



Industrial Cellular Series **IOG500-0T001** 4G IIoT RTU

Location Free Telemetry at Instant

IOG500-0T001 is a cellular-based remote terminal unit (RTU) for machine telemetry of SCADA system. With both Ethernet and serial interfaces, It can connect to both IP based network equipment and legacy serial devices. With 4G LTE WAN, it is non-geographic limit and can install at instant. Three are rich functions capable of performing Intelligent protocol conversion and secure data transfer. Smart event handling allows administrator to manage system or initiate event to trigger action remotely. It can also action and notify staff when system status is changed.

VPN Secure Transfer

To achieve secure transfer inside SCADA system, there are rich protocols inside RTU. Built in both IPv4/IPv6 and routing protocols are compatible with most ISP network. Cellular toolkit simplifies setting, utilizes ISP service and monitoring data usage. Capable of various VPN technologies, it can build a secure tunnel with standard VPN server for scenario requirement. Friendly setting with Web-UI for basic, CLI and Script window for advance requirement. Built-in TR-069 can work with AMIT-NMS and SNMP work with popular network tools for multi-site management.

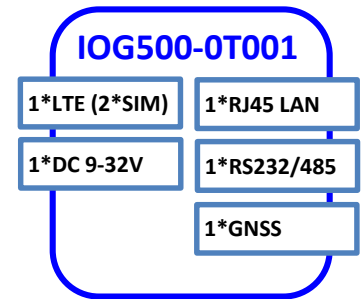
Intelligent Protocol Conversion

Built-in both Ethernet and serial interface, it can not only connect IP-based equipments but also legacy RS232 or RS485 serial devices. It behaves as a Modbus gateway that connects devices in the field and SCADA server to perform intelligent protocol conversion between Modbus TCP, RTU and ASCII.

Smart Event Handling

According to pre-defined rules, administrators can change RTU setting or trigger event action remotely by SMS or SNMP trap. When there is a new input or behavior change of RTU, it will trigger a new event to activate corresponding actions, and also can notify administrator or related devices by SMS or SNMP traps. It will be a useful function to work as automatic process when setting one event to trigger consecutive events for special purpose within RTU or more remote devices.

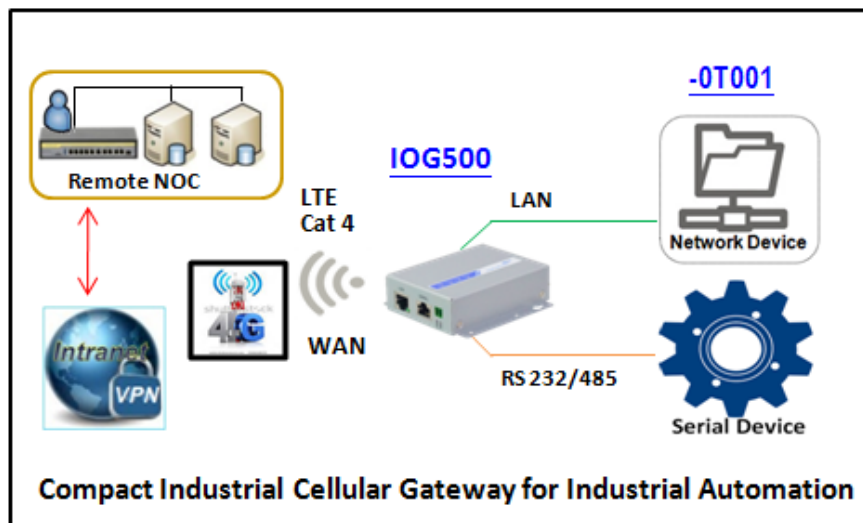
Block Diagram



Application

- Infrastructure: ITS, utility, AMR, street lighting
- Security: surveillance, environmental monitoring
- Industry: livestock, agriculture, factory
- Device SCADA: PLC, IED, generator, sensor, pipe
- Building: security, energy, waste, facility, lighting

