

Icomera X6 Mobile Applications Router

Multi-radio Wireless Router & Applications Platform



- ▶ Up to six WAN connections
- ▶ GPRS / EDGE / HSPA
- ▶ 1X RTT / EVDO
- ▶ LTE & WiMAX prepared
- ▶ Two SIM slots per modem
- ▶ Built-in 20-channel GPS
- ▶ 802.11 a/b/g/n networking
- ▶ Rail-grade chassis
- ▶ Remote management
- ▶ Open application platform
- ▶ Antenna diversity
- ▶ Rail compliant

Introducing the Icomera X6, a rail and industrial grade communications and applications platform.

The Icomera X6 Mobile Applications Router is an industrial-class communications and applications hub designed for demanding transport solutions. The Icomera X6 sets a new level of performance and quality for onboard router and applications platforms.

Extra durability. From the ground up, the Icomera X6 is designed to withstand the harshest rail environments possible. The chassis is made of highly rugged custom molded aluminium with industry connectors, including the all-new standard Gbps M12 Ethernet connectors.

Extra connectivity. The Icomera X6 provides a stable and high-performing Internet connection by aggregating up to six cellular WAN radios. The system will automatically combine different networks including HSPA, EDGE, 1X RTT and EVDO to deliver the best possible connection. And since each modem supports dual SIMs you can be assured to have the most cost-efficient connection across your route, even if it takes you across national borders. The Icomera X6 uses patented Icomera technology to seamlessly aggregate multiple WAN and Wi-Fi networks.

Extra control. With the Icomera X6 you are in control. The system features a highly sensitive GPS receiver with inertial sensors, providing you with a reliable view of your feet even when travelling in dense urban areas or through tunnels. The system is manageable using standard protocols. A web based management interface provides real-time information. Based on the communication system software, it is also possible to remotely monitor other equipment, such as electronic point of sales, engine fault status, air conditioning units etc.

Extra open. The Icomera X6 is an extensible and open platform on which you can add applications by using standard virtualisation technologies. The Icomera X6 also protects your investment by providing clear and concise APIs based on standard protocols and technologies.



Icomera X6

Technical Specifications

Dimensions

318 (W) x 287 (H) x 88 (D) mm

Weight

4 kg

Materials

All aluminium custom molded chassis

CPU, memory, storage

Depending on build configuration

Power Inputs

Supports a wide range of input voltages while complying with RIA 12 and EN50155:
28 VDC (9-36 V)
48 VDC (36-75 V)
72 VDC (43-110 V)
110 VDC (66-154 V)

Power consumption

< 50W

Antenna connectors

N1 for roof mounted cellular antennas.
QMA connector for GPS

Interface ports

3 M12 industrial Gbit Ethernet interfaces
2 serial ports, RS-232, D-sub 9-pin
2 internal USB 2.0
M12 power connector

Environmental

Operating: -40°C to +70°C
Storage: -40°C to +85°C
Humidity: Up to 95% (non-condensing)
Temperature range depends on build configuration

Compliance

General:

- RoHS (2002/95/EC)

EU market:

- EN 50155 (relevant parts) Electronic equipment used on rolling stock
- EN 50121-3-1, 50121-3-2 EMC
- EN 61373 Shock and vibration
- RIA 12 Surge & Transients
- CE
- E Mark 2004/104/EC, 2007/46/EC

US market:

- S-5702 Railroad electronics environmental requirements
- MIL-STD-810G (relevant parts) Military standard for environmental engineering
- FCC Part 15

GPS

20 channel SiRFStarIII with SiRFLoc and SiRFInstantFix multimode with dead reckoning

Accuracy:

Horizontal: 2.5 m (CEP), 5.5m (95%), velocity: <0.01m/s, heading: <0.01°
DR only: horizontal: <5% of distance travelled, heading: <1% of less than 2 minutes

Acquisition

Hot start: 500ms (typical), <1s (90%)
Warm start: 31s (typical), 36s (90%)
Cold start: 33s (typical), 38s (90%)

Wireless interfaces

Uses standard embedded PCI Express Mini modules with dual SIM capability. Supports up to 6 cellular modems or up to 2 WiFi wireless adapters and 4 cellular modems (GPRS/EDGE/HSPA, 1X RTT/EVDO)
Prepared for LTE and WiMAX

Network services

Icomera patented seamless WAN switching and aggregation
DHCP, DNS, SNTP/NTP, etc

Supported protocols

IP, GRE, ICMP, standards-based VPN

Application support

Supports virtualisation technologies to allow applications to run in virtual environments. The number of virtual machines that can run on the system is subject to resource availability on the host machine.

Management

Web based fleet configuration management
Support for remote upgrade of component firmware and system software
SNMP v3 monitoring
System SSH access

Warranty

One year hardware warranty. Extended warranty can be ordered separately.

SKU

Icomera X6 is available with a wide range of CPUs, storage size etc. For full technical specification on the various build configurations, please contact Icomera.



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