OnCell 5104-HSPA Series

Industrial five-band GSM/GPRS/EDGE/UMTS/HSPA cellular routers

Features and Benefits

- Five-band UMTS/HSPA 800/850/AWS/1900/2100 MHz

- Quad-band GSM/GPRS/EDGE 850/900/1800/1900 MHz

- Cellular WAN and Ethernet WAN backup mechanism for a complete path redundancy

- Primary and secondary power inputs for power source redundancy

- Cellular link redundancy with dual-SIM GuaranLink support

- DIN-rail housing and wall-mountable housing

- Connect to 4 10/100BaseT(X) devices over an integrated VPN

- 2 digital inputs and 1 relay output

- Centralized private IP management software with OnCell Central Manager

Certifications

Introduction

The OnCell 5104-HSPA high-performance industrial-grade cellular routers allow up to 4 Ethernet-based devices to simultaneously use a single cellular data account for primary or backup network connectivity to remote sites and devices. It provides the functionality of a cellular router, firewall, and switch in one device and is integrated with Moxa's GuaranLink function to ensure zero data loss and on-demand cellular communication.

The OnCell 5104-HSPA comes with a built-in relay output that can be configured to indicate the priority of events when notifying or warning engineers in the field, and the two digital inputs allow you to connect basic I/O devices, such as sensors, to the cellular network. The OnCell 5104-HSPA uses 12 to 48 VDC power inputs with a screw-on design for greater reliability, and the Ethernet ports come with 1.5 kV magnetic isolation protection to keep your system safe from unexpected electrical discharges.

Specifications

Cellular Interface

Cellular Standards	GSM, GPRS, EDGE, UMTS, HSPA
Band Options	UMTS/HSPA 800 MHz / 850 MHz / AWS MHz / 1900 MHz / 2100 MHz Universal quad-band GSM/GPRS/EDGE 850 MHz / 900 MHz / 1800 MHz / 1900 MHz
HSPA Data Rates	14.4 Mbps DL, 5.76 Mbps UL
EDGE Data Rates	237 kbps DL, 237 kbps UL
EDGE Multi-Slot Class	12
EDGE Terminal Device Class	Class B
GPRS Data Rates	85.6 kbps DL, 85.6 kbps UL
GPRS Multi-Slot Class	12
GPRS Terminal Device Class	Class B
No. of SIMs	2

SIM Control Voltage	3 V
Cellular Antenna Connectors	1 SMA female

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	5
Total Port Count	5
Highest Speed	100M
Note	One of the Ethernet ports is a WAN port.

Serial Interface

Console Port	RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)

Input/Output Interface

Alarm Contact Channels	1, Resistive load: 1 A @ 24 VDC
Digital Input Channels	2
Digital Inputs	+13 to +30 V for state 1 +3 to -30 V for state 0

Ethernet Software Features

Management	ARP, BOOTP, DDNS, DHCP Server/Client, DNS, PPPOE, PPP, HTTP, IPv4, SMTP, SNMPv1/v2c/v3, TCP/IP, Telnet, UDP, Web Console, Serial Console, Telnet Console, Remote SMS Control, Wireless Search Utility, Auto IP Report, OnCell Central Manager
Security	HTTPS/SSL, IPsec, SSH
Time Management	SNTP
Routing	Static Route, Port forwarding, NAT
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded

Firewall

Filter	ICMP
Firewall	WAN IP Filtering

Physical Characteristics

Housing	Aluminum
IP Rating	IP30
Dimensions	51 x 135 x 103 mm (2 x 5.32 x 4.16 in)
Weight	650 g (1.43 lb)

Environmental Limits

Operating Temperature	OnCell 5104-HSPA: -30 to 55°C (-22 to 131°F) OnCell 5104-HSPA-T: -30 to 70°C (-22 to 158°F)
Storage Temperature (package included)	-40 to 75°C (-40 to 167°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Power Parameters

Power Connector	Terminal block
Input Voltage	Redundant dual inputs, 12 to 48 VDC
Input Current	0.95 A @ 12 VDC, 0.25 A @ 48 VDC
Reverse Polarity Protection	Supported

