



Icomera X6 & Icomera X6S Multi-radio mobile access and applications router



- ▶ Up to six WAN connections
- ▶ Supports LTE
- ▶ GPRS / EDGE / HSPA+
- ▶ Two SIM slots per modem
- ▶ Built-in 20-channel GPS
- ▶ 802.11 b/g/n networking
- ▶ Industry grade IP65 chassis
- ▶ Remote management
- ▶ Open application platform
- ▶ Antenna diversity
- ▶ Industry compliant

Icomera X6, the mobile access and applications router for a wide range of transport applications.

Icomera X6 is a ground-breaking platform for connected vehicle solutions that is ideal for all rail applications.

Icomera X6 comes with four LTE modems and WiFi capability and there is an additional modem or WiFi slot for future expansion. Each modem slot has two SIM card slots and supports geo-fencing SIM card selection to allow operators a way to reduce cost in, for instance, cross border scenarios. Icomera X6S adds an eight-port PoE switch with 5+5 digital I/O capabilities.

Icomera X6 is IP65 rated, making it ideal for any dirty or humid environment.

The Icomera X6 router runs the Icomera Mobility Platform system software, allowing apps written for Icomera X4 to be deployed on Icomera X6 without any changes. Icomera Mobility Platform includes support for wireless link aggregation, captive portal with individual user QoS, application hosting and many more features.

Icomera X6 is designed for all rail applications and includes support for passenger services. The memory and processing power available on Icomera X6 allows many and large applications to be running on hosted on the system at the same time.

The same web management tools are used for all Icomera X series router, allowing customers to seamlessly manage a heterogenous fleet consisting of Icomera X4 and Icomera X6 routers.

There are a number of applications available for Icomera X Series routers, such as coverage measurement, infotainment, eco-driving and CCTV. Contact Icomera for more information or to learn how the Icomera X Series platform could drive applications developed on your own.



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Icomera X6 & Icomera X6S

Technical specification

Dimensions

318 (W) x 287 (H) x 94 (D) mm

Weight

6.5 kg

Materials

All aluminium custom chassis

CPU, memory, storage

Intel® Core2Duo™ 2.26 GHz
4 GB RAM (3GB available for applications)
80 GB SSD disk (76GB available for applications)
Extra storage available as build option

Power Inputs

Supports a range of input voltages:
28 VDC (9-36 V)
110 VDC (66-154 V) (additional cost)

Power consumption

< 50W (continuous, excluding add-on card)

Antenna connectors

- 13 QMA for cellular and WiFi
- 1 QN for GPS

Interface ports

- 2 M12 industrial Gbps Ethernet interfaces
- 1 serial port, RS-232, D-sub 9-pin
- 1 USB 2.0 M12 (A coded female) connector
- Power, M12 (A coded male)
- Fan power output, M12 (B coded female)

Environmental

Operating: -40°C to +70°C
Storage: -40°C to +85°C
IP rating: IP65

Compliance

EU market:

- RoHS(2002/95/EC)
- EN 50155 Electronic equipment used on rolling stock
- EN 50121-3-2 EMC
- EN 60068 Environmental
- EN 61373 Shock and vibration
- CE Declaration of Conformity
- E Mark 2004/104/EC, 2007/46/EC
- R&TTE

US market:

- S-5702 Railroad electronics environmental requirements
- FCC Part 15

GPS

20 channel SiRFStarIII with SiRFLoc and SiRFInstantFix multimode

Accuracy:

Horizontal: 2.5 m (CEP), 5.5m (2s),
velocity: <0.01m/s, heading: <0.01°

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. Standard configuration includes four LTE modem with backward support for GPRS / EDGE / UMTS / HSPA+ and a WiFi card (802.11b/g/n) that can work in client or access point mode. Supports up to 6 cellular modems or up to 2 WiFi wireless adapters and 4 cellular modems (GPRS/EDGE/HSPA+, 1X RTT/EVDO). WiMAX supported via external modem.

WAN Radio EU market:

LTE:

- 800/900/1800/2100/2600 MHz DC-HSPA+/HSPA+/HSPA/HSDPA/WCDMA:

- 900/2100 MHz

EDGE/GPRS:

- 900/1800/1900 MHz

WAN Radio US market:

LTE:

- 700(B17,B13)/AWS

DC-HSPA+/HSPA+/HSPA/HSDPA/WCDMA:

- 850/1900/2100 MHz

GPRS/EDGE

- 850/900/1800/1900 MHz

CDMA 1xRTT/EV-DO Rev A:

- 800/1900 MHz

WLAN Radio

- 802.11a/b/g/n
- Dual-band, 2.4/5 GHz
- 3x3 MIMO up to 450 Mbps
- Multi-Country Roaming (IEEE802.11d)
- 802.11x authentication, 64/128/152Bit WEP, IEEE802.11i encryption

Network services

Icomera patented seamless WAN switching and aggregation
DHCP, DNS, VLAN, SNTTP/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
- Remote upgrade of system software
- SNMP v3 monitoring System

Warranty

One year hardware warranty. Support packages can be ordered separately.

SKU

For full technical specification on the various build configurations, please contact Icomera.



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