HYC-OLTRG-101 ATEX & IP68
Power EIRP 2x30 dBm (2x1 Watt)

HYC-OLTR(G)-101 4G/LTE Router is a highly reliable and secure wireless communications gateway designed for industrial networking, Operator or WISP create their own networks to share bandwidth with customers and also for marine and coastal communication applications.

It supports multi-band connectivity including FDD / TDD LTE, WCDMA and GSM for a wide range of applications and vertical machine-to-machine (M2M) markets. To enhance reliability, HUYC-OLTR(G)-101 is equipped with dual SIM that supports failover and roaming over to ensure uninterrupted connectivity for mission-critical cellular communications. With flexible LAN / WAN Ethernet options, HYC-OLTR(G)-101 series allows you to customize your professional applications in diverse environments.

It also provides enterprise-grade software features, such as Quality of Service (QoS) for traffic prioritization, IPSec, OpenVPN, Firewall security and so on.

The device is administrated via web GUI, Telnet, SSH v2 and HTTP/HTTPS. Built for secure and uninterrupted operation in harsh environments, HYC-OLTR(G)-101 series supports extended operating temperature from -40 to +70°C and a flexible input voltage range of 10-32V DC.

HYC-OLTR(G)-101 is an ideal cellular communications solution for heavy industrial use.

Features:
- Highly reliable and secure for mission-critical cellular communications
- Provide flexible options to configure LAN/WAN ports
- Support multi-band connectivity with FDD LTE/ TDD LTE/ WCDMA/ GSM/ LTE Cat4
- Built-in dual SIM for network redundancy
- Dual MIMO antenna input against radio interference
- LED indicators for connection and data transmission status
- Industrial rated from -40 to +70°C for use in harsh environments
- IPv6/IPv4 dual stack and all applications are IPv6 ready
- Support various serial communication protocols for rich connectivity
- Enhance security and encryption for authentication and transmission
- IP68 Waterproof
- WiFi embedded
- High gain Antennas
## Specifications

### Frequencies

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>TDD LTE</td>
<td>B38 / B40 / B41</td>
</tr>
<tr>
<td>WCDMA</td>
<td>B1 / B5 / B8</td>
</tr>
<tr>
<td>GSM</td>
<td>900 / 1800 MHz</td>
</tr>
<tr>
<td>WiFi Access Point</td>
<td>2402 – 2482 MHz</td>
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</tbody>
</table>

### Output Power

<table>
<thead>
<tr>
<th>LTE FDD</th>
<th>23dBm +/- 2dB up to EIRP 30dBm</th>
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</thead>
<tbody>
<tr>
<td>LTE TDD</td>
<td>23dBm +/- 2dB up to EIRP 30dBm</td>
</tr>
<tr>
<td>TD-SCDMA</td>
<td>24dBm +/- 3dB up to EIRP 31dBm</td>
</tr>
<tr>
<td>UMTS</td>
<td>24dBm +/- 3dB up to EIRP 31dBm</td>
</tr>
<tr>
<td>WiFi Access Point</td>
<td>27dBm +/- 1.5dB up to EIRP 34dBm</td>
</tr>
</tbody>
</table>

### Interface

- SIM Cards Slots x 2
- WAN 10/100 Mbps Ethernet M12 port x 1
- LAN 10/100 Mbps Ethernet M12 port x 1
- LTE antenna N-type port x 2
- WiFi AP N-type port x 2
- GPS N-type port x 1
- DC power M12 port x 1

### Software

- Network Protocols: IPv4, IPv6, IPv4/IPv6 dual stack, DHCP server and client, PPPoE, Static IP, SNTP, DNS Proxy
- Routing & Firewall: NAT, Virtual Server, DMZ, MAC filter, URL Filter, IP Filter, VLAN, Static Routing and RIP-1/2
- VPN: OpenVPN, IPSec (3DES, AES128, AES192, AES256, MD5, SHA-1, SHA256)

### Wireless Connectivity

- Two SIM cards for failover / roaming over / back up
- Two SIM cards data usage control
- Seamless multi WAN connections switch
- WiFi Access Point for hotspot (OLT-101G model)

### Others

- DDNS, QoS, UPnP
- Alarm: SMS, VPN/WAN Disconnection, SNMP Trap, E-mail

### Management

- Web GUI for remote and local management, CLI
- SNMP, TR069

### Environment

- Operating Temperature: -40–70 °C
- Storage Temperature: -40–85 °C
- Humidity: 95% non-condensing

### Power Supply & Consumption

- Power consumption: 17 Watts (Typical), 19 Watts (Max.)
- Power Input: DC 24V

### Physical

- Dimension: 259 (L) * 250 (W) * 75 (H) ; mm
- Weight: 1.8Kg

### Warranty

1 YEAR

### Ordering Information

- HYC-OLTRG-101: Outdoor IP68 4G LTE Router (1 x WAN + 1 x LAN) with GPS
- HYC-OLTRG-101G-20: Outdoor IP68 4G LTE Router (1 x WAN + 1 x LAN + 2.4GHz WiFi AP) with GPS
- HYC-ANT-45270-M: 450 MHz – 2700 MHz Linear Omni Marine antenna
Main Applications

LTE / Ethernet redundant

IPv4/IPv6 Dual Stack
Main Applications

MQTT Broker

Virtual COM > Remote Management

Virtual COM > Modbus RTU over TCP
Main Applications

Virtual COM > Modbus RTU over TCP

Modbus Gateway

HYPERCABLE sarl 74 Avenue Paul Sabatier ZA de la Coupe 11.100 Narbonne - France
Tel: +33 (0) 4 68 70 91 75 - Mail: info@hypercable.fr - www.hypercable.fr
Main Applications

OpenVPN Net-to-Net

OpenVPN 1:1 NAT
Main Applications

OpenVPN with third-party server

OpenVPN tunnel

Internet

OpenVPN third-party server e.g. vpngate

LAN: 192.168.1.1/24

PC: 192.168.1.2/24

OpenVPN Access Server

Services

HTTPS
SNMP
Modbus
MCTT
TR069
...

