

AIG-100 系列

2 埠 Modbus RTU/ASCII/TCP 轉 MQTT/Azure/AWS 雲端閘道器



特色與優點

- 支援通用 MQTT 用戶端
- 支援使用 Azure/AWS 雲端的內建裝置 SDK 進行的 MQTT 連接
- 支援 Modbus RTU/ASCII/TCP 主控裝置/用戶端
- 支援 Modbus TCP 伺服器
- 內建網路流量監控和診斷工具，便於故障排除
- 支援使用儲存轉發和數據記錄器的數據緩衝
- 與 Moxa ioLogik /UPort 裝置緊密整合，輕鬆擴充 I/O 和序列介面
- 內建數據處理功能，不需要進行程式設計
- -40°C 至 70°C 操作溫度範圍
- 提供 LTE Cat.1 美國、歐盟和亞太地區型號

認證



簡介

AIG-100 系列閘道器是入門級 IIoT 閘道器，可將 Modbus RTU/ASCII/TCP 裝置連接到雲端平台和應用程式，例如 Azure、AWS 和 MQTT。做為 Modbus 主站的 AIG-100 可以將現有的 Modbus 裝置與雲端平台整合，輕鬆收集數據並將數據傳輸到 Azure 和 AWS 雲端。此外，閘道器也支援 Modbus TCP 從站模式，能夠同時將數據傳輸到雲端平台和本地 SCADA 系統。

I/O 和序列介面的輕鬆擴充

隨著工業現場數量的增加，需要額外的 I/O 或序列介面來連接感測器、儀錶和逆變器等裝置，才能收集和處理產生的大量數據。一般的做法是安裝遠端 I/O 和裝置伺服器來擴充介面，不過所需的配置設定對於大多數使用者來說可能是一場噩夢。為了提供極為簡單的介面擴充配置過程，AIG-100 閘道器達到更好的整合度，並提供直覺式精靈，只需要按幾下即可設定 Moxa ioLogik 和 UPort。

內建即用型數據預先處理功能，不需要編碼

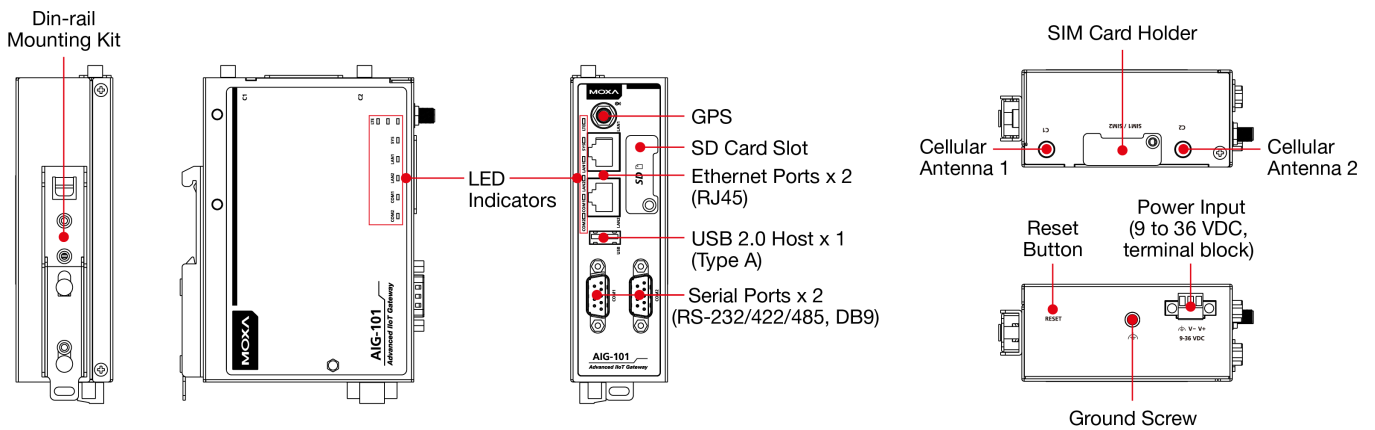
能源管理系統主要收集平均發電量、能效等能源數據。這些數據隨後用於顯示現場情況、觀察能源趨勢並達到最佳的能源使用。大多數邊緣系統需要額外的程式設計來處理能源管理系統所需的數據。AIG-100 可以預先處理邊緣數據並將有意義的數據直接傳送到能源管理系統。直覺式 UI 可輕鬆配置 IIoT 閘道器設定以收集和處理數據。

