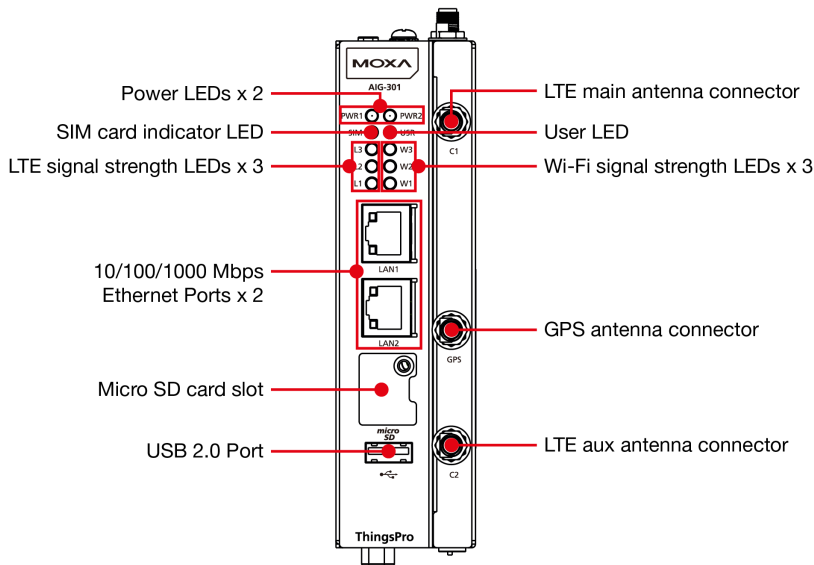
AIG-301 系列進階 IIoT 閘道器專為工業物聯網應用而設計，特別適用於嚴苛操作環境中的分散式和無人站點。ThingsPro Edge 和 Azure IoT Edge 軟體已預先載入並與 AIG-301 系列無縫整合，使用 Azure 雲端解決方案實現簡單、可靠、安全的感測器到雲端連線，用於資料採集和裝置管理。使用 ThingsPro Proxy 工具程式，裝置部署過程比以往更容易。由於強大的 OTA 功能，完全不需要擔心軟體升級過程中的系統故障。啟用安全啟動功能後，您可以啟用 AIG-301 系列的啟動程序，以防惡意軟體注入。

外觀

AIG-301-T-AZU-LX



AIG-301 美國、歐盟、AP 和 CN 型號



規格

Computer

| | |
|-----------------------|--|
| CPU | Armv7 Cortex-A7 dual-core 1 GHz |
| DRAM | 2 GB DDR3L |
| Storage Pre-installed | 16 GB eMMC GB eMMC |
| Pre-installed OS | Moxa Industrial Linux (Debian 9, Kernel 4.4) |

Computer Interface

| | |
|----------------------------|--|
| TPM | TPM v2.0 |
| 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) |
| CAN Ports | CAN 2.0 A/B x 1 (DB9 male) |
| Digital Input | DIs x 4 |
| Digital Output | DOs x 4 |
| USB 2.0 | USB 2.0 hosts x 1, type-A connectors |
| Wi-Fi Antenna Connector | RP-SMA x 2 (excluding AIG-301-AZU-LX/T-AZU-LX models) |
| Cellular Antenna Connector | SMA x SMA x 2 (excluding AIG-301-AZU-LX/T-AZU-LX models) |
| GPS Antenna Connector | SMA x SMA x 1 (excluding AIG-301-AZU-LX/T-AZU-LX models) |
| Expansion Slots | mPCIe slot x 1: AIG-301-US-AZU-LX/T-US-AZU-LX, AIG-301-EU-AZU-LX/T-EU-AZU-LX, AIG-301-AP-AZU-LX/T-AP-AZU-LX mPCIe slot x 2: AIG-301-CN-AZU-LX/T-CN-AZU-LX |
| SIM Format | Nano (AIG-301-US-AZU-LX/T-US-AZU-LX, AIG-301-EU-AZU-LX/T-EU-AZU-LX, AIG-301-AP-AZU-LX/T-AP-AZU-LX) |
| Number of SIMs | 2 |
| Buttons | Programmable button |

