

# OnCell 3120-LTE-1 Series

## Industrial LTE Cat 1 cellular gateways



### Features and Benefits

- Low power consumption (40 mW in standby)
- GuaranLink for reliable cellular connectivity
- Dual cellular operator backup with dual-SIM
- Rugged hardware design well suited for hazardous locations (ATEX Zone 2/ IECEx)
- VPN secure connection capability with IPsec, GRE, and OpenVPN protocols

### Certifications



## Introduction

The OnCell 3120-LTE-1 is a reliable, secure, low power consumption LTE gateway with state-of-the-art global LTE Cat 1 coverage. This LTE cellular gateway provides reliable connection from serial and Ethernet to the cellular network so that your applications can be easily implemented for the IIoT remote-access scenario. With the power save feature, the OnCell 3120-LTE-1 Series can stay idle with less than 40 mW power consumption and be managed with on/off scheduling. To enhance industrial reliability, the OnCell 3120-LTE-1 features GuaranLink to ensure robust cellular connectivity.

### Remote Access Gateway with VPN and Network Security

- Managed by centralized IP management software, OnCell Central Manager
- Secure and reliable VPN support with NAT/OpenVPN/GRE/IPsec functionality
- Cybersecurity features based on IEC 62443-4-2

### Industrial-grade Reliability

- Rugged hardware design well suited for hazardous locations (ATEX, C1D2, IECEx)
- GuaranLink for reliable cellular connectivity
- -30 to 70°C wide operating temperature
- Low power consumption: Less than 40 mW in standby mode

## Specifications

### Cellular Interface

Cellular Standards	LTE CAT-1, HSPA, UMTS, EDGE, GPRS, GSM
LTE Data Rate	10 MHz bandwidth: 10.2 Mbps DL, 5.2 Mbps UL
HSPA Data Rates	7.2 Mbps DL, 5.76 Mbps UL
No. of SIMs	2
Band Options (EU)	LTE Band 1 (2100 MHz) / LTE Band 3 (1800 MHz) / LTE Band 8 (900 MHz) / LTE Band 20 (800 MHz) / LTE Band 28 (700 MHz) UMTS/HSPA 2100 MHz / 900 MHz GSM 900 MHz / 1800 MHz
Band Options (AU)	LTE Band 3 (1800 MHz) / LTE Band 5 (850 MHz) / LTE Band 8 (900 MHz) / LTE Band 28 (700 MHz) UMTS/HSPA 2100 MHz / 850 MHz / 900 MHz
Cellular Antenna Connectors	2 SMA female

## Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	2
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## USB Interface

USB Connector	USB Type A 1
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## Serial Interface

Baudrate	75 bps to 921.6 kbps
Connector	DB9 male
Console Port	RS-232 (TxD, RxD, GND), 4-pin header output (115200, n, 8, 1)
Data Bits	5, 6, 7, 8
No. of Ports	1
Parity	None, Even, Odd, Space, Mark
Serial Standards	RS-232/422/485
Stop Bits	1, 1.5, 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

## Ethernet Software Features

Firewall	Access IP list, Filter: MAC, IP protocol, port-based
Management	OnCell Central Manager, DHCP server, GuaranLink, Serial Console, Telnet Console, Web Console, ARP, DDNS, SMTP, SNMPv1/v2c/v3, Syslog, TCP/IP, Telnet, UDP, Wireless Search Utility, Remote SMS Control
Routing	NAT, Port forwarding
Security	HTTPS
Time Management	SNTP Client

## Security Functions

Concurrent VPN Tunnels	Max. 5 IPsec VPN tunnels
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## IPsec VPN

Encryption	DES, 3DES, AES, MD5, SHA-1, DH2, DH5
Authentication	PSK/X.509/RSA

## OpenVPN

OpenVPN	OpenVPN (client and server), Tunnel mode (routing) and TAP mode (bridge)
Encryption	Blowfish CBC, DES CBC, DES-EDE3 CBC, AES-128/192/256 CBC

## Power Parameters

Input Current	0.52 A @ 9 VDC, 0.14 A @ 36 VDC
Input Voltage	9 to 36 VDC
Power Connector	Terminal block
Reverse Polarity Protection	Supported
Power Button	Reset button

## Physical Characteristics

Dimensions	128.5 x 26 x 89.1 mm (5.06 x 1.02 x 3.51 in)
Housing	Metal
Installation	DIN-rail mounting, Wall mounting (with optional kit)
IP Rating	IP30
Weight	550 g (1.22 lb)

## Environmental Limits

Ambient Relative Humidity	5 to 95% (non-condensing)
Operating Temperature	Standard Models: 0 to 55°C (32 to 131°F) Wide Temp. Models: -30 to 70°C (-22 to 158°F) 0 to 55°C (32 to 131°F) -30 to 70°C (-22 to 158°F) -30 to 70°C (-22 to 158°F) 0 to 55°C (32 to 131°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)

## Standards and Certifications

EMC	EN 61000-6-2/-6-4
EMI	CISPR 22, FCC Part 15B Class A
EMS	IEC 61000-4-6 CS: 10 V; 150 kHz to 80 MHz IEC 61000-4-8: 30 A/m 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: 2 kV; Signal: 1 kV
Freefall	IEC 60068-2-32
Hazardous Locations	ATEX, IECEx, Class I Division 2
Radio Frequency	FCC, PTCRB
Safety	UL 60950-1
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Cellular Standards	AS/NZS 60950 EN 301511 EN 301489-1-1 MPE SAR AS/NZS S042 EN 301489-24 EN 3011908-1

