

OnCell G4302-LTE4 系列

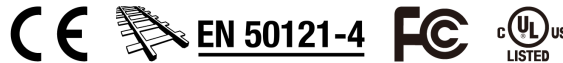
2 埠工業 LTE Cat.4 個安全蜂巢式網路路由器



特色與優點

- 整合式 LTE Cat.4 模組，支援 US/EU/APAC 頻帶
- 附雙 SIM 卡 GuaranLink 支援的蜂巢式網路連結備援
- 支援蜂巢式網路和乙太網路之間的 WAN 備援
- 支援 MRC Quick Link Ultra，可集中監控及遠端存取現場裝置
- 使用 MXsecurity 管理軟體可視化 OT 安全
- 支援電源管理功能，可進行喚醒時間排程或數位輸入信號，適用於車輛點火系統
- 透過深度封包檢測 (DPI) 技術，檢查工業通訊協定資料
- 根據 IEC 62443-4-2 開發，具有安全啟動功能
- 堅固精巧設計，適用於惡劣環境

認證



簡介

OnCell G4302-LTE4 系列是一款可靠且功能強大的安全蜂巢式網路路由器，具備全球 LTE 涵蓋範圍。這款路由器提供從串列和乙太網路到蜂巢式網路介面的可靠資料傳輸，可輕鬆整合到傳統和現代應用中。蜂巢式網路和乙太網路介面之間的 WAN 備援保證了最短的停機時間，同時也提供了額外的靈活性。為了增強蜂巢式網路連線的可靠性和可用性，OnCell G4302-LTE4 系列採用雙 SIM 卡的 GuaranLink。此外，OnCell G4302-LTE4 系列還具有雙電源輸入、高等級 EMS 和寬範圍操作溫度，適合在苛刻的環境中部署。透過電源管理功能，網管人員可以設定排程來完全控制 OnCell G4302-LTE4 系列的功率使用量，並最大限度地減少閒置時的功耗，來節省成本。

OnCell G4302-LTE4 系列專為堅固耐用的安全性而設計，支援安全啟動以確保系統完整性、多層防火牆原則（用於管理網路存取和流量篩選）以及 VPN（用於安全遠端通訊）。OnCell G4302-LTE4 系列符合國際公認的 IEC 62443-4-2 標準，可輕鬆將這些安全蜂巢式網路路由器整合到 OT 網路安全系統中。

高度整合的工業級蜂巢式網路路由器

- 支援全球蜂巢式網路頻段，包括美國、澳洲、歐洲、亞洲和日本
- 具備網管型 Layer 2 交換器功能的 2 個 Gigabit 連接埠
- 支援具備三合一 RS232/422/485 連接埠的串列裝置
- 支援 MRC Quick Link Ultra，可遠端存取，且容易設定。如需詳細資訊，請造訪「安全遠端存取」(<https://www.moxa.com/en/products/industrial-network-infrastructure/secure-remote-access/moxa-remote-connect-suite>)。
- 支援 MXsecurity 和 MXview One 用於分散式系統和本機站點管理

利用進階的網路安全功能防禦惡意威脅

- 安全啟動可確保系統完整性並防止篡改攻擊
- VPN 功能可實現安全且加密的資料通訊
- 防火牆原則可保護內部網路免受未經授權的存取和 DoS 攻擊
- 網路位址轉譯 (NAT) 在可信和不可信網路之間提供 IP 隱私
- 深度封包檢測 (DPI) 功能，針對多種 OT 專用協議檢查網路封包的數據部分
- 基於 IEC 62443-4-2 的網路安全功能

工業級可靠性

- 電源備援的雙電源輸入
- GuaranLink 和雙 SIM 卡支援可靠的蜂巢式網路連線
- -30 至 70°C 寬範圍操作溫度

- 堅固耐用的硬體設計，適合危險場所和各種工業應用

MX-ROS 因應日益增長的網路安全威脅

Moxa 的 MX-ROS (<https://www.moxa.com/en/spotlight/portfolio/mx-ros/index>) 是用於工業級安全路由器和防火牆的軟體平台。這個平台透過簡化的 Web 和 CLI 介面支援安全路由器堅固耐用的安全性和易於使用的操作。除了遵守 IEC 62443-4-2 之外，MX-ROS 裝置還為每個版本提供了大量最新的跨界營運技術 (OT) 網路管理功能，保護硬體和軟體。

