>>> **intercel**

Intercel Pty. Ltd.   ABN 13 007 077 161

eSAM

eSAM
Specifications Sheet

4G LTE ROUTER

Compact and Robust Design for
Industrial **M2M** & **IoT** Applications.

Overview

eSAM is a compact and robust 4G LTE router for industrial M2M/IoT applications. It has 1 LAN and 1 RS232 or RS485 port to provide real-time data connectivity even in harsh environments. eSAM provides a secure, reliable connection to industrial controllers, retail terminals and process automation equipment on third party sites or remote locations. This drop-in connectivity gives operators a way to reduce the cost of downtime and service calls and also increase revenue by bringing distributed sites online faster.

Aplications

- Digital Signage
- Security Monitoring Services
- Smart Grid Assets
- Building Automation
- Kiosks
- Traffic Lights
- Remote Data Loggers
- Flow Meters and Sensing Equipment

Quick Overview

Features

1. Main Antenna
2. GPS Antenna
3. (Div) Antenna
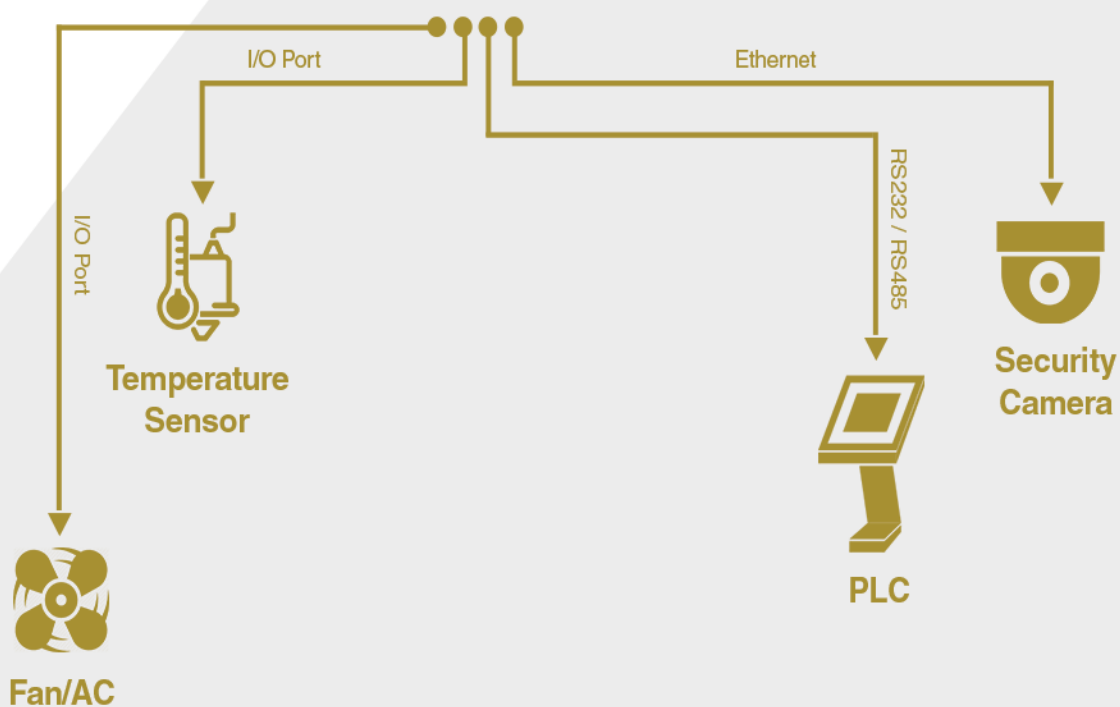4. SIM Card Tray
5. RS232/RS485 & 2 GPIO Ports
6. LAN
7. Power

Applications Overview

Cellular
Tower

Remote
PC

TX RX GND GPIO1 GPIO2

1 2 3 4 5

LAN

DC
5-36V

I/O Port

Ethernet

I/O Port

RS232 / RS485

Temperature
Sensor

Security
Camera

PLC

Fan/AC

Features & Benefits

- Powerful cellular connectivity supporting 4G LTE
- Industrial designed rugged enclosure with IP30 rating
- Multiple mounting options
- Embedded watchdog for auto recovery
- Two Ethernet ports for networking flexibility
- Option to use one LAN port connection
- WAN supports ADSL(PPPoE), Static IP and DHCP client
- AT commands & SMS over Ethernet
- Serial and I/O for connecting diverse field assets
- USB for storage or additional interface
- High speed Wi-Fi (IEEE 802.11/b/g/n) supports Access Point or Client
- Integrated standalone GPS
- Supports IPsec, PPTTP/L2TP, GRE/IPIP, DMVPN and OpenVPN tunnelling for establishing secure connections
- Advanced firewall with MAC/IP filtering, port mapping and DMZ support
- Firmware upgrade and configuration via Web, CLI and Intercel's Cloud Management
- Intercel's Cloud Management for remote device management and trouble-shooting
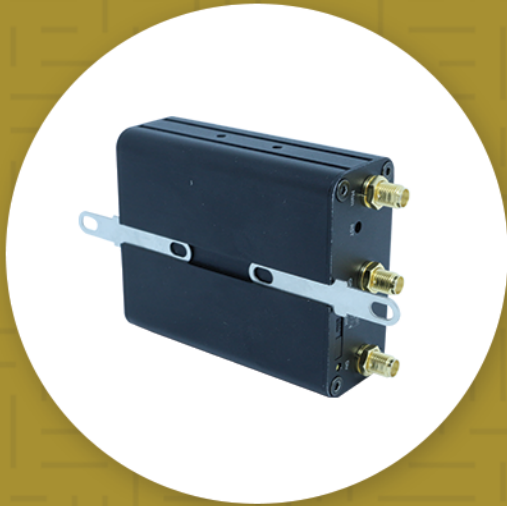- Wide range input voltages from 5 to 36 VDC