## MTBF

Standards	Telcordia SR332
Time	585,775 hrs

## Warranty

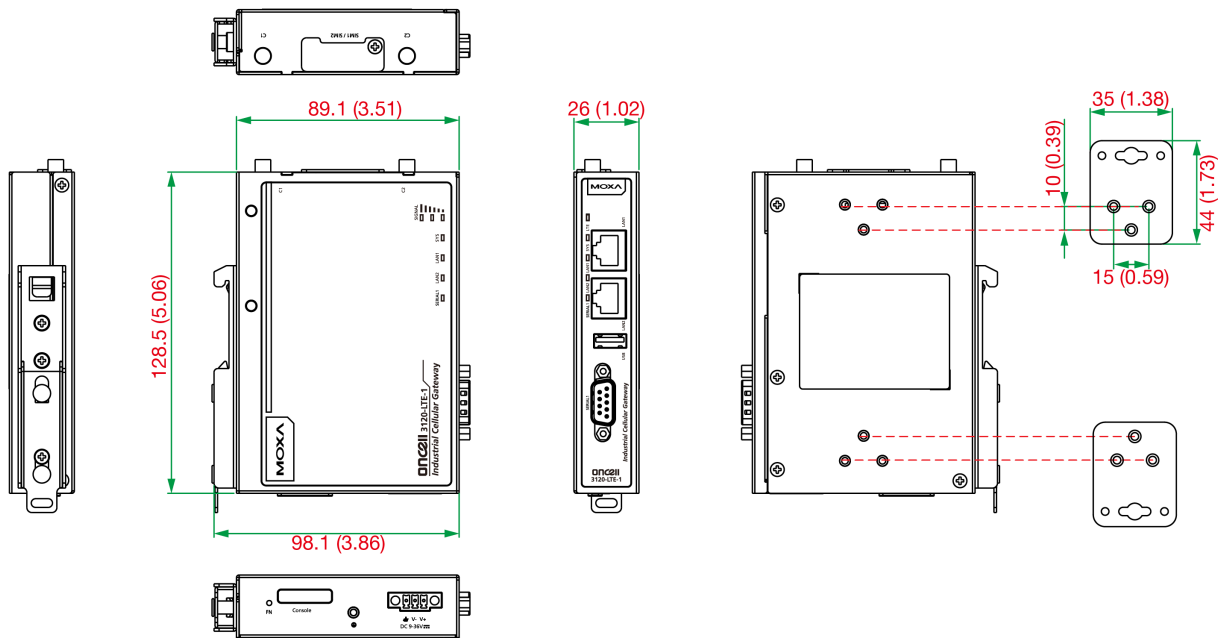
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>
Warranty Period	5 years

## Package Contents

Device	1 x OnCell 3120-LTE-1 Series LTE cellular gateway <sup>1</sup>
Documentation	1 x quick installation guide 1 x warranty card
Installation Kit	1 x DIN-rail kit

## Dimensions

Unit: mm (inch)



## Ordering Information

Model Name	Cellular Standard	LTE Band	Operating Temp.	Mounting
OnCell 3120-LTE-1-EU	LTE Cat 1	B1 (2100 MHz) / B3 (1800 MHz) / B8 (900 MHz) / B20 (800 MHz) / B28 (700 MHz)	-30 to 55°C	Wall, DIN rail
OnCell 3120-LTE-1-EU-T	LTE Cat 1	B1 (2100 MHz) / B3 (1800 MHz) / B8 (900 MHz) / B20 (800 MHz) / B28 (700 MHz)	-30 to 70°C	Wall, DIN rail
OnCell 3120-LTE-1-AU	LTE Cat 1	B3 (1800 MHz) / B5 (850 MHz) / B8 (900 MHz) / B28 (700 MHz)	-30 to 55°C	Wall, DIN rail
OnCell 3120-LTE-1-AU-T	LTE Cat 1	B3 (1800 MHz) / B5 (850 MHz) / B8 (900 MHz) / B28 (700 MHz)	-30 to 70°C	Wall, DIN rail

1. An activated nano SIM card (not included) must be provided by a third party Cellular Service Provider.

## Accessories (sold separately)

### Antennas

ANT-LTE-ASM-02	GPRS/EDGE/UMTS/HSPA/LTE, omni-directional rubber duck antenna, 2 dBi
ANT-LTEUS-ASM-01	GSM/GPRS/EDGE/UMTS/HSPA/LTE, omni-directional rubber duck antenna, 1 dBi
ANT-LTE-ANF-04	GSM/GPRS/EDGE/UMTS/HSPA/LTE, omni-directional outdoor antenna, 4 dBi, IP66

### Wireless Antenna Cables

CRF-SMA(M)/N(M)-300	N-type (male) to SMA (male), CFD200 cable, 3 m
A-CRF-SMSF-R3-100	Cellular magnetic-base SMA connector with 1-meter RF cable

### Wall-Mounting Kits

WK-36-02	Wall-mounting kit, 2 plates, 6 screws, 36 x 67 x 2 mm
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