Ethernet Interface

| | |
|-------------------------------|-------------------|
| Magnetic Isolation Protection | 1.5 kV (built-in) |
|-------------------------------|-------------------|

Serial Interface

| | |
|--------------|--|
| Console Port | 1 x 4-pin header |
| Connector | DB9 female |
| Baudrate | 300 bps to 921.6 kbps |
| Data Bits | 5, 6, 7, 8 |
| Flow Control | ADDC® (automatic data direction control) for RS-485, RTS/CTS, XON/XOFF |
| Parity | None, Even, Odd, Space, Mark |
| Stop Bits | 1, 1.5, 2 |
| Isolation | N/A |

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 | 1 |
| Connector | DB9 male |
| Baudrate | 10 to 1000 kbps |
| Industrial Protocols | CAN 2.0A, CAN 2.0B |
| Signals | CAN_H, CAN_L, CAN_GND, CAN_SHLD, CAN_V+, GND |
| Isolation | 2 kV (built-in) |

Digital Inputs

| | |
|-------------------------|-------------------------------------|
| Connector | Spring-type Euroblock terminal |
| Dry Contact | Off: open On: short to GND |
| Wet Contact (DI to COM) | On: 10 to 30 VDC Off: 0 to 3 VDC |
| Isolation | 3K VDC |
| Sensor Type | Wet contact (NPN) Dry contact |

Digital Outputs

| | |
|----------------|--|
| Connector | Spring-type Euroblock terminal |
| Current Rating | 200 mA per channel |
| I/O Type | Sink |
| Voltage | 24 VDC nominal, open collector to 30 VDC |

Cellular Interface

| | |
|--------------------|--|
| Cellular Standards | LTE CAT-4 |
| Band Options (US) | LTE Band 2 (1900 MHz) / LTE Band 4 (1700 MHz) / LTE Band 5 (850 MHz) / LTE Band 13 (700 MHz) / LTE Band 17 (700 MHz) UMTS/HSPA 850 MHz / 1900 MHz Carrier Approval: Verizon, AT&T |
| Band Options (EU) | LTE Band 1 (2100 MHz) / LTE Band 3 (1800 MHz) / LTE Band 5 (850 MHz) / LTE Band 7 (2600 MHz) / LTE Band 8 (900 MHz) / LTE Band 20 (800 MHz) UMTS/HSPA 850 MHz / 900 MHz / 1900 MHz / 2100 MHz |
| Band Option (APAC) | LTE Band 1 (2100 MHz) / LTE Band 3 (1800 MHz) / LTE Band 5 (850 MHz) / LTE Band 7 (2600 MHz) / LTE Band 8 (900 MHz) / LTE Band 28 (700 MHz) UMTS/HSPA 850 MHz / 900 MHz / 1900 MHz / 2100 MHz |

GPS Interface

| | |
|----------------|--|
| Receiver Types | 72-channel u-blox M8 engine GPS/GLONASS/Galileo |
| Accuracy | Position: 2.5 m CEP SBAS: 2.0 m CEP |
| Acquisition | Aided starts: 3 sec Cold starts: 26 sec |
| Sensitivity | Cold starts: -148 dBm Tracking: -164 dBm |

LED Indicators

| | |
|--------------------------|---|
| System | Power x 2 User x 1 SIM card indicator x 1 |
| Wireless Signal Strength | Cellular/Wi-Fi x 6 |

ThingsPro Software

| | |
|------------------------------|-----|
| ThingsPro Proxy Utility | Yes |
| Azure IoT Edge Preintegrated | Yes |
| ThingsPro Edge Preloaded | Yes |

