IOG851-0TL0x
IOG851-06L0x
4G IIoT LoRa Gateway

The IOG851 is optimized to acquire, process and filter large amount of real-time data. It creates secure IIoT system and enables cloud integration providing full operational control over field devices from any place in the world. The cost-effective industrial network solution is easy to scale connecting wide range of assets as systems, logic controllers, actuators, and sensors.

**Applications:**
- Industrial IoT and networking
- System cloud integration
- Smart City and ITS
- Remote monitoring
- LoRaWAN

**Industrial IoT & cloud integration**
- LoRa Gateway, Network Server
- HTTP, MQTT, Modbus TCP/RTU/ASCII

**Robust low-latency networking**
- Multi-WAN Failover / Load Balance
- 4G, Gigabit Ethernet

**Data & access security**
- VPN, Firewall; TR-069, SNMP Remote
- VLAN grouping, I/O ports disablement

**Open platform for developers**
- Python programming
- AMIT Linux SDK

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![Diagram of IOG851-0TL0x and IOG851-06L0x 4G IIoT LoRa Gateway]

- **IOG851-0TL0x**
  - 1* LTE (Dual SIM)
  - 1* LoRa 8 Channels
  - 4GE LAN
  - 1*GE WAN
  - 1*RS232/485
  - Dual Power Input DC 12-48V
  - 1*DI+1*DO
  - USB Data Logging
  - -0TL0x: LTE Cat.4
  - -06L0x: LTE Cat.6

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![Diagram of 4G IIoT LoRa Gateway for Industrial Automation]

- **Remote NOC**
- **4G Cat4/6**
- **4GE WAN**
- **Alarm**
- **Sensor**
- **Data Logging**
- **LoRa Node**
- **4G Ethernet fail-over WAN extender for Network or Net-device**
Specification Summary

Device Interface
- 4G Module: 1*4G, 2*SIM
- Ethernet: 5* RJ45 GE
- LoRa: 1*LoRa (8 Channel)
- Field Bus: 1*RS232/485 (Terminal Block)
- Log Storage: 1*USB
- I/O: 1*DI (“Logic 0”: 0~2V, “Logic 1”: 5V~30V), 1*DO (Relay Mode, up to 30V/1A)
- Power Input: 2* DC 12V ~ 48V (Terminal Block)
- Antenna Con.: 2*SMA (F-4G, 1* SMA (F)-LoRa

WAN & Uplink
- WAN: Cellular & Config. Ether-WAN; Failover, Load Balance
- Cellular: 3GPP, 2G/3G/4G, IP Pass-through, IPv4/6
- Ether-WAN: Dynamic IP, Static IP, PPPoE, PPPTP, L2TP
- Network Monitor: ICMP/DNS Query

Protocol
- LAN & VLAN: DHCP Server/Relay, Port/Tag based VLAN
- IPv6: Dual Stack, Static IPv6, DHCPv6, PPPoEv6
- Port Forward: NAT 1-1, 1-many, tansversal, DMZ, Virtual Server & Computer, VPN Pass-through
- Routing: Static, Dynamic - RIPv1/RIPv2, OSPF, BGP
- QoS: Policy-based, 802.1q and TOS for priority queues

Field Comm.
- Virtual COM: RFC2217, TCP Client, TCP Server, UDP
- Modbus: Gateway for Modbus TCP/RTU/ASCII Master/Slave Access; Slave for Device Status/Information Access
- Data Interchange: OPC UA Server, MQTT Broker, MQTT Client
- Data Logging: Sniffer, Off-line / Full-time Proxy, mixed modes

Object
- Scheduling: Time Schedule List
- Grouping: Host Grouping List
- Ext. Server: Email, Syslog, RADIUS, Scep, FTP, DDNS, IGMP

SKU Information:
IOG851-0TL01-00-y: LTE Cat.4
IOG851-0TL02-00-y: LTE Cat.4, build-in Network Server
IOG851-06L01-00-y: LTE Cat.6
IOG851-06L02-00-y: LTE Cat.6, build-in Network Server
‘yy’: Area Variant. As below table

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<th>Module Cert.</th>
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</table>

Security
- VPN Tunneling: IPSec, OpenVPN, PPPTP, L2TP, GRE
- Scenario: Site/Host to Site/Host; Hub and Spoke; Dynamic VPN
- VPN Capability: IPSec: up to 16 tunnels
- Firewall: SPI Firewall with Stealth Mode, IPS
- Access Control: Packet Filter, URL Blocking, MAC Filter

Administration
- Configuration: Web UI, CLI, Command Script, Python*
- Management: SNMPv3 Std. & AMIT MIB, TR069
- System: Upgrade, Backup & Restore, Reboot & Reset, SysLog
- FTP: FTP Server, User Account
- Diagnostic: Packet Analyzer, Diagnostic Tools

Service
- Cellular Toolkit: Data Usage, SMS, SIM PIN, USSD, Network Scan
- Event Handling: User Defined Manage/Notify Event; Action & Trigger by SMS, Mail, Syslog, SNMP Trap, Modbus, I/O
- LoRa:
  - LoRa Gateway, Public Network Server (external), Private Network Server (internal)
  - ISM band support: EU 863 - 870 MHz, U.S. 902 - 928 MHz, AS 923 MHz
  - Support for up to 8 uplink channels, 500 KHz bandwidth
  - LoRa technology: Spreading Factors
  - Support up to 200 Class A and C endpoints

Environment
- OP/Storage Temp.: -30°C ~ 70°C; -40°C ~ 85°C
- Humidity: 10% ~ 95% (non-condensing)
- Enclosure: Metal, DIN-Rail, Bracket (Optional)
- Dimension: 62x125x160mm (w/o mounting kit)
  62x135x160mm (with DIN Rail kit)

Certificate - CE
- Standards & Regulation
- EME: EN 55024, IEC 61000
- Radio: EN 301 489, EN 300 328 ,EN 301 893, EN50385
- Safety: EN 60950-1

Package Accessory
- 1*Device
- 1*Terminal Block (8-pin for DC Power & DI/DO)
- 1*Terminal Block (4-pin for serial port)
- 1* RJ45 Cable
- 1* DIN Rail Kit, 1*Screw Bag, 1*CD (User Manual)

Mechanic Drawing

(1) Front View
(2) Left View

AMIT Wireless Inc.
TEL: +886 (0)6 505 8026  FAX: +886 (0)6 505 8068
Web: http://www.amitwireless.com  Email: sales@amit.com.tw
No. 28, Lane 31, Huandong Rd., Sec. 1, Xinshi Dist., Tainan City 74146, Taiwan (R.O.C.)