



# IOG700-CC501

## 4G CBRS IIoT RTU

### High-Speed IIoT Telemetry

IOG700 is a high-speed 4G-based remote terminal unit (RTU) for IIoT telemetry of SCADA system. With two Gigabit Ethernet and LTE uplink, 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 legacy serial devices, sensors and relay output to control device. Micro-SD storage based data logging function can store serial and D/I data. Smart event handling allow remote management and can initiate event to trigger action for automatic control purpose.

### Reliable & Secure Transfer

