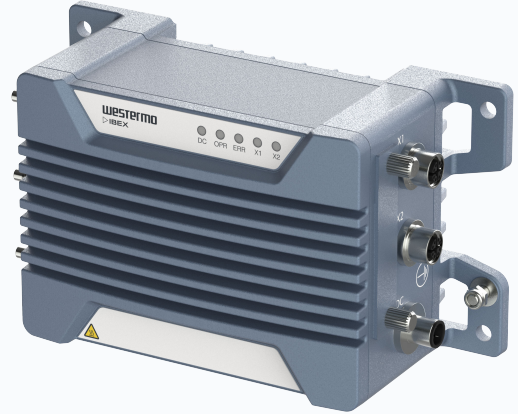


## EN 50155 LTE Router Ibex-RT-330 series

- **Mobile broadband Cat12 LTE-A router**
  - Supports 3 x carrier aggregation and 256QAM
  - Worldwide LTE-A and UMTS/HSPA + coverage
  - Dual SIM support
- **Designed for mobile usage**
  - EM 50155 and EN 45545-2 certified
  - Compact design with M12 interfaces
  - Wide temperature range
- **High bandwidth supports multiple applications**
  - Data offloading
  - Remote monitoring
  - Video surveillance



**EN 45545-2**  
Fire Protection

**EN 50121-4**  
Railway Trackside

**EN 50155**  
On Board Rail

**NFPA 130**  
Fire Protection

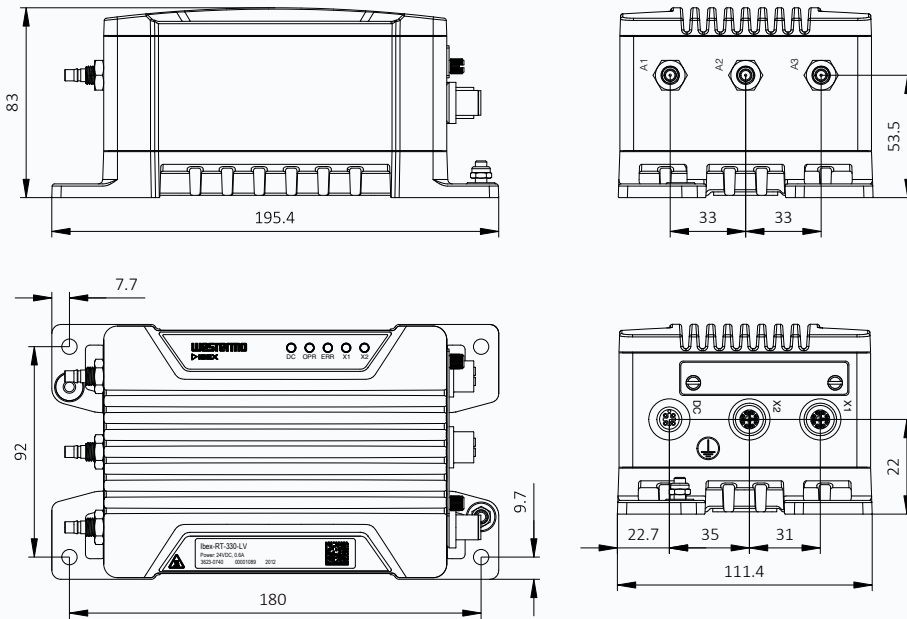
The Ibex-RT-330 is a mobile LTE router for onboard usage in trains, trams, locomotives and busses. The Mobile Communication Gateway (MCG) router is designed to withstand the tough onboard environmental conditions and can be remotely managed using web browser or SNMP management tools. The MCG provides advanced firewall functionalities and high-performance VPN connectivity.

The router exceeds the high requirements for the most bandwidth-demanding applications worldwide and features global LTE bands to support all current, as well as future, frequencies. A compact design enables quick and easy installation into the tight spaces of trains, while configuration and unit replacement are simplified by a SIM card memory for configuration parameters. Dual SIM allow for further performance optimisations and carrier redundancy. IP66-rating and a wide temperature range from -40 °C to +70 °C ensure that the devices can be installed virtually anywhere, without the need of additional protection.

