

OnCell G4302-LTE4 系列

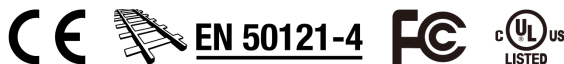
2 埠工業 LTE Cat. 4 安全行動通訊網路路由器



特色與優點

- 整合式 LTE Cat. 4 模組，支援 US/EU/APAC 頻帶
- 行動通訊網路連結備援功能，支援雙 SIM GuaranLink
- 支援行動通訊網路與乙太網路之間的 WAN 備援
- 支援適用於 SCATS (雪梨協調式自適應交通系統) 的串列 TSC (交通訊號控制器) 通訊
- 透過 MXsecurity 管理軟體視覺化 OT 安全性
- 電源管理支援喚醒時間排程或數位輸入訊號，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
- 堅固輕巧設計，適用於惡劣環境

認證



簡介

OnCell G4302-LTE4 系列是涵蓋全球 LTE 範圍的可靠及強大安全行動通訊網路路由器。此路由器提供從序列與乙太網路至行動通訊網路介面的可靠資料傳輸，可輕鬆整合到傳統及現代應用。行動通訊網路與乙太網路介面之間的 WAN 備援可保證最短停機時間，同時也能夠提供額外的靈活性。未提升行動通訊網路連接可靠性與可用性，OnCell G4302-LTE4 系列具備雙 SIM 卡 GuaranLink。此外，OnCell G4302-LTE4 系列還具有雙電源輸入、高層級 EMS 及寬操作溫度，可在嚴苛環境下部署。透過電源管理功能，管理員可以設定排程以完整控制 OnCell G4302-LTE4 系列的電源使用，並於待機時減少電源耗用以節省成本。

專為強固的安全性所設計，OnCell G4302-LTE4 系列支援安全開機以確保系統完整性、管理網路存取及流量篩選的多層防火牆政策，以及適用於安全遠端通訊的 VPN，使其非常容易將這些安全行動通訊網路路由器整合到 OT 網路安全系統。

高度整合工業行動通訊網路路由器

- 支援全球行動通訊網路頻段包括美洲、澳洲、歐洲、亞洲及日本
- 含網管型 Layer2 交換器功能的 2 個 Gigabit 連接埠
- 支援具有 3 合 1 RS232/422/485 連接埠的串列裝置
- 支援適用於遠端存取的 MRC Quick Link Ultra，非常容易設定。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>)。
- 支援適用於分散式系統與本機站台管理的 Mxsecurity 與 MXviewOne

使用進階網路安全功能防禦惡意威脅

- 安全開機功能可確保系統完整性並有效防範竄改攻擊
- VPN 功能適用於安全及加密資料通訊
- 防火牆政策可保護內部網路免受未經授權的存取及 DoS 攻擊
- 網路位址轉譯 (NAT) 提供信任及不受信任網路之間的 IP 隱私
- 深度封包檢測 (DPI) 可檢查網路封包的資料中是否含有各種不同的 OT 專屬通訊協定

工業級可靠性

- 電源備援的雙電源輸入
- GuaranLink 與雙 SIM 卡支援可實現可靠的行動通訊網路連接
- -30 至 70°C 寬範圍操作溫度
- 堅固硬體設計，適用於危險位置及各種工業應用

MX-ROS可解決不斷增加的網路安全威脅

Moxa 的 MX-ROS 是工業安全路由器與防火牆的軟體平台。該平台透過簡化的網頁與 CLI 介面，支援強固的安全性與易於操作的安全路由器。MX-ROS 裝置透過每次版本更新，提供豐富的跨產業操作技術 (OT) 網路管理功能，全面防護您的硬體與軟體資產。

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 ¹

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) ²

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 SCATS
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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 MXview One MXconfig MXsecurity Moxa Remote Connect (MRC) Remote SMS Control
Broadcast Forwarding	IP directed broadcast, broadcast forwarding
Configuration Options	Serial Console ² Web Console (HTTP/HTTPS) Command Line Interface (CLI) through Serial/Telnet/SSH

1. 供 ABC-02 使用。
2. 我們建議使用 Moxa CBL-USBCF9-GY-150 主控台纜線，可單獨購買。

Network Protocols	DDNS DHCP Server/Client SMTP SNMPv1/v2c/v3 ARP Telnet TCP/IP UDP
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 DPI 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

OpenVPN

OpenVPN	OpenVPN (client)
Encryption	AES-128/192/256 CBC AES-128/192/256 GCM CHACHA20-POLY1305

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	170 mW (idle) 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 ³

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 kHz to 150 MHz; Signal: 80 V IEC 61000-4-8: 30 A/m
Freefall	IEC 60068-2-32
Hazardous Locations	IECEX ⁴ ATEX ⁴ Class I Division 2 ⁴
Railway	EN 50121-4