Power Parameters

| | |
|---------------------|--|
| No. of Power Inputs | Redundant dual inputs |
| Input Voltage | 12 to 48 VDC |
| Power Consumption | 4.8 W (AIG-301-AZU-LX/T-AZU-LX) 6.0 W (AIG-301-CN-AZU-LX/T-CN-AZU-LX) 8.4 W (AIG-301-US-AZU-LX/T-US-AZU-LX, AIG-301-EU-AZU-LX/T-EU-AZU-LX, AIG-301-AP-AZU-LX/T-AP-AZU-LX) |
| Input Current | 0.4 A @ 12 VDC (AIG-301-AZU-LX/T-AZU-LX) 0.5 A @ 12 VDC (AIG-301-CN-AZU-LX/T-CN-AZU-LX) 0.7 A @ 12 VDC (AIG-301-US-AZU-LX/T-US-AZU-LX, AIG-301-EU-AZU-LX/T-EU-AZU-LX, AIG-301-AP-AZU-LX/T-AP-AZU-LX) |

Reliability

| | |
|--------------------------|-------------------------------|
| Automatic Reboot Trigger | External WDT (watchdog timer) |
|--------------------------|-------------------------------|

Physical Characteristics

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|--------------|--|
| Housing | SECC Metal |
| Installation | DIN-rail mounting, Wall mounting (with optional kit) |
| IP Rating | IP30 |
| Dimensions | 141.5 x 120 x 27 mm (5.7 x 4.72 x 1.06 in) (AIG-301-AZU-LX/T-AZU-LX) 141.5 x 120 x 39 mm (5.7 x 4.72 x 1.54 in) (AIG-301-US-AZU-LX/T-US-AZU-LX, AIG-301-EU-AZU-LX/T-EU-AZU-LX, AIG-301-AP-AZU-LX/T-AP-AZU-LX, AIG-301-CN-AZU-LX/TCN-AZU-LX) |
| Weight | 560 g (1.23 lb) (AIG-301-AZU-LX/T-AZU-LX) 745 g (1.64 lb) (AIG-301-CN-AZU-LX/T-CN-AZU-LX) 750 g (1.65 lb) (AIG-301-US-AZU-LX/T-US-AZU-LX, AIG-301-EU-AZU-LX/T-EU-AZU-LX, AIG-301-AP-AZU-LX/T-AP-AZU-LX) |

Environmental Limits

| | |
|--|---|
| Ambient Relative Humidity | 5 to 95% (non-condensing) |
| Operating Temperature | Standard Temp. Models: -20 to 70°C (-4 to 158°F) (AIG-301-US-AZU-LX, AIG-301-EU-AZU-LX, AIG-301-AP-AZULX, AIG-301-CN-AZU-LX) -20 to 85°C (-4 to 185°F) (AIG-301-AZU-LX) Wide Temp. Models: -40 to 70°C (-40 to 158°F) (AIG-301-T-US-AZU-LX, AIG-301-T-EU-AZU-LX, AIG-301-T-AP-AZU-LX, AIG-301-T-CN-AZU-LX) -40 to 85°C (-40 to 185°F) (AIG-301-T-AZU-LX) |
| Storage Temperature (package included) | -40 to 85°C (-40 to 185°F) |
| 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) |

Standards and Certifications

| | |
|---------------------|--|
| Safety | UL 62368-1, EN 62368-1 |
| EMC | EN 55032/35, EN 61000-6-2/-6-4 |
| 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: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV |
| Green Product | RoHS, CRoHS, WEEE |
| Hazardous Locations | Class I Division 2, ATEX (AIG-301-T-US-AZU-LX, AIG-301-T-EU-AZU-LX, AIG-301-T-AP-AZU-LX, AIG-301-T-AZU-LX) |