規格

Cellular Interface

Cellular Standards	LTE CAT 4, HSPA, UMTS, EDGE, GPRS, GSM
LTE Data Rate	20 MHz bandwidth: 150 Mbps DL, 50 Mbps UL
Band Options (EU)	-EU(-T) models: LTE B1 (2100 MHz) / B3 (1800 MHz) / B7 (2600 MHz) / B8 (900 MHz) / B20 (800 MHz) / B28 (700 MHz) UMTS/HSPA B1 (2100 MHz) / B8 (900 MHz) GSM/GPRS/EDGE 900 MHz / 1800 MHz
Band Options (AU)	-AU(-T) models: LTE B1 (2100 MHz) / B3 (1800 MHz) / B5 (850 MHz) / B7 (2600 MHz) / B8 (900 MHz) / B28 (700 MHz) UMTS/HSPA B1 (2100 MHz) / B5 (850 MHz) / B8 (900 MHz) GSM/GPRS/EDGE 900 MHz / 1800 MHz
Band Options (US)	-US(-T) models: LTE B2 (1900 MHz) / B4 (1700/2100 MHz (AWS)) / B5 (850 MHz) / B12 (700 MHz) / B13 (700 MHz) / B14 (700 MHz) / B66 (1700 MHz) / B25 (1900 MHz) / B26 (850 MHz) / B71 (600 MHz) UMTS/HSPA B2 (1900 MHz) / B4 (1700 MHz (AWS)) / B5 (850 MHz)
Band Options (JP)	-JP(-T) models: LTE B1 (2100 MHz) / B3 (1800 MHz) / B8 (900 MHz) / B11 (1500 MHz) / B18 (800 MHz) / B19 (800 MHz) / B21 (1500 MHz) UMTS/HSPA B1 (2100 MHz) / B19 (800 MHz)
No. of SIMs	2 Push-eject tray type
SIM Format	Nano SIM
Cellular Antenna Connectors	2 SMA female

Ethernet Interface

10/100/1000BaseT(X) Ports (RJ45 connector)	2
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GNSS Interface

GNSS Bands	GPS (1575.42 MHz) GLONASS (1597.52 MHz) Galileo (1575.42 MHz) BeiDou (1561.098 MHz)
GNSS Antenna Connectors	1 SMA female

Input/Output Interface

Digital Output Channels	1 Relay output with current carrying capacity of 1 A @ 24 VDC
Digital Input Channels	1
Digital Inputs	-30 to +3 V for state 0 +13 to +30 V for state 1
Buttons	Reset button

USB Interface

No. of USB Ports	1
USB Connector	USB Type A
USB Standards	USB 2.0

Serial Interface

No. of Ports	1
Connector	DB9 male
Serial Standards	RS-232/422/485
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None Even Odd
Baudrate	300 bps to 921.6 kbps
Console Port	RS-232 (TxD, RxD, GND), USB type-C (115200, n, 8, 1) ¹

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

Operation Modes

Standards	Real COM mode RFC2217 mode TCP Client mode TCP Server mode UDP mode
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LED Interface

LED Indicators	PWR1, PWR2, STATE, USB, SIM1, SIM2, CELL, LTE, GNSS, SERIAL, VPN
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Ethernet Software Features

Management	GuaranLink Power Management Back Pressure Flow Control LLDP Syslog Wireless Search Utility MXview One MXconfig MXsecurity Moxa Remote Connect (MRC)
Broadcast Forwarding	IP directed broadcast, broadcast forwarding
Configuration Options	Serial Console ¹ Web Console (HTTP/HTTPS) Command Line Interface (CLI) through Serial/Telnet/SSH

1. 我們建議使用可另行購買的 Moxa CBL-USBCF9-GY-150 主控台纜線。

Network Protocols	DDNS DHCP Server/Client SMTP SNMPv1/v2c/v3 ARP Telnet TCP/IP UDP Remote SMS Control
Filter	802.1Q VLAN Port-based VLAN
Unicast Routing	Static Route
Multicast Routing	Static Route
Routing Redundancy	VRRP
Time Management	NTP Server/Client SNTP

Security Functions

Hardware-based Security	Secure Boot
Password	User-level password protection
Authentication	Local database RADIUS Access Control List

Firewall

Filter	DDoS Ethernet protocols ICMP IP address MAC address Ports
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NAT

Features	1-to-1 N-to-1 PAT NAT loopback Double NAT
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IPsec VPN

Authentication	MD5 and SHA (SHA-256) RSA (key size: 1024-bit, 2048-bit) Pre-shared Key or X.509 v3 certificate
Encryption	DES 3DES AES-128 AES-192 AES-256
Concurrent VPN Tunnels	Max. 15 IPsec VPN tunnels
Protocols	IPsec

Power Parameters

Input Current	0.96 A @ 12 VDC (max.) 0.63 A @ 12 VDC (average) 0.33 A @ 24 VDC (average) 0.18 A @ 48 VDC (average)
Input Voltage	12 to 48 VDC
Power Consumption	7.6 W (typ.) 11.52 W (max.)
Power Connector	Screw-locked terminal block
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
Dimensions	125 x 46.2 x 100 mm (4.92 x 1.82 x 3.94 in)
Weight	610 g (1.34 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)
IP Rating	IP40 ²

