

# OnCell 5004/5104-HSPA Series

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



OnCell 5004-HSPA Series



OnCell 5104-HSPA Series

- > 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 (OnCell 5104-HSPA only)
- > Centralize private IP management with OnCell Central Manager



## Overview

The OnCell 5004/5104-HSPA series are high-performance industrial grade cellular routers that 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. Both products provide the functionality of a cellular router, firewall, and switch in one device, and to ensure zero data loss and on-demand cellular communication, the OnCell 5004/5104-HSPA are integrated with the GuaranLink function. The difference between the OnCell 5004-HSPA and OnCell 5104-HSPA is that 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 5004-HSPA can be placed on a desktop or mounted on a wall, whereas the OnCell 5104-HSPA has an IA design and can be attached to a DIN-rail. Both products use 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

**Standards:** GSM/GPRS/EDGE/UMTS/HSPA

**Band Options:**

- Five-band UMTS/HSPA 800/850/AWS/1900/2100 MHz
- Quad-band GSM/GPRS/EDGE 850/900/1800/1900 MHz

**HSPA Data Rate:** 14.4 Mbps DL, 5.76 Mbps UL

**EDGE Multi-slot Class:** Class 12

**EDGE Data Rate:** 237 kbps DL, 237 kbps UL

**EDGE Terminal Device Class:** Class B

**GPRS Multi-slot Class:** Class 12

**GPRS Data Rate:** 85.6 kbps DL, 85.6 kbps UL

**GPRS Terminal Device Class:** Class B

**GPRS Coding Schemes:** CS1 to CS4

**Tx Power:**

UMTS/HSPA: 0.25 W

EDGE900: 0.5 W

EDGE1800: 0.4 W

GSM1800: 1 W

GSM900: 2 W

### WAN Interface

**Number of Ports:** 1

**Ethernet:** 10/100 Mbps, RJ45 connector, auto MDI/MDIX

### LAN Interface

**Number of Ports:** 4

**Ethernet:** 10/100 Mbps, RJ45 connector, auto MDI/MDIX

### Interface

**Cellular Antenna Connectors:** 1, SMA (female)

**Console Port:** RS-232 (RJ45)

### I/O Interface (OnCell 5104-HSPA)

**Alarm Contact:** 1 relay output with current carrying capacity of 1 A @ 24 VDC

**Digital Inputs:** 2 electrically isolated inputs

- +13 to +30 V for state "1"

- +3 to -30 V for state "0"

### Software

**Network Protocols:** ARP, DDNS, DHCP/BOOTP, DNS Relay, HTTP, HTTPS, ICMP, IPsec, PPP, PPPoE, SMTP, SNMP, SSL, TCP/IP, Telnet, UDP

**Routing/Firewall:** NAT, port forwarding, WAN IP filtering, static route

**Cellular Connectivity:** GuaranLink

**Authentication:** Local username and password

### Management Software

**Utilities:** Wireless Search Utility

**Configuration and Management Options:** SNMP v1/v2c/v3, Web/Telnet/Serial Console, SSH, Remote SMS Control, Auto IP Report

**Centralized Device Management, Monitoring and Private IP**

**Solution:** OnCell Central Manager

### SIM Interface

**Number of SIMs:** 2

**SIM Control:** 3 V

### Physical Characteristics

**Housing:** Aluminum, providing IP30 protection

**Weight:**

OnCell 5004-HSPA: 510 g (1.12 lb)

OnCell 5104-HSPA: 650 g (1.43 lb)

**Dimensions:**

OnCell 5004-HSPA: 158 x 103 x 35 mm (6.22 x 4.06 x 1.38 in)

OnCell 5104-HSPA: 51 x 135 x 103 mm (2 x 5.32 x 4.16 in)

### Environmental Limits

**Operating Temperature:**

Standard Models: -30 to 55°C (-22 to 131°F)

Wide Temp. Models: -30 to 70°C (-22 to 158°F)

**Storage Temperature:** -40 to 75°C (-40 to 167°F)

**Ambient Relative Humidity:** 5 to 95% (non-condensing)

### Power Requirements

**Number of Power Inputs:**

OnCell 5004-HSPA: 2 (1 terminal block, 1 power jack)

