OnCell 5104-HSPA Series

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

> 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
> Centralize private IP management with OnCell Central Manager

Overview

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
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
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, SNTP, 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

MOXA®

SIM Interface
Number of SIMs: 2
SIM Control: 3 V

Physical Characteristics
Housing: Aluminum, providing IP30 protection
Weight: 650 g (1.43 lb)
Dimensions: 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: 2 (terminal block), redundant dual inputs
Input Voltage: 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
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)
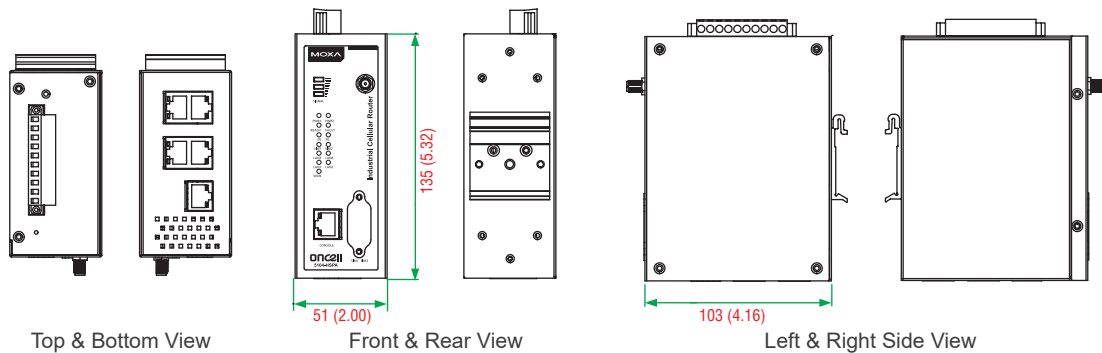**Time:** 411,000 hrs
Standard: Telcordia SR332

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

Dimensions

Unit: mm (inch)

Top & Bottom View

Front & Rear View
135 (5.32)
51 (2.00)

Left & Right Side View
103 (4.16)

: Ordering Information

Available Models
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 5104-HSPA cellular router
- 1 UMTS/HSPA antenna: ANT-WCDMA-ASM-1.5
- DIN-rail kit
- Quick installation guide (printed)
- Warranty card

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