SG-7100

Cellular Communications Gateway

Fully programmable, broadband connectivity for fleet management and fixed asset monitoring applications.

The SG-7100 cellular communications gateway is a powerful cellular platform with optional Wi-Fi and satellite, providing broadband connectivity for easy integration into fleet management and industrial fixed asset monitoring applications.

Ideal for sending mission-critical data from the field to the back office, the versatile SG-7100 creates a vital communications link that enables functions like dispatch, electronic forms/signatures, location-based services, HOS (hours of service) reports, collection of equipment data and much more.

The expandable, fully programmable SG-7100 also supports multiple LAN and WAN interfaces and features an onboard web server for forms in logistics applications. Designed to accelerate time to market, the smart device's configurable applications, modular hardware architecture and optional expansion cards offer the flexibility to meet evolving asset management challenges.

Cellular, wi-fi or satellite

Easy programming/ configuration

Integration flexibility

Quick to deploy and easy to manage

Small footprint

Sample Applications

Transportation
- Fleet management
- Workflow automation
- Vehicle maintenance
- Telemetry
- Dispatch and navigation
- Wi-Fi access point

SCADA & Fixed Equipment
- Primary/backup communication for SCADA systems
- Secure VPN IP access for PLCs, RTUs and other equipment
- Remote sensor data collection and control
- Building automation
- Video surveillance
- Device-agnostic connectivity

Processor and operating system

- Processor: ARM9, 450MHz
- Memory: 64 MB
- Flash: 128MB
- Operating System: Linux Open WRT
- Application Interfaces: TCP/IP
  - » *UDP/IP, DHCP*
  - » *HTTP*
  - » *IP* Router PPP
  - » HTTP Web server
  - » Telnet/SSH server
  - » NAT
  - » *NMEA*
  - » *GPS*
  - » *IP forwarding*
- Security: VPN (SSL v2, TLS v1), SSH server, SCP, SFTP

Cellular

- HSPA Penta-Band: 800/850/1800/1900/2100 MHz diversity capability. Fallback to HSDPA/UMTS/EDGE/GPRS
- EVDO Rev A Dual-Band: 800/1900 MHz diversity capability. Fallback to CDMA 1x Rev 0 and CDMA 1xRTT
- SIM: Single slot. Dual slot with telematics expansion card

Certification

- Regulatory: Fully certified FCC, CE, IC, PTCRB, Applicable carriers

External interfaces

- Standard:
  - » *1 x 100 Mbps Ethernet*
- (Optional) Telematics Expansion card:
  - » *1 x USB OTG, 1 x USB host*
  - » *2 x RS-232 or 1 x RS-232 and 1x RS-485*
  - » *1 x CAN bus*
  - » *1 x 1-wire interface*
  - » *3 x Digital/Analog In*
  - » *2 x Digital Out*
  - » *2 x Dedicated Analog (0 to 10 V, 12 bit resolution)*
  - » *Accelerometer: 3-axis, 12 bit*
- (Optional) Serial card: 1 x RS-232
- (Optional) Industrial Serial Card: 1 x RS-485
  - » *1 x RS-232*
- Status LEDs: Status, Communication, GPS

Environmental

- Operating temperature: -30 to +70°C

Dimensions

- 11.5 cm x 10.5 cm x 4.5 cm

Wi-Fi (optional)

- Service: IEEE 802.11b/g/n
- Frequency: 2.4 GHz

Satellite (optional)

- Service: IsatData Pro (IDP), Two-way, Global
- Frequency: Rx: 1525.0 to 1559.0 MHz; Tx: 1626.5 to 1660.5 MHz
- Elevation Angle: Up to -15° to +90°

GPS

- Standalone GPS, Assisted GPS, gpsOneXTRA Assistance™
- Wideband GPS Processing (20MHz) for improved measurement accuracy
- Option: Dual GPS and GLONASS with optional satellite

Electrical

- Input Voltage: 9 to 32 Volts DC, Optional SAE J1455 load dump protection
- Power Consumption (Typical @12V DC):
  - » *121 mA (connected to GPRS network)*
  - » *772 mA (peak transmitting, GPRS)*

Development support

- M2M Messaging: Lua Services Framework with core services and API. SDK with GUI-based development tools.
- Web Services: Web server installed.
- Optional, Configurable Device-Level Applications:
  - » *Analytics Agent - Notifications and reports for driver behavior and vehicle/asset performance.*
  - » *AVL Agent - Facilitates integration of IDP terminals into fleet management solutions.*
  - » *Garmin Dispatch Agent - Tracking, navigation, driver communication and dispatch using Garmin devices.*
  - » *J1939 Agent - Vehicle CAN bus connectivity for monitoring driver behaviour and vehicle/asset performance.*
  - » *ARC Agent - Alert on critical events, report status proactively and control simple devices remotely*

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