OnCell 5104-HSPA: 2 (terminal block), redundant dual inputs

**Input Voltage:** 12 to 48 VDC

**Input Current:**

OnCell 5004-HSPA: 0.9 A @ 12 VDC; 0.23 A @ 48 VDC

OnCell 5104-HSPA: 0.95 A @ 12 VDC; 0.25 A @ 48 VDC

**Reverse Polarity Protection:** Present (OnCell 5104-HSPA only)

### 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

**Radio:** 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 (mean time between failures)

**Time:**

OnCell 5004-HSPA: 441,000 hrs

OnCell 5104-HSPA: 411,000 hrs

**Standard:** Telcordia SR332

### Warranty

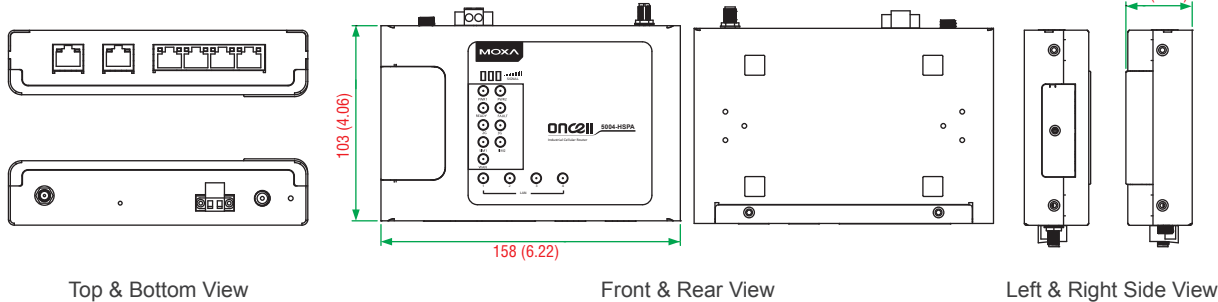
**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

### Dimensions

#### OnCell 5004-HSPA

Unit: mm (inch)

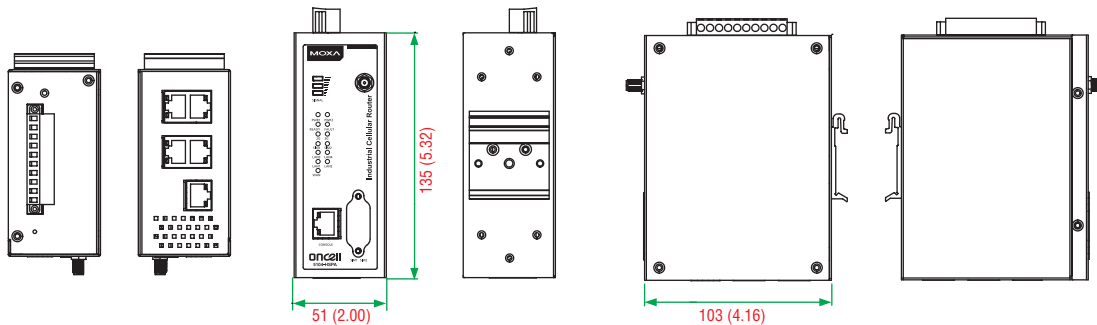


Top & Bottom View

Front & Rear View

Left & Right Side View

#### OnCell 5104-HSPA



Top & Bottom View

Front & Rear View

Left & Right Side View

### Ordering Information

#### Available Models

**OnCell 5004-HSPA:** 4-port five-band industrial GSM/GPRS/EDGE/UMTS/HSPA router, -30 to 55°C operating temperature

**OnCell 5104-HSPA:** 4-port five-band industrial GSM/GPRS/EDGE/UMTS/HSPA router, IA design, -30 to 55°C operating temperature

**OnCell 5104-HSPA-T:** 4-port five-band industrial GSM/GPRS/EDGE/UMTS/HSPA router, IA design, -30 to 70°C operating temperature

**Note:** Please visit Moxa's website for a complete list of optional wireless accessories and antennas available for Moxa's wireless products.

#### Package Checklist

- OnCell 5x04-HSPA cellular router
- 1 UMTS/HSPA antenna: ANT-WCDMA-ASM-1.5
- Rubber stand (OnCell 5004-HSPA only)
- Wall-mounting kit (OnCell 5004-HSPA only)
- DIN-rail kit (OnCell 5104-HSPA only)
- Quick installation guide (printed)
- Warranty card

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