Meeting the requirements of the rail market, Ibex-RT-330 is very well-suited for any deployment in challenging environments such as mining and industrial vehicle automation.

## Specifications - Ibox-RT-330 series

### Dimensional drawing



### Technical data

Dimensions (W x H x D)	195.4 x 83 x 111.4 mm (7.69 x 3.27 x 4.39 inches)
Housing	Full metal
Weight	1.54 kg without antennas
Operating temperature	-40 to +70°C (-40 to +158°F)
Ingress protection	IP66
MTBF	360,000 hours (IEC 62380)
Power feed	LV: 24 VDC isolated, 0.6 A max. or IEEE 802.3 at type 1 powered device HV: 72 to 110 VDC isolated, 0.2 A max.

### Interface

RF antenna	2 x QMA compatible connectors for LTE 1 x QMA compatible connector for GNSS
Ethernet	2 x 10/100/1000 Base-T with M12 X-code with M12 connector
SIM	2 x mini-SIM

Wireless	
Mobile interface	2x2 MIMO LTE-A Cat 12, 3GPP E-UTRA Release 12
Mobile frequency bands	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B9/B12/B13/B14/B17/B18/B19/B20/B21/B26/B28/B29/B30/B32/B66 LTE-TDD: B38/39/B40/B41 WCDMA Band: B1/B2/B3/B4/B5/B8/B9/B19
LTE-A carrier aggregation	DL 2CA: B1+3/5/18/19/20/26; B2+2/4/5/12/13/17/29/30/66; B3+3/5/7/8/19/20/28; B4+4/5/12/13/17/29/30; B5+7/30/66; B7+7/20/28; B12+30; B13+66; B19+21; B20+B32; B29+30; B38+38; B39+39; B39+39; B39+41 B40+40; B41+41; B66+66;12,29,30,5; B2+B14;B14+B30;B14+B66; (Note: B29, B32 only for secondary component carrier)  DL inter-band 3CA: B1+3+5/7/8/19/20/28; B1+7+20, B2+4+5,B2+4+13, B2+5+30, B2+12+30, B2+29+30, B3+7+20, B3+7+28, B3+7+8, B4+5+30, B4+12+30, B4+29+30, B5+66+2, B13+66+2, B66+12+30, B66+29+30, B66+5+30; B2+B14+B66  DL 2 intra-band plus inter-band 3CA: B2+2+5, B2+2+13, B3+3+7, B3+7+7, B3+3+20, B3+3+28,B3+3+1, B4+4+5, B4+4+13, B7+7+28, B5+66+66, B13+66+66, B66+66+2, B39+B39+B41; B39+B41+B41; B14+B66+B66  DL 3 intra-band 3CA: B40+40+40, B41+41+41, B66+66+66  UL Intra-band Continuous 2xCA: B3+3; B7+7; B38+38; B40+40; B41+41
Mobile data rates	LTE-FDD: Max 600 Mbps (DL)/Max 150 Mbps (UL) – DL 256QAM / UL 64QAM; LTE-TDD: Max 430 Mbps (DL), Max 30 Mbps (UL); DC-HSDPA: Max 42 Mbps (DL); HSUPA: Max 5.76 Mbps (UL); WCDMA: Max 384 Kbps (DL), Max 384 Kbps (UL)
GNSS	GPS L1C/A, SBAS L1C/A, QZSS L1C/A, QZSS L1 SAIF, GLONASS L1OF, BeiDou B1I, Galileo E1B/C, D-GPS