Model Descriptions

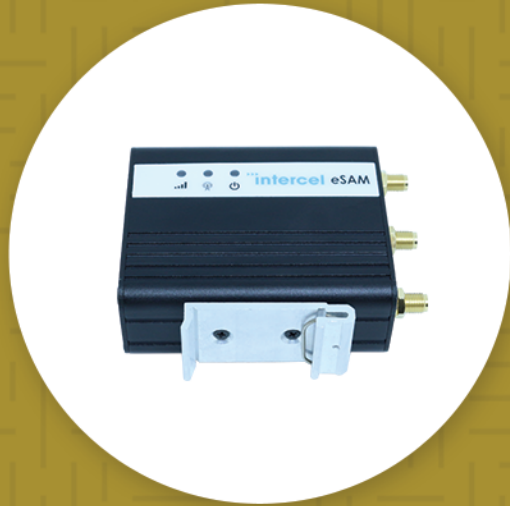| Model	Peak & Speed	Frequency Band
eSAM - 4Q	LTE Category 1 10Mbps Download 5Mbps Upload	4G LTE: B1, B3, B5, B7, B28 3G WCDMA: B1, B5,
eSAM - 4QX	LTE Category 4 150Mbps Download 50Mbps Upload	4G LTE: B1, B2, B3, B4, B5, B7, B8, B28, B40 3G WCDMA: B1, B2, B5, B8 2G GSM: B2, B3, B5, B8
eSAM - 4WX	LTE Category 6 300Mbps Download 50Mbps Upload	4G LTE: B1, B3, B5, B7, B8, B18, B19, B28, B38-B41 3G WCDMA: B1, B5, B6, B8, B9, B19

Mounting Options

Holding Bridles

*Holding bridles are sold separately.

35mm Din-Rail Clip

Package Contents

1. eSAM
2. Power Supply
3. GPS Antenna
4. Ethernet Cable
5. 3G/4G Antenna
6 35mm Din-Rail Clip
7. 5 Way Terminal Block

TECHNICAL SPECIFICATIONS

CPU & STORAGE

- Powerful 580Mhz CPU
- 1GB DDR2 SDRAM
- 128Mb flash memory

ETHERNET INTERFACE

- 1 X RJ45 LAN (10/100Mbps)
- IEEE Standards

SERIAL PORT

- 1 x RS232 interface (RS485/RS422
  optional made to order only)
- Serial RS232 via terminal block with RX,
  TX and GND
- 15KV ESD protection

I/O PORT

- 2 X I/O Interface
- GPIO via terminal block

LED INDICATION

- Power
- Network
- Signal

I/O Port

- 2 X I/O interface
- GPIO via terminal block

ANTENNA CONNECTORS

- 1 x SMA-K connector for GPS
- 2 x SMA-K connectors for 3G/4G

NETWORK & ROUTING

- Static, policy route
- Port forwarding
- RIP (V1/v2)/OSPF/BGP route
- Dynamic DNS

FIREWALL & FILTER

- IP Packet/Domain/Mac Filter
- NAT
- DMZ

VPN

- IPSec
- PPTP/L2TP client
- GRE/IPIP
- DMVPN
- OpenVPN

DEVICE MANAGEMENT

- Local or remote web browser HTTP
- CLI/Telnet command line
- Intercel's Remote SAM Cloud
  Management Platform
- SSH

SAM CLOUD

- View Online/Offline status of a device
- Remote terminal management
  and maintenance
- Check the status of internet data
  consumed at a specific date
- Device location via GPS
- Debug remotely
- Flow statics and data analysis

POWER SUPPLY & CONSUMPTION

- 1 x 4-pin Micro fit connector
- Wide range 5 - 36 VDC input voltage
- Power consumption:

    Idle: 40mA@+12VDC

    Communications: 240mA@+12VDC

MOUNTING OPTIONS

- 35mm DIN rail mount
- Wall mount with holding bridles
- Desktop

PHYSICAL & TEMPERATURE

- Dimension: 77.4 mm (L) x 64.2 mm (W) x 29.7 mm (D)
  without antenna connectors
- Operation temperature: -30 ~ +70°C
- Related humidity: <95% (non-condensing)

WARRANTY & SUBSCRIPTION

- Warranty: One year
- SAM Cloud: One year Subscription

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