Environmental Limits

Operating Temperature	Standard Models: -10 to 55°C (14 to 131°F) Wide Temp. Models: -30 to 70°C (-22 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 55032/35 EN 61000-6-2/-6-4
EMI	CISPR 22, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV, Signal: 2 kV IEC 61000-4-6 CS: 10 V; 150 kHz to 80 MHz IEC 61000-4-8: 30 A/m
Freefall	IEC 60068-2-32
Hazardous Locations	IECEX ³ ATEX ³ Class I Division 2 ³
Railway	EN 50121-4
Traffic Control	NEMA TS2
Road Vehicles	E mark E1
Radio Frequency	FCC PTCRB EN 303 413

2. 橡膠 SIM 插槽蓋已蓋上的情況。
3. 支援 1.1.0 版及更高版本的硬體

Radio	NCC TELEC RCM KC ICID UKCA Anatel
Carrier Approvals	Verizon AT&T
Cellular Standards	EN 301 489-1/-19 EN 301 489-1/-52 EN 301511 EN 301908-1/-2/-13
Safety	UL 62368-1 EN 62368-1
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6

MTBF

Time	-AU(-T) models: 518,722 hrs -EU(-T) models: 518,722 hrs -JP(-T) models: 522,186 hrs -US(-T) models: 521,746 hrs
Standards	Telcordia SR332

Warranty

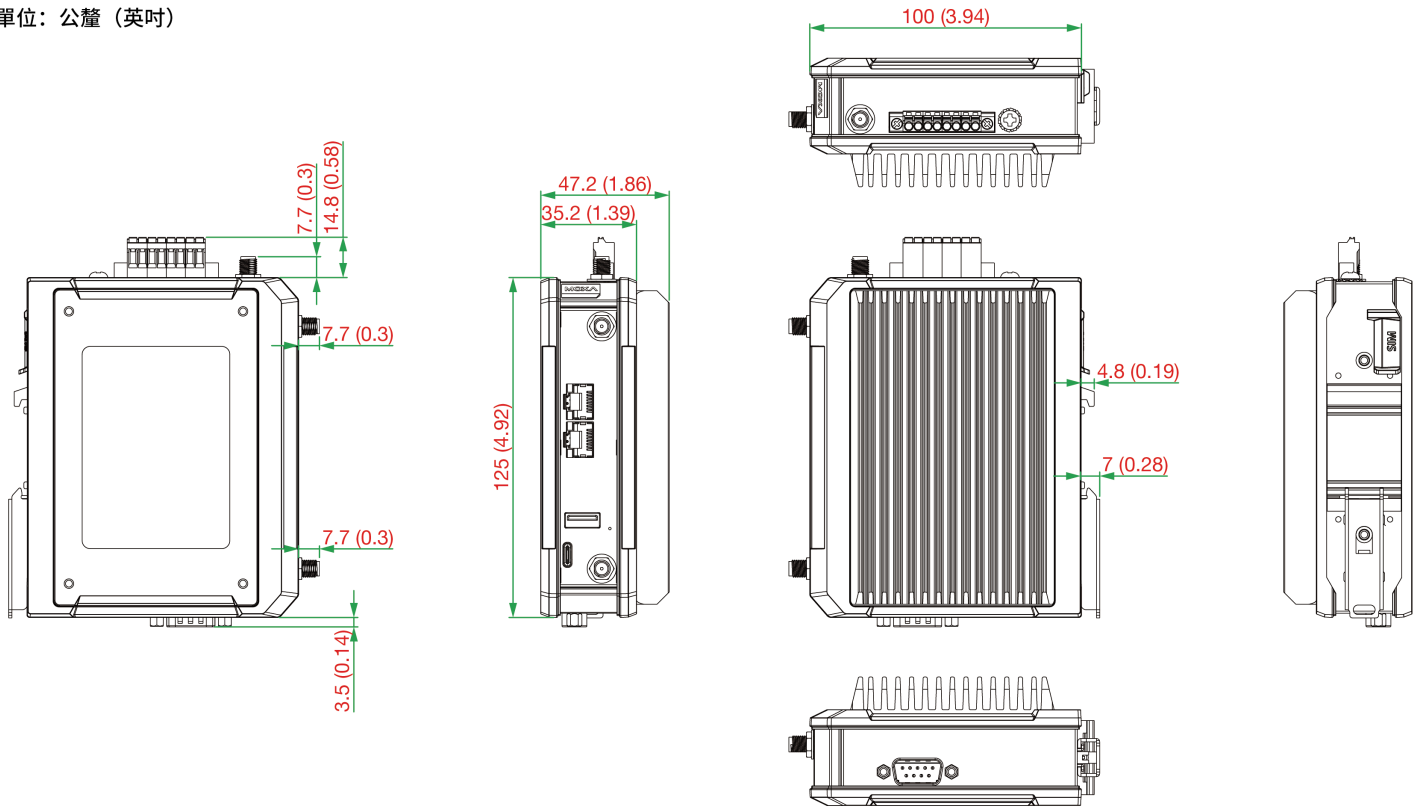
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x OnCell G4302-LTE4 Series secure cellular router
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	Operating Temp.
OnCell G4302-LTE4-EU	B1 (2100 MHz) / B3 (1800 MHz) / B7 (2600 MHz) / B8 (900 MHz) / B20 (800 MHz) / B28 (700 MHz)	-10 to 55°C
OnCell G4302-LTE4-EU-T	B1 (2100 MHz) / B3 (1800 MHz) / B7 (2600 MHz) / B8 (900 MHz) / B20 (800 MHz) / B28 (700 MHz)	-30 to 70°C
OnCell G4302-LTE4-AU	B1 (2100 MHz) / B3 (1800 MHz) / B5 (850 MHz) / B7 (2600 MHz) / B8 (900 MHz) / B28 (700 MHz)	-10 to 55°C
OnCell G4302-LTE4-AU-T	B1 (2100 MHz) / B3 (1800 MHz) / B5 (850 MHz) / B7 (2600 MHz) / B8 (900 MHz) / B28 (700 MHz)	-30 to 70°C
OnCell G4302-LTE4-US	B2 (1900 MHz) / B4 (1700/2100 MHz (AWS)) / B5 (850 MHz) / B12 (700 MHz) / B13 (700 MHz) / B14 (700 MHz) / B66 (1700 MHz) / B25 (1900 MHz) / B26 (850 MHz) / B71 (600 MHz)	-10 to 55°C
OnCell G4302-LTE4-US-T	B2 (1900 MHz) / B4 (1700/2100 MHz (AWS)) / B5 (850 MHz) / B12 (700 MHz) / B13 (700 MHz) / B14 (700 MHz) / B66 (1700 MHz) / B25 (1900 MHz) / B26 (850 MHz) / B71 (600 MHz)	-30 to 70°C
OnCell G4302-LTE4-JP	B1 (2100 MHz) / B3 (1800 MHz) / B8 (900 MHz) / B11 (1500 MHz) / B18 (800 MHz) / B19 (800 MHz) / B21 (1500 MHz)	-10 to 55°C
OnCell G4302-LTE4-JP-T	B1 (2100 MHz) / B3 (1800 MHz) / B8 (900 MHz) / B11 (1500 MHz) / B18 (800 MHz) / B19 (800 MHz) / B21 (1500 MHz)	-30 to 70°C

