



4G Multi-port RTU IOG700-0T501 IOG700-06501

High Speed IIoT Telemetry

IOG700-0x501 is high speed 4G based remote terminal unit (RTU) for IIoT telemetry of SCADA system. With both Giga Ethernet and LTE Cat.4 or Cat.6, it can afford high speed device or sub network. It is non-geographic limit and can install at instant. With two Ethernet, it can connect to two network devices. It can also configure one port as fail over Ether-WAN for reliable dual-WAN scenario. With serial and I/O interfaces, it can connect to more legacy serial devices, sensors and relay output to control device. Micro-SD storage based data logging function can store serial and D/I data for non-broken or scheduling transfer. Smart event handling allow remote management and can initiate event to trigger action for automatic control purpose.

Reliable & Secure Transfer

Besides Cellular WAN, there is also configurable Ether-WAN for fail-over function. It can guarantee reliable transfer. Capable of various VPN technologies, it can build tunnel with famous VPN server for scenario requirement. Built in both IPv4/IPv6 and routing protocol are compatible with most ISP network. Cellular toolkit simplifies setting, utilizes ISP service and monitoring data usage. Easy setting. 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 connect not only IP based equipment but also acquired legacy serial devices. It is Modbus gateway connect SCADA server and remote machine to perform intelligent protocol conversion between *Modbus/TCP* and *Modbus/RTU/ASCII*. It can also be slave when SCADA server do configuration or Modbus master to access device when perform data logging function.

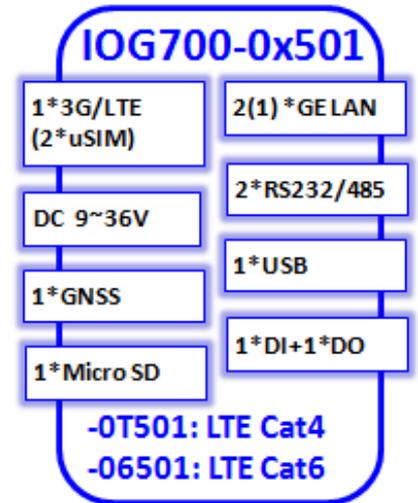
Non-Broken Data Logging

There are serial or D/I interface for IIoT telemetry requirement. To keep record all data when transaction no matter connection online or broken is helpful for Administrator's further data analysis and statistics. Multi-mode data logging function can work for scenario requirement. It can work for non-broken and scheduling transfer.

Smart Event Handling

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

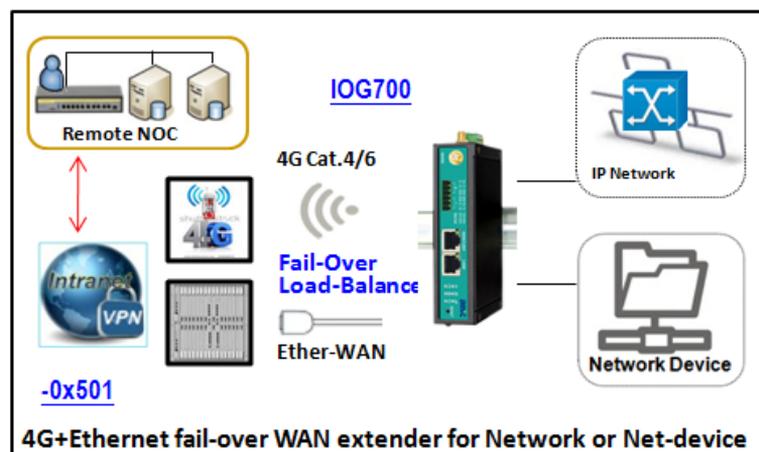
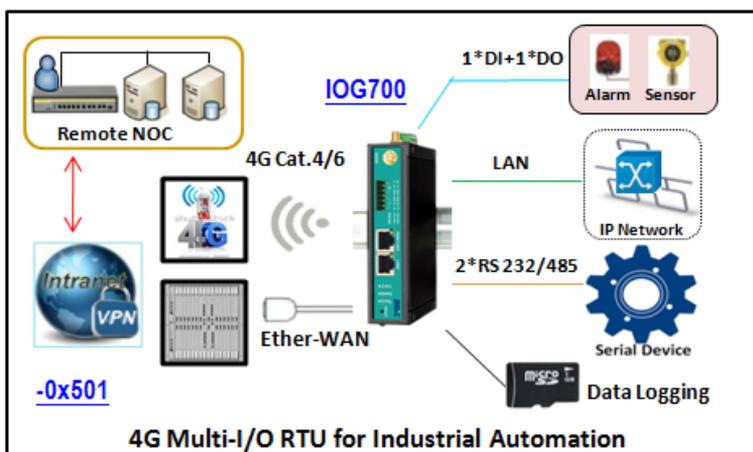
Block Diagram:



