

OnCell G4302-LTE4 系列

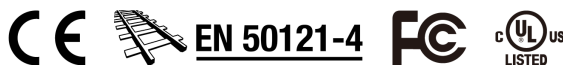
2 埠工業 LTE Cat.4 安全蜂巢式網路路由器



特色與優點

- 蜂巢式網路路由器/交換器/防火牆一體式解決方案
- 雙 SIM 卡故障切換與自動連線恢復，確保可靠的蜂巢式網路連線
- 具備防火牆與深度封包檢測 (DPI) 功能的工業網路防護能力
- 支援安全啟動以檢查系統完整性
- 透過 Moxa 遠端連線 (MRC) 進行集中監控與遠端存取

認證



簡介

OnCell G4302-LTE4 系列為一體式工業級蜂巢式路由器，整合了 2 埠高效能交換器、防火牆與 LTE Cat.4 連線功能，可簡化部署與維護工作。OnCell G4302-LTE4 系列已通過車載系統 (E-Mark)、ITS 基礎設施 (NEMA TS2) 以及石油和天然氣環境 (IECEX、ATEX、CID2) 認證，是挑戰性高且在嚴格規範領域中部署的理想選擇。專為關鍵工業應用設計，作為無線骨幹網路使用，提供穩定的串列/乙太網路轉蜂巢式網路連線，並透過雙 SIM 卡故障切換與 GuaranLink 蜂巢式網路自動恢復功能，確保最佳可靠性。

OnCell G4302-LTE4 系列可保護組織免受多方面威脅。從設計之初便將安全性納入核心考量，安全啟動功能可確保軟體完整性，具備 OT 協定感知功能的進階防火牆則可保護網路免受內部與外部威脅。同時，深度封包檢測 (DPI) 功能可偵測並封鎖偽造或惡意的封包。這些功能相輔相成，為關鍵營運提供全方位、多層級的安全保護。

透過 MRC Quick Link Ultra，操作員可獲得對 OnCell 路由器及其連接端點裝置的完整可視性與安全的遠端控制，進而縮短故障排除時間、大幅縮短停機時間，並提升工業營運的可靠性。

規格

Cellular Interface

Cellular Standards	LTE CAT 4, HSPA, UMTS, EDGE, GPRS, GSM
Data Rate	20 MHz bandwidth: 150 Mbps DL, 50 Mbps UL
Frequency Bands Supported	-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 -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 -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) -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 x SMA female

Ethernet Interface

10/100/1000BaseT(X) Ports (RJ45 connector)	2
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X)

GNSS Interface

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

1. 與 ABC-02 搭配使用。
2. 我們建議使用 Moxa CBL-USBCF9-GY-150 主控台纜線，該纜線可個別購買。

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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Wireless Software Features

Management	GuaranLink Send SMS SMS Remote Control Moxa Remote Connect (MRC)
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Ethernet Software Features

Management	DHCP Server/Client DNS Syslog MXview One MXconfig MXsecurity Power Management
Broadcast Forwarding	IP directed broadcast, broadcast forwarding
Configuration Options	Serial Console ³ Web Console (HTTP/HTTPS) Command Line Interface (CLI) through Serial/Telnet/SSH
Network Protocols	LLDP SMTP SNMPv1/v2c/v3 TFTP TCP/IP UDP IPv4 ARP HTTP/HTTPS Telnet SSH
Filter	802.1Q VLAN Port-based VLAN
Unicast Routing	OSPF RIPv1/V2 Static Route
Multicast Routing	Static Route
Routing Redundancy	VRRP
Time Management	NTP Server/Client

3. 我們建議使用 Moxa CBL-USBCF9-GY-150 主控台纜線，該纜線可個別購買。

	SNTP
Tunneling	GRE
VPN	IPsec OpenVPN

Security Functions

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

DoS and DDoS Protection

Technology	ARP-Flood FIN Scan ICMP Flood TCP Sessions Without SYN NMAP-ID Scan NMAP-Xmas Scan Null Scan SYN/FIN Scan SYN/RST Scan SYN-Flood Xmas Scan
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Firewall

Filter	DDoS Ethernet protocols ICMP IP address MAC address Ports
Deep Packet Inspection	Modbus TCP Modbus UDP DNP3 IEC 60870-5-104 IEC 61850 MMS EtherNet/IP MELSEC Omron FINS OPC UA Siemens S7 Comm. Siemens S7 Comm. Plus Additional protocols will be supported through future firmware updates.