MTBF

| | |
|-----------|--|
| Time | 683,818 hrs (AIG-301-US-AZU-LX/T-US-AZU-LX, AIG-301-EU-AZU-LX/T-EU-AZU-LX, AIG-301-AP-AZU-LX/T-AP-AZU-LX) 794,092 hrs (AIG-301-AZU-LX/T-AZU-LX) |
| Standards | Telcordia (Bellcore) Standard TR/SR |

Warranty

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

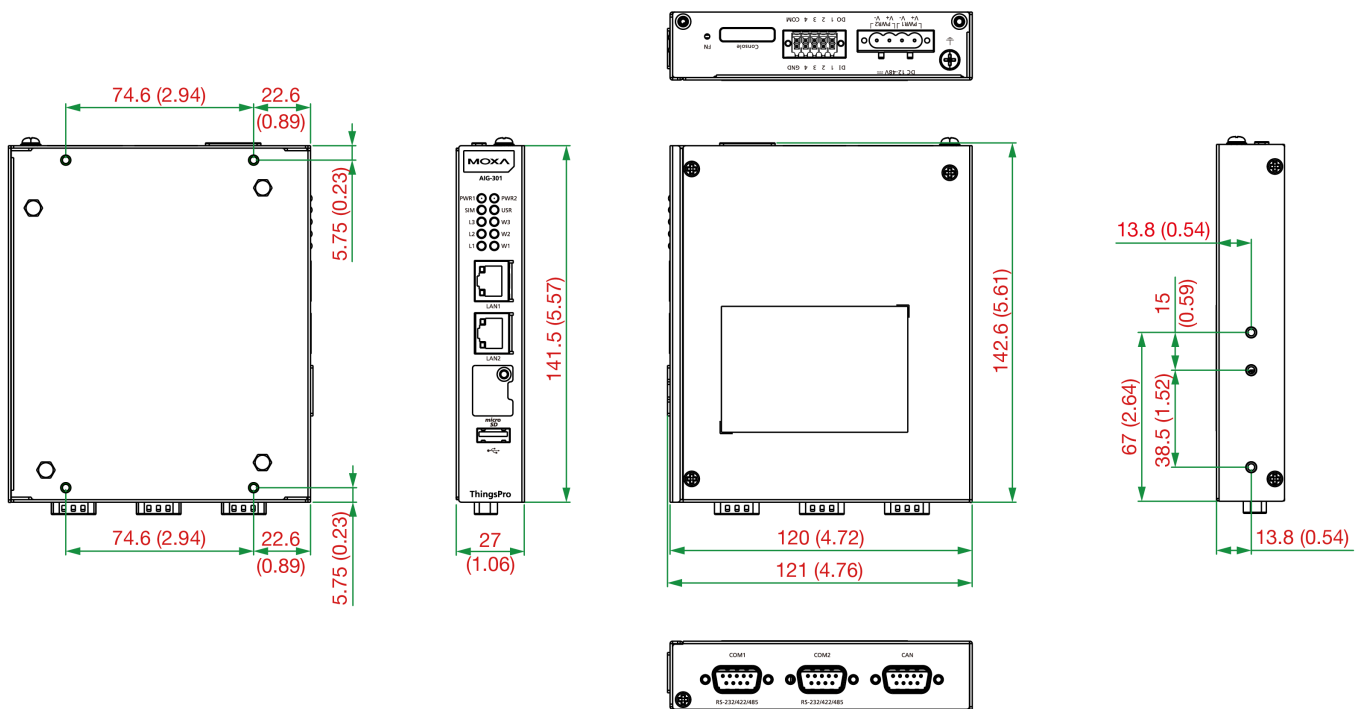
Package Contents

| | |
|------------------|---|
| Device | 1 x AIG-300 Series computer |
| Documentation | 1 x quick installation guide 1 x warranty card |
| Installation Kit | 1 x DIN-rail kit (preinstalled) 1 x power jack |