Application:

- Infrastructure: ITS, Utility, AMR, Lighting, Station
- Security: Surveillance, Environment, Disaster
- Industry: Livestock, Agriculture, Heavy, Factory
- Device SCADA: PLC, IED, Generator, Sensor, Pipe
- Building: Security, Energy, Waste, Facility, Lighting

Connection Diagram:



Specification Summary

Device Interface

- **LTE Module:** 1*LTE, 2*SIM, with GNSS
- **Ethernet:** 2*RJ45 GE
- **Field Bus:** 2*RS232/485 (Terminal Block)
- **Log Storage:** 1*USB, 1*Micro SD
- **I/O:** 1*DI ("Logic 0": 0~2V, "Logic 1": 5V~30V), 1*DO (Relay Mode, up to 30V/1A)
- **Power Input :** 1* DC 9V ~ 36V (Terminal Block)
- **Antenna Con.:** 2*SMA (F)-LTE, 1* SMA(F)-GNSS

WAN & Uplink

- **WAN:** Cellular & Config. Ether-WAN; Failover
- **Cellular:** 3GPP, 2G/3G/LTE, IP Pass-through, IPv4/6
- **Ether-WAN:** Dynamic IP, Static IP, PPPoE , PPTP, 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, transversal, DMZ, Virtual Server & Computer, VPN Pass-through
- **Routing:** Static, Dynamic - RIP1/RIP2, OSPF, BGP

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 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
- **Certificate:** My Certificate, Trusted Certificate, Issue Certificate

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
- **GNSS:** GPS Location Tracking

Security

- **VPN Tunneling:** IPSec, OpenVPN, PPTP, 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, 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

Environment

- **OP/Storage Temp.:** -30°C ~ 70°C ; -40°C ~ 85°C
- **Humidity:** 10%~95% (non-condensing)
- **Enclosure:** Metal, DIN-Rail, Bracket (Optional)
- **Dimension:** 31x99 x131mm (w/o mounting kit)
31x108x131mm (with DIN Rail kit)

Certificate - CE

- Standards & Regulation
- EMI: EN 55032: 2015 +AC: 2016 Class B
- EMS: EN 55024, IEC 61000
- Radio: EN 301 489, EN 300 328, EN 301 893, EN50385
- Safety: EN 60950-1

Package Accessory

- 1*Device
- 1*Power Adapter DC 12V/1A
- 2*Cellular Antenna (3dBi)
- 1*Terminal Block (2-pin for DC Power)
- 1*Terminal Block (4-pin for DI/DO)
- 1*Terminal Block (6-pin for 2*RS232/485)
- 1*DIN Rail Kit, 1*Screw Bag
- 4*Rubber feet, 1*CD (User Manual)

SKU Information:

IOG700-0T501-00-yy : LTE Cat.4

IOG700-06501-00-yy : LTE Cat.6

'yy': Area Variant. As below table

yy	SKU	Cellular Band	Module Cert.	System Cert.	GNSS
E0	EU	B1/3/7/8/20	CE, GCF	CE	GPS
U0	US	B2/4	PTCRB, AT&T	TBC	GPS
J0	Japan	B1/9/18/19/21	Telec, NTT, KDDI	Telec	GPS
J1	Japan	B1/8/41	Telec, Softbank	Telec	GPS
T0	Taiwan	B3/7/8/28	NCC	TBC	GPS
C0	China	B3/8/39/40/41	MII, SRRC	TBC	GPS
A0	Australia	B1/3/5/7/28/40	RCM	TBC	GPS

Comment:

- Specifications are subject to change without prior notice.
- Besides CE, other regional certification needs to be checked for availability.

Mechanic Drawing

(1) Front View



(2) Left View



(3) Bottom View



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