安全遠端存取降低維護成本

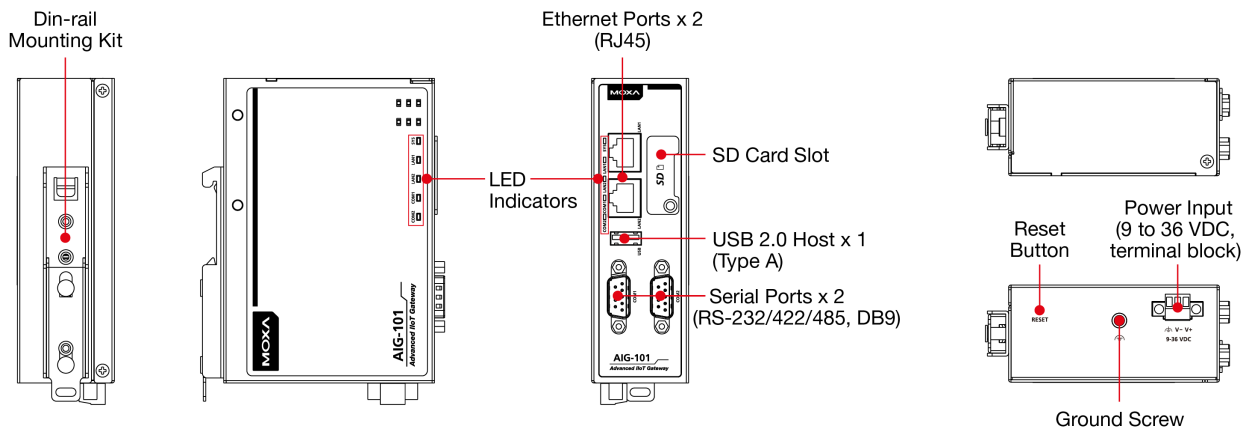
AIG-100 配備強大的故障排除工具，可診斷通訊協定狀態問題並擷取和分析流量封包，以便工程師能夠遠端確定問題的根本原因並快速復正常運作。這些工具也提供對 AIG-100 的安全遠端存取，以便維護工程師能夠直接存取，因此節省大量時間和精力，並縮短能源管理系統的系統停機時間。

外觀

AIG-101-T-AP/EU/US



AIG-101-T



規格

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	2, Auto MDI/MDI-X connection
Magnetic Isolation Protection	1.5 kV (built-in)

Ethernet Software Features

Industrial Protocols	Modbus TCP Client (Master) / Server (Slave) Generic MQTT Azure IoT Device AWS IoT Core
Configuration Options	Web Console (HTTP/HTTPS)
Time Management	NTP Client GPS

Serial Interface

No. of Ports	2
Connector	DB9 male
Serial Standards	RS-232/422/485
Baudrate	300 bps to 921.6 kbps

Data Bits	7, 8
Parity	None, Even, Odd, Space, Mark
Stop Bits	1, 2
Flow Control	RTS/CTS

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

Cellular Interface

Cellular Standards	LTE Cat. 1
Cellular Antenna Connectors	SMA x 2
SIM Format	Nano SIM
No. of SIMs	2
GPS Antenna Connectors	SMA x 1
Band Options	<p>US Model: 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</p> <p>EU Model: LTE Bands: Band 1 (2100 MHz) / Band 3 (1800 MHz) / Band 7 (2600 MHz) / Band 8 (900 MHz) / Band 20 (800 MHz) / Band 28 (700 MHz) UMTS Bands: Band 1 (2100 MHz) / Band 3 (1800 MHz) / Band 8 (900 MHz)</p> <p>AP Model: LTE Bands: Band 1 (2100 MHz) / Band 3 (1800 MHz) / Band 5 (850 MHz) / Band 8 (900 MHz) / Band 28 (700 MHz) UMTS Bands: Band 1 (2100 MHz) / Band 5 (850 MHz) / Band 8 (900 MHz)</p>