Features	
Security	802.1X
Ethernet routing/networking and VPN	Fixed fallback IP, IP aliases, MAC address control lists, Port forwarding, Routing, Multicast Routing, DHCP Server/Client, NAT, VLAN support, NTP client, SNMP v2c and v3 with USM authentication and encryption support, SNMP Traps, RSTP, Firewall, IP Masquerading (NAT/NAPT), Port Forwarding, Stateless NAT (1-1 NAT), SSL VPN (Client and Server), Certificate Authentication, Pre-shared Key (PSK) Point-to-Point Mode, Layer-2 and Layer-3 VPN, Layer-2 VPN bridging, Address pool and address per CN, TLS Authentication), Generic Routing Encapsulation (GRE)
Monitoring features	Built-in monitoring sensors and diagnostics, SNMP Traps, Syslog
Device management	SNMP, HTTP/HTTPS with user authentication, CLI (SSH and Telnet)
SNMP MIB Support	MIB-2, RFC1213, HOST-RESOURCES, BRIDGE, ETHERLIKE, IF-MIB, LLDP-MIB, UCD-SNMP-MIB, WESTERMO-SW6-MIB, WESTERMO-SW6-BRIDGE-MIB, WESTERMO-SW6-FIREWALL-MIB, WESTERMO-SW6-ICL-MIB, WESTERMO-SW6-GNSS-MIB

Approvals and Standards	
Climate	<ul style="list-style-type: none"> <li>EN 50155, class OT4 Railway applications - Electronic equipment used on rolling stock</li> </ul>
EMC	<ul style="list-style-type: none"> <li>EN 50155, Railway applications - Electronic equipment used on rolling stock</li> <li>EBA EMV 06, German Federal Railway Authority, Radio compatibility of rail vehicles (valid for LV models only)</li> <li>EN 50121-3-2, Railway applications – Electromagnetic compatibility, Part 3-2: Rolling stock – Apparatus</li> <li>ETSI EN 301 489-1, Electromagnetic compatibility (EMC) and Radio spectrum Matters (ERM) for radio equipment and services - Part 1: Common technical requirements</li> <li>ETSI EN 301 489-19, Electromagnetic Compatibility (EMC) standard for radio equipment and services - Part 19: Specific conditions for Receive Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band</li> <li>ETSI EN 301 489-24, Electromagnetic compatibility (EMC) and Radio spectrum Matters (ERM) for radio equipment and services - Part 24: Specific conditions for IMT-2000 CDMA Direct Spread (UTRA) for Mobile and portable (UE) radio and ancillary equipment</li> <li>ETSI EN 301 489-52, Electromagnetic Compatibility (EMC) standard for radio equipment and services - Part 52: Specific conditions for Cellular Communication Mobile and portable (UE) radio and ancillary equipment</li> <li>ECE E-Mark, Road Vehicles, E13 10R-06 15771 (valid for LV models only)</li> </ul>
Mechanical (Shock and vibration)	<ul style="list-style-type: none"> <li>EN 61373, category 1, class A and B</li> <li>IEC 60068-2-27, 100 m/s<sup>2</sup>, 30 ms</li> <li>MIL STD 810G Method 516.7, 10 g, 11 ms</li> </ul>
Insulation (Coordination and test)	<ul style="list-style-type: none"> <li>EN 50124-1, Railway applications – Insulation coordination</li> <li>EN 50155, Railway applications - Electronic equipment used on rolling stock</li> </ul>
Radio communication	<ul style="list-style-type: none"> <li>ETSI EN 301 908-1, IMT cellular networks</li> <li>3GPP LTE Advanced standard</li> <li>FCC-47-15, Radio frequency devices</li> <li>FCC-47-22, Public mobile services</li> <li>FCC-47-24, Personal communications services</li> <li>FCC-47-27, Miscellaneous wireless communications services</li> </ul>
Safety	<ul style="list-style-type: none"> <li>EN/IEC 62368-1, Safety Requirements for audio/video, information and communication technology equipment</li> <li>EN 45545-2, Fire protection on railway vehicles</li> <li>NFPA 130, Fire protection for fixed guideway transit and passenger rail system</li> </ul>

Ordering information	
Art. no.	Description
3623-0740	Ibex-RT-330-LV
3623-0741	Ibex-RT-330-HV
3623-0799	Factory Reset Plug X-code (Accessory)