

# 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
<b>Ethernet Interface</b>	
10/100BaseT(X) Ports (RJ45 connector)	5
Total Port Count	5
Highest Speed	100M
Note	One of the Ethernet ports is a WAN port.
<b>Serial Interface</b>	
Console Port	RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
<b>Input/Output Interface</b>	
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
<b>Ethernet Software Features</b>	
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
<b>Firewall</b>	
Filter	ICMP
Firewall	WAN IP Filtering
<b>Physical Characteristics</b>	
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)
<b>Environmental Limits</b>	
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	483,175 hrs
Standards	Telcordia SR332

## Warranty

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

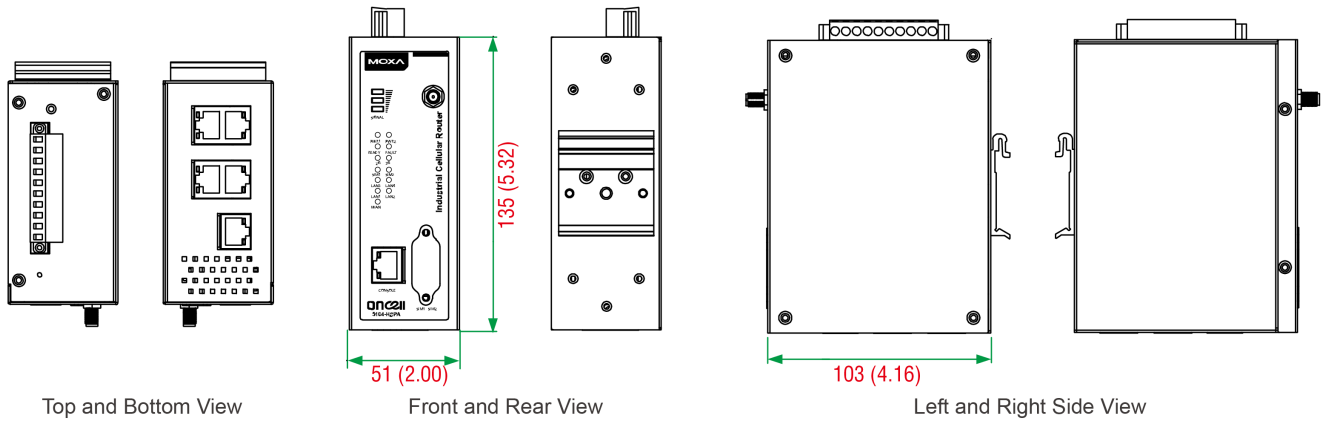
## Package Contents

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

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

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

### Wireless Antenna Cables

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