Serial Software Features

Industrial Protocols	Modbus RTU/ASCII Master
----------------------	-------------------------

Modbus RTU/ASCII

Mode	Master
Functions Supported	1, 2, 3, 4, 5, 6, 15, 16, 23
Max. No. of Commands	256 per port

Modbus TCP

Mode	Server (Slave) Client (Master)
Functions Supported	1, 2, 3, 4, 5, 6, 15, 16, 23
Max. No. of Client Connections	4

Max. No. of Server Connections	64
Max. No. of Commands	1500
Generic MQTT Client	
Versions Supported	v3.1.1 v3.1
QoS Levels	0, 1, 2
Authentication Methods	Username and password
Secure Transmission	TLS 1.0 TLS 1.1 TLS 1.2
Native Capabilities	Keep Alive Retain Message Clean Session Will and Testament
Moxa Functions	Store and Forward Custom Payload Remote API Invocation
Azure IoT Device	
Connection Protocols Supported	MQTT MQTT over WebSockets AMQP AMQP over WebSockets
Authentication Methods	Symmetric Key X.509 Certificate
Azure Direct Methods	Reboot Software Upgrade Remote API Invocation
Moxa Functions	Store and Forward Custom Payload
AWS IoT Core	
QoS Levels	0,1
Authentication Methods	X.509 Certificate Private Key Trusted Root CA
Native Capabilities	Keep Alive
Moxa Functions	Store and Forward Custom Payload
Commands Invokable Via Jobs	Reboot Software Upgrade Remote API Invocation
Memory	
microSD Slot	Up to 32 GB (SD 2.0 compatible) Max. No. of Tags Supported: 1500
Power Parameters	
Input Voltage	9 to 36 VDC
Power Connector	Screw-fastened Euroblock terminal

Physical Characteristics

Dimensions	128.5 x 89.1 x 41 mm (5.06 x 3.51 x 1.61 in)
Housing	Metal
Installation	DIN-rail mounting Wall mounting (with optional kit)
Weight	AIG-101-T: 492 g (1.08 lb) AIG-101-T-AP/EU/US: 512 g (1.13 lb)

Environmental Limits

Ambient Relative Humidity	5 to 95% (non-condensing)
Operating Temperature	-40 to 70°C (-40 to 158°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)

Standards and Certifications

EMC	EN 55032/35
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 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Safety	IEC 62368-1 UL 62368-1 EN 62368-1
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-64 5 Grms @ 5 to 500 Hz, random wave, 1 hr per axis (without USB devices attached)
Cellular Standards	EN 303 413 (GPS) EN 301 908-1 (WCDMA/LTE) EN 301 908-2/-13 (WCDMA/LTE) EN 301 489-1/-19 EN 301 489-1/-52 EN 62311
Radio Frequency	FCC PTCRB RCM
Carrier Approvals	Verizon AT&T Note: Approval pending from AT&T.
Green Product	RoHS, CRoHS, WEEE