Standards and Certifications

Safety	UL 60950-1
EMC	EN 55032/24
EMI	CISPR 32, 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: 4 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
Radio Frequency	FCC Part 22H, FCC Part 24E, EN 301 489-1, EN 301 489-7, EN 301 489-24, EN 301 511, EN 301 908

MTBF

Time	411,000 hrs
Standards	Telcordia SR332

Warranty

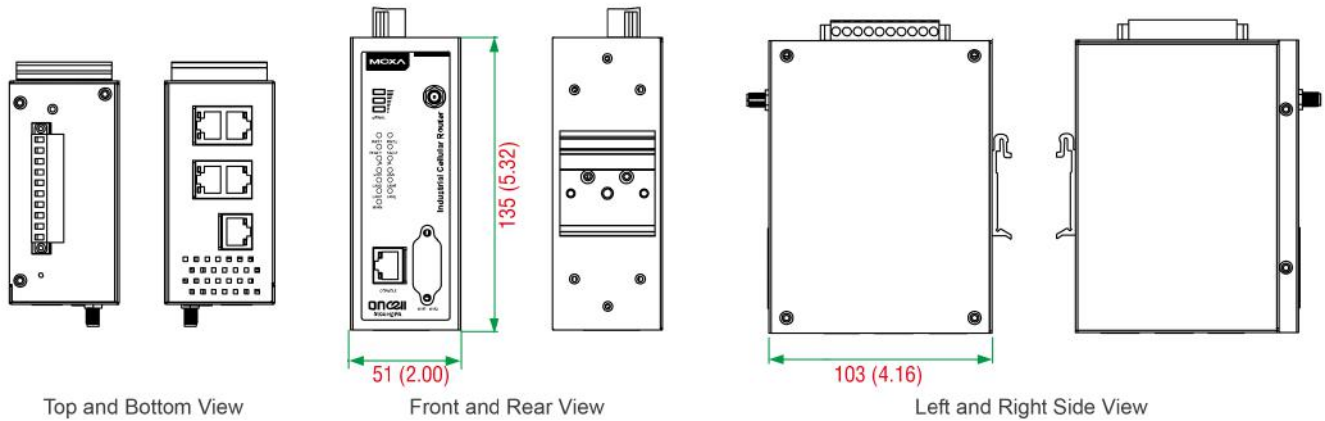|	
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x OnCell 5104-HSPA Series cellular router[1]
Installation Kit	1 x DIN-rail kit
Antenna	1 x UMTS/HSPA
Documentation	1 x quick installation guide 1 x warranty card

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

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Dimensions

Unit: mm (inch)

Top and Bottom View

Front and Rear View

Left and Right Side View

Ordering Information

Model Name	Cellular Standard	HSPA Band	Operating Temp.	Mounting
OnCell 5104-HSPA	UMTS/HSPA	800/850/AWS/1900/2100 MHz	-30 to 55°C	DIN rail
OnCell 5104-HSPA-T	UMTS/HSPA	800/850/AWS/1900/2100 MHz	-30 to 70°C	DIN rail

Accessories (sold separately)

Antennas

ANT-WCDMA-ANF-00	GSM/GPRS/EDGE/UMTS/HSPA, omni-directional outdoor antenna, 0 dBi
ANT-WCDMA-ASM-1.5	GSM/GPRS/EDGE/UMTS/HSPA, omni-directional rubber duck antenna, 1.5 dBi
ANT-WCDMA-AHSM-04-2.5m	GSM/GPRS/EDGE/UMTS/HSPA, omni-directional magnetic base antenna, 4 dBi
ANT-LTE-ANF-04	GSM/GPRS/EDGE/UMTS/HSPA/LTE, omni-directional outdoor antenna, 4 dBi, IP66

Antennas

ANT-LTEUS-ASM-01	GSM/GPRS/EDGE/UMTS/HSPA/LTE, omni-directional rubber duck antenna, 1 dBi

Wireless Antenna Cable

A-CRF-SMSF-R3-100	Cellular magnetic-base SMA connector with 1-meter RF cable