尺寸

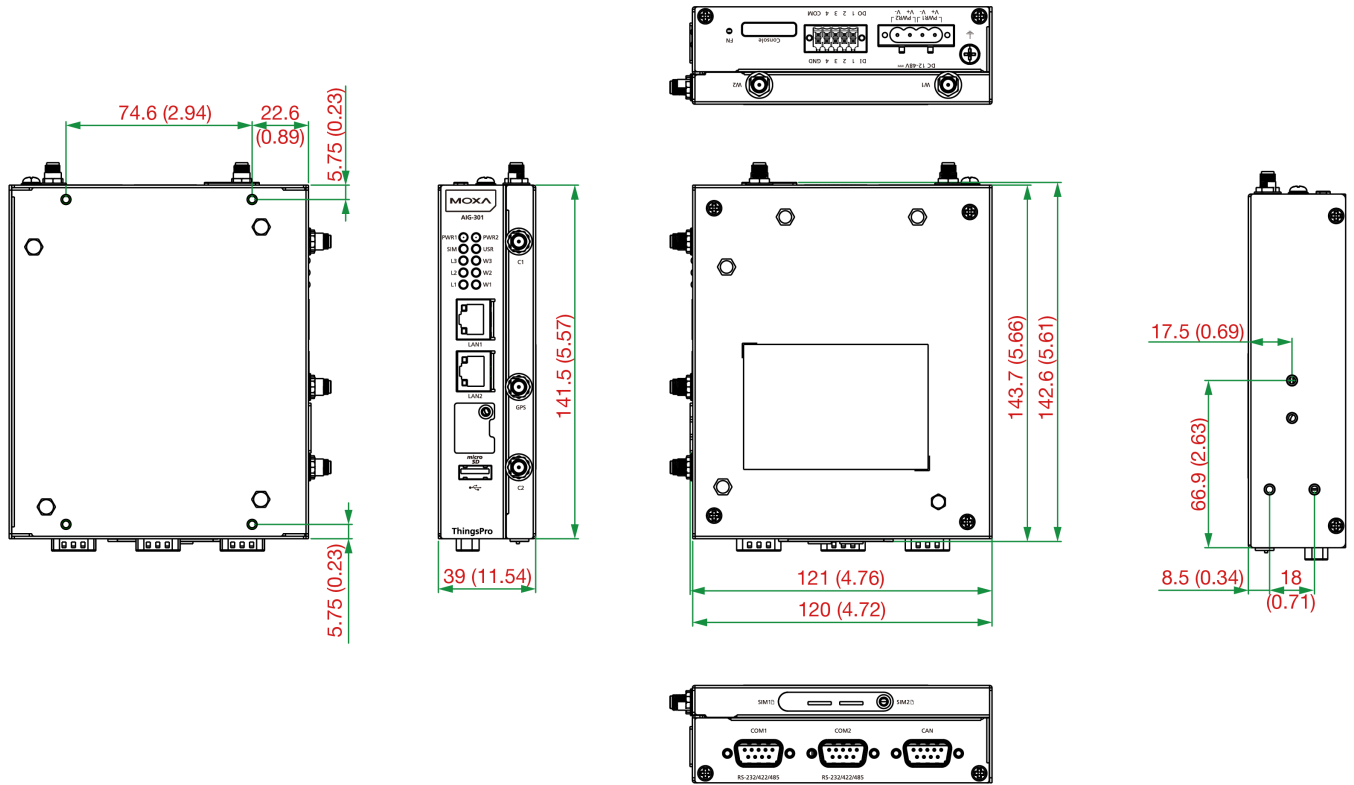
AIG-301-T-AZU-LX

單位：公釐 (英吋)