Connection Diagram



Specification Summary

Device Interface

- **LTE Module:** 1*LTE-Cat.4 3GPP Release 11, 2* MicroSIM (3FF) slots
- **Ethernet:** 1*RJ45 Fast Ethernet
- **Field Bus:** 1*RJ45 RS232/485 (software configurable)
- **Power Input:** 1*DC 9V-32V (Terminal Block)
- **Antenna Con.:** 2*SMA for LTE , 1*SMA for GPS

WAN & Uplink

- **WAN:** Cellular
- **Cellular:** 2G/3G/LTE(*), IP Pass-through
- **Network Monitor:** ICMP/DNS Query

Protocol

- **LAN & VLAN:** DHCP Server/Relay, Tag based VLAN
- **Port Forward:** NAT, DMZ, Virtual Server, VPN Pass-through
- **Routing:** Static, Dynamic - RIP1/RIP2, OSPF, BGP

Field Com

- **Virtual COM:** RFC2217, TCP Client, TCP Server, UDP
- **Modbus:** Gateway for Modbus TCP/RTU/ASCII Master/Slave Access;
Slave for Device Status/Information Access

Object

- **Scheduling:** Time Schedule List
- **Ext. Server:** Email, Syslog, RADIUS, SCEP, DDNS, IGMP
- **Certificate:** My Certificate, Trusted Certificate, Issue Certificate

Security

- **VPN Tunneling:** IPSec, OpenVPN, PPTP, L2TP, GRE
- **Scenario:** Site/Host to Site/host; Hub and Spoke; Dynamic VPN
- **VPN Capability:** IPSec: up to 3 tunnels
- **Firewall:** SPI Firewall with Stealth Mode, IPS
- **Access Control:** Packet Filter, URL Blocking, MAC Filter

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
- **GNSS:** GPS Location Tracking / Viewer

Administration

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

Environment

- **Operation Temperature:** -22°F-158°F (-30°C-70°C)
- **Storage Temperature:** -40°F-185°F (-40°C-85°C)
- **Humidity:** 10%~95% (non-condensing)
- **Enclosure:** Metal, Mounting Tab
- **Dimension:** 90(L)x93(W)x27(H)mm (exclude antenna connectors)
90(L)x101(W)x27(H)mm (include antenna connectors)

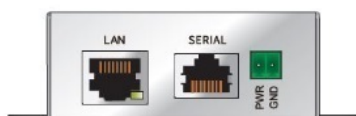
Certification & Carrier Approval

- CE
- FCC
- PTCRB
- AT&T

Package Accessory

- 1*IOG500-0T001
- 2*Cellular Antenna (3dB)
- 1*Terminal Block (2-pin for DC Power)
- 1*DIN Rail Kit, 1*Screw Bag
- 1*Power Adapter DC 12V/1A
- 1*CD (User Manual)

Mechanic Drawing



Front View



Rear View



Top View

SKU Information

IOG500-0T001-00-yy : LTE Cat.4

'yy' is referred to the SKU code in the table

SKU Code	Country	Mobile Operator	LTE Band	WCDMA Band	GSM Band	Certification	Carrier Approval
UA	USA	AT&T, T-Mobile	B2/B4/B12	B2/B4/B5	-	FCC, PTCRB	AT&T
UV	USA	Verizon	B4/B13	-	-	FCC	-
E0	Europe	All	B1/B3/B5/B7/B8/B20 /B38/B40/B41	B1/B5/B8	B3/B8	CE	-

Note

- Specifications are subject to change without prior notice.
- Available cellular modes depend on the specification of specific SKU.

ZCOMAX / AMIT USA

TEL: (562) 926-4588

Web: <http://www.zcomax.com> Email: sales@zcomax.com

3855 E La Palma Ave., Suite 240, Anaheim, CA 92807, USA