Mobile Router

OpenVPN client test/test

OpenVPN client admin/password

Mobile Router

PC
Video Multipoint Applications

Video & Data Unbreakable VPN Tunnels Communications

Maximum 8 VPN clients supported

VPN clients get dynamic private IP address from 4G station

Open VPN client

4G Signal

Open VPN client

4G Signal

Open VPN Server

(SIM card with fixed Public IP address)

Open VPN client

WAN port wired connecting to ADSL or fiber (fixed Public IP address)
EIRP High Power 30dBm 2x1 Watt

Specification for the model HYC-OLTRG-101

LTE Interface
- FDD LTE: B1/B3/B5/B7/B8/B20
- TDD LTE: B38/B40/B41
- WCDMA: B1/B5/B8
- GSM: 900/1800 MHz
- LTE Cat4

Processor & I/O Interface
- High performance 528 MHz CPU with 512 Mbytes of DDR3 memory
- 2 x SIM Card Slots
- 1 x LAN 10/100 Mbps Ethernet port (Model: OLTRG-101)
- 3 x LAN 10/100 Mbps Ethernet ports (Model: LTR / LTRG-102)
- 1 x WAN 10/100 Mbps Ethernet port
- Reset Button
- Console: 1 x RS232 (9-pin Sub-D)
- 2 x SMA connectors for detachable LTE antenna
- 1 x GPS detachable antenna
- 2 x SMA connectors for detachable LTE antenna (Optional)
- 1 x RS485 (D+/D-)
- 1 x RS232 (TXD/RXD)
- 2 x DI, 1 x DO (Alarm +/-)

Physical Characteristics
- Enclosure: Metal moulded Shell
- Housing: IP68 Protection
- Dimensions (W x H x D): 259 x 250 x 75 mm
- Installation: Mast, tube or Wall Mount

LED Display
- 1 x System status LED (Green)
- 1 x SIM1 status LED (Green)
- 1 x SIM2 status LED (Green)
- Ethernet status LEDs (Green for LINK/ACT, Yellow for SPEED)
- 2 x Mobile connection strength LEDs (Green)

Power Supply
- Power Consumption: 10 Watts (Max)
- Power Input: +10 ~ -32V DC or nominal 24 VDC

MTBF (mean time between failures)
- OLTRG-101: 155,899 hrs (MIL-HDBK-217-FN2)

Software
- Network Protocols:
  - IPv4, IPv6, IPv4/IPv6 dual stack, DHCP server and client,
  - PPPoE, Static IP, SNTP, DNS Proxy, Modbus, VRRP, OSPF,
  - Message Queue Telemetry Transport (MQTT Broker)
- Routing/Firewall:
  - NAT, Virtual Server, DMZ, MAC Filter, URL Filter, IP Filter,
  - VLAN, Static Routing and RIP-1/2
- VPN:
  - OpenVPN, IPSec (3DES, AES128, AES196, AES256,
    MD5, SHA-1, SHA256)
- Wireless Connectivity:
  - Two SIM cards for failover/ roaming over/ back up
  - Two SIM cards data usage control
- Others:
  - DDNS, QoS, Virtual COM, UPnP
- Alarm:
  - DI, DO, SMS, VPN/WAN Disconnect, SNMP Trap, E-mail

Management Software
- Web GUI for remote and local management, CLI
- Dual Image firmware upgrade by Web GUI
- SNMP, TR069
- Remote management via SSH v2, HTTPS
- Local management via Telnet, SSH v2, HTTP/HTTPS

Environment
- Operating Temperature: -40 ~ +70°C
- Storage Temperature: -40 ~ +85°C
- Ambient Relative Humidity: 10 ~ 95% (non-condensing)
- Humidity: 0 ~ 95% (non-condensing)

Standards and Certifications
- EMC: CE, FCC
- EMI: EN 55032 Class A, FCC Part 15 Subpart B Class A
- Rail Traffic: EN50121-4
- Vibration: IEC60068-2-6
- Safety: EN60950-1
- Highly Accelerated Life Test (HALT)

* Features and specifications are subject to change without prior notice.

Ordering Information

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<td>Outdoor IP68 Industrial 4G LTE Router (1 x WAN + 1 x LAN) with GPS</td>
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Outdoor or indoor radio 3-4G Modem ATEX and Waterproof IP68 enclosure

HYC-OLTRG-101 the ODU and 7 dB gain antenna

- Next Generation Marine qualified High Performance Omni Directional Antenna
- Easy mounting with feed through 1 inch marine standard mounts
- Robust and All weather proof
- Various mounting options available
- UV and Saltwater protected against tempestuous weather conditions.
Main Applications

4G/3G Signal

4G/3G mobile Networks on Shore

DC 24V

2.4GHz WiFi Access

Applications on boats

Marine & Coastal 15km offshore Mobile Access
- Internet Service on boat

Outdoor 4G modem HYC-OLTRG-101 on terrestrial vehicle
Main Applications

Outdoor 4G modem HYC-OLTRG-101 on vehicle & Control Center

Outdoor 4G modem HYC-OLTRG-101 on boats connected to the Shore