AIG-301 美國、歐盟、AP 和 CN 型號

單位：公釐（英吋）



訂購資訊

| Model Name | CPU | RAM | Storage | TPM | mPCIe Slot 1 for LTE Module | mPCIe Slot 2 for Wi-Fi Module | Operating Temperature |
|---------------------|-----------------|------|---------|----------|---------------------------------------|-------------------------------|-----------------------|
| AIG-301-AZU-LX | 1 GHz Dual Core | 2 GB | 16 GB | Built-in | - | - | -20 to 85°C |
| AIG-301-T-AZU-LX | 1 GHz Dual Core | 2 GB | 16 GB | Built-in | - | - | -40 to 85°C |
| AIG-301-CN-AZU-LX | 1 GHz Dual Core | 2 GB | 16 GB | Built-in | Reserved | Reserved | -20 to 70°C |
| AIG-301-T-CN-AZU-LX | 1 GHz Dual Core | 2 GB | 16 GB | Built-in | Reserved | Reserved | -40 to 70°C |
| AIG-301-US-AZU-LX | 1 GHz Dual Core | 2 GB | 16 GB | Built-in | US region LTE module preinstalled | Reserved | -20 to 70°C |
| AIG-301-T-US-AZU-LX | 1 GHz Dual Core | 2 GB | 16 GB | Built-in | US region LTE module preinstalled | Reserved | -40 to 70°C |
| AIG-301-EU-AZU-LX | 1 GHz Dual Core | 2 GB | 16 GB | Built-in | Europe region LTE module preinstalled | Reserved | -20 to 70°C |
| AIG-301-T-EU-AZU-LX | 1 GHz Dual Core | 2 GB | 16 GB | Built-in | Europe region LTE module preinstalled | Reserved | -40 to 70°C |
| AIG-301-AP-AZU-LX | 1 GHz Dual Core | 2 GB | 16 GB | Built-in | APAC region LTE module preinstalled | Reserved | -20 to 70°C |
| AIG-301-T-AP-AZU-LX | 1 GHz Dual Core | 2 GB | 16 GB | Built-in | APAC region LTE module preinstalled | Reserved | -40 to 70°C |

配件 (選購)

Power Wiring

| | |
|-----------------|--|
| CBL-PJTB-10 | Non-locking barrel plug to bare-wire cable |
| Mini DB9F-to-TB | DB9 female to terminal block connector |

Cables

| | |
|---------------------|---|
| CBL-F9DPF1x4-BK-100 | Console cable with 4-pin connector, 1 m |
|---------------------|---|

Wi-Fi Wireless Modules

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|-------------------|---|
| UC-8200-WLAN22-AC | Wireless package for UC-8200 V2.0 or later with Wi-Fi module, 2 screws, 2 spacers, 1 heat sink, 1 pad |
|-------------------|---|

Antennas

| | |
|---------------------------|--|
| ANT-LTEUS-ASM-01 | GSM/GPRS/EDGE/UMTS/HSPA/LTE, 1 dBi, omnidirectional rubber-duck antenna |
| ANT-LTE-ASM-04 BK | 704 to 960/1710 to 2620 MHz, LTE omnidirectional stick antenna, 4.5 dBi |
| ANT-LTE-OSM-03-3m BK | 700-2700 MHz, multiband antenna, specifically designed for 2G, 3G, and 4G applications, 3 m cable |
| 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 |
| ANT-WDB-ARM-0202 | 2 dBi at 2.4 GHz or 2 dBi at 5 GHz, RP-SMA (male), dual-band, omnidirectional antenna |
| ANT-GPS-OSM-03-3m BK | 3 dBi at 1575.42 MHz, SMA (male), omnidirectional magnetic-base passive GPS antenna, 3 m cable |
| ANT-GPS-CSM-03-3m | 3 dBi at 1575.42 MHz, SMA (male), directional passive GPS antenna, 3 m cable |
| ANT-GPS-OSM-05-3M | 26 dBi at 1575.42 MHz, SMA (male), omnidirectional active GPS antenna, 3 m cable |

Wall-Mounting Kits

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|---------------------------|--|
| UC-8200 Wall-mounting Kit | Wall-mounting kit for UC-8200 with 4 M3 screws |
|---------------------------|--|

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