配件 (選購)

Antennas

ANT-5G-ASM-03	3 dBi GSM/UMTS/LTE/5G NR dipole antenna with SMA (male) connector
MAT-5G-PA-SM-2-06-3m	6 dBi MIMO panel antenna with 2 SMA (male) connectors for cellular applications, 3 m cable

MAT-5G-PA-SM-3-06-3m	6 dBi MIMO panel antenna with 3 SMA (male) connectors for cellular and GNSS applications, 3 m cable
ANT-GNSS-CSM-02-3m	2 dBic GNSS antenna with SMA (male) connector, 3 m cable

Wireless Antenna Cables

A-CRF-SMSF-R3-100	Wireless antenna cable with SMA (male) to SMA (female) connectors, magnetic base, RG-174 type, 1 m
A-CRF-SMSF-L1-300	Wireless antenna cable with SMA (male) to SMA (female) connectors, magnetic base, LMR195 type, 3 m
A-CRF-SMSF-C2-300	Wireless antenna cable with SMA (male) to SMA (female) connectors, CFD-200 type, 3 m
A-CRF-SMSF-C2-500	Wireless antenna cable with SMA (male) to SMA (female) connectors, CFD-200 type, 5 m

Mounting Kits

WK-41-01	Wall-mounting kit with 1 plate (41 x 144 x 7.5 mm)
WK-160-01	Wall-mounting kit with 1 plate (160 x 89 x 2.0 mm), 4 screws, black

Software

LIC-MXviewOne-NEW-XN-SR	MXview One node license with customizable node quantity (minimum 1 node)
LIC-MXsecurity-NEW-1Y-XN-SR	1-year MXsecurity license with customizable node quantity (minimum 1 node)
LIC-MRCQL-ADD-1Y-XN-SR	1-year MRC Quick Link add-on license with customizable node quantity (minimum 1 node)

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