3. 關閉橡膠 SIM 卡插槽蓋。
4. 支援硬體修訂版 1.1.0 及以上

Traffic Control	NEMA TS2
Road Vehicles	E mark E1
Radio Frequency	FCC ID N7NWP76B PTCRB EN 303 413
Radio	NCC: CCAH234G0310T1 TELEC: R 003-190014/T D190010003 RCM KC: R-R-MXA-OnCell-G4302 IC: 2417C-WP76B UKCA
Carrier Approvals	Verizon AT&T
Cellular Standards	EN 301 489-1/-19 (GPS) EN 301 489-1/-52 (WCDMA/LTE) EN 301 511 EN 301908-1/-2/-13
Cybersecurity	EN 18031-1
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 Standard SR-332

Warranty

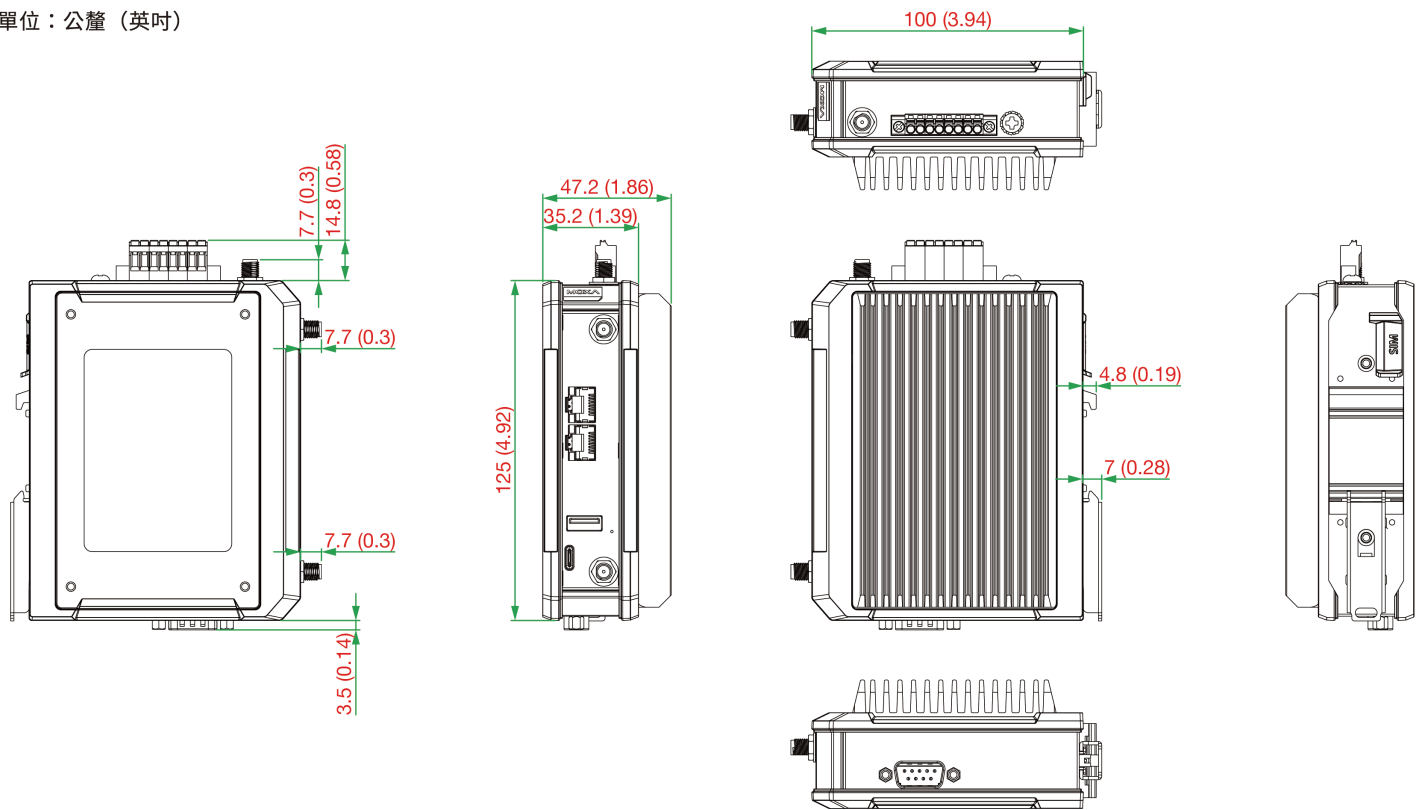
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

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) / B25 (1900 MHz) / B26 (850 MHz) / B66 (1700 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) / B25 (1900 MHz) / B26 (850 MHz) / B66 (1700 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）

Storage Kits

ABC-02-USB

Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, 0 to 60°C operating temperature

ABC-02-USB-T	Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, -40 to 75°C operating temperature
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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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