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 AES-256-GCM
Concurrent VPN Tunnels	Max. 15 IPsec VPN tunnels

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 Redundant dual inputs
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 ⁴

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

4. 橡膠 SIM 卡槽蓋已蓋好。

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 ⁵ ATEX ⁵ Class I Division 2 ⁵
Railway	EN 50121-4
Traffic Control	NEMA TS2
Road Vehicles	E mark E1
Radio Frequency	FCC ID N7NWP76B PTCRB EN 303 413
Radio	RCM UKCA IC: 2417C-WP76B NCC: CCAH234G0310T1 TELEC: R 003-190014/T D190010003 KC: R-R-MXA-OnCell-G4302
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

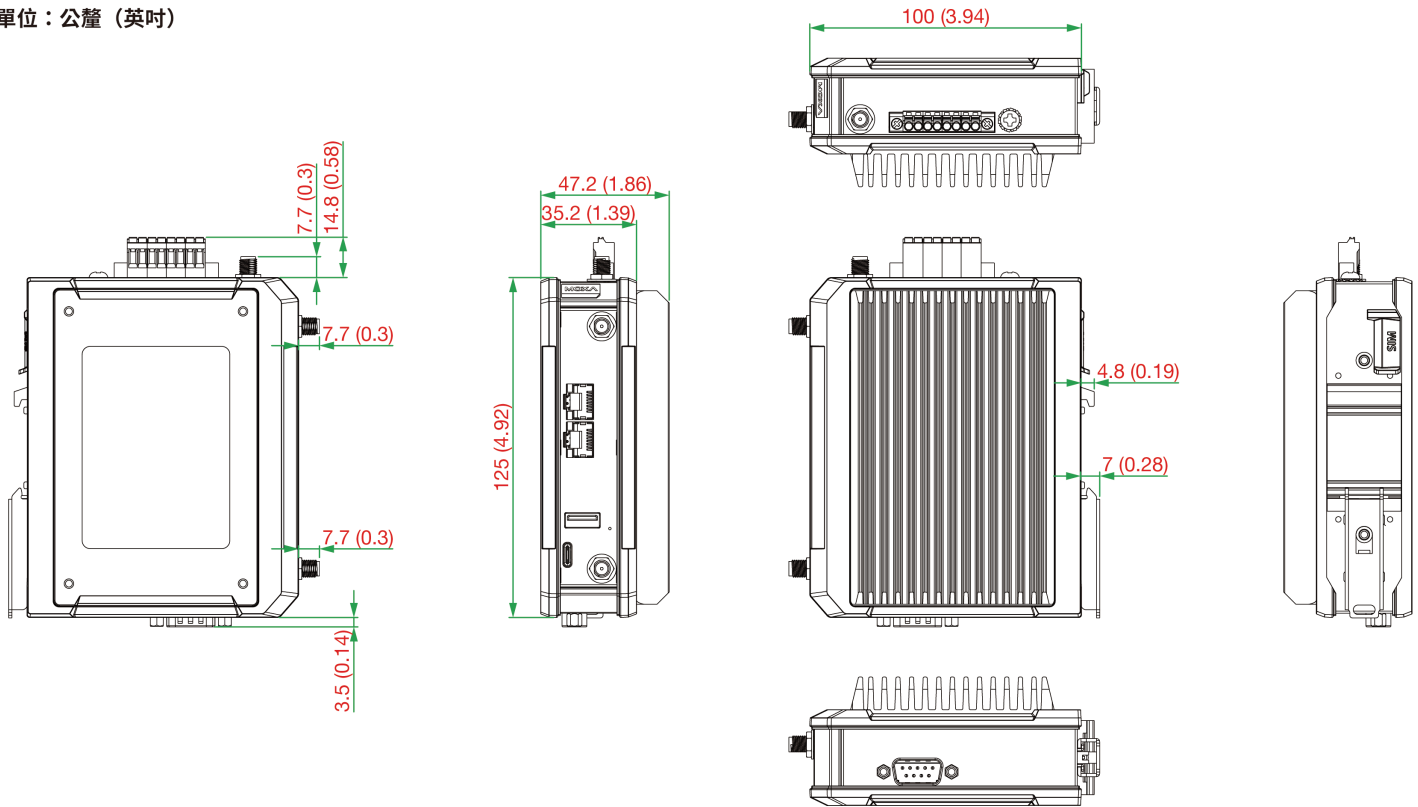
5. 支援硬體版本 1.1.0 及以上

Package Contents

Device	1 x OnCell G4302-LTE4 Series secure cellular router
Documentation	1 x quick installation guide 1 x warranty card
Installation Kit	1 x DIN-rail kit

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

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

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