MTBF

Time	566,458 hrs
Standards	Telcordia SR332

Warranty

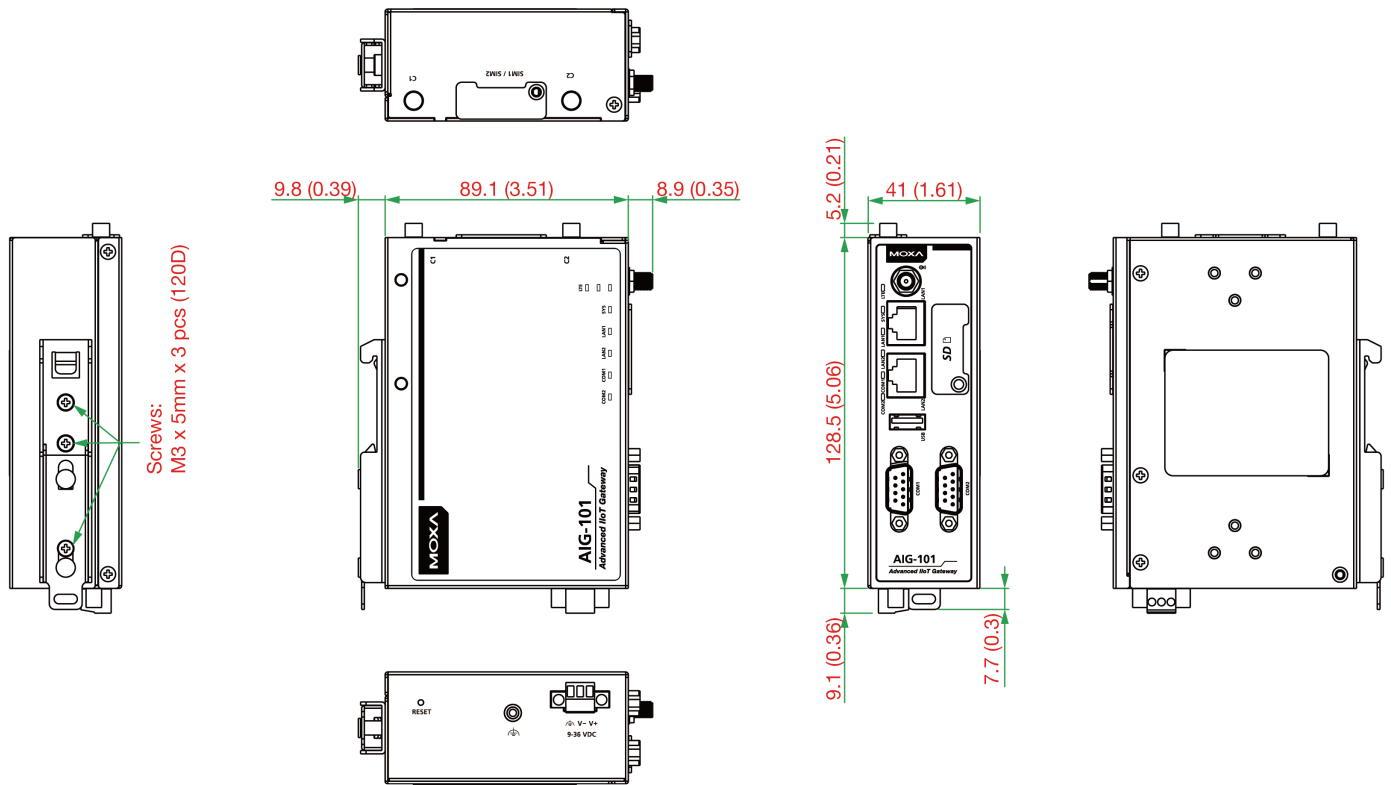
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x AIG-100 Series gateway
Cable	1 x terminal block to power jack converter
Installation Kit	1 x DIN-rail kit
Documentation	1 x quick installation guide 1 x warranty card

尺寸

單位：公釐 (英吋)



訂購資訊

Model Name	LTE	Band
AIG-101-T	-	-
AIG-101-T-AP	Cat. 1	AP
AIG-101-T-EU	Cat. 1	EU
AIG-101-T-US	Cat. 1	US

配件 (選購)

Power Adapters

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

Antennas

ANT-LTE-ASM-02	GPRS/EDGE/UMTS/HSPA/LTE, 2 dBi, omnidirectional rubber-duck antenna
ANT-LTEUS-ASM-01	GSM/GPRS/EDGE/UMTS/HSPA/LTE, 1 dBi, omnidirectional rubber-duck antenna

© Moxa Inc. 版權所有.2022 年 11 月 22 日更新。

未經 Moxa Inc. 明確書面許可，不得以任何方式複製或使用本文件及其任何部分。產品規格如有變更，恕不另行通知。請至本公司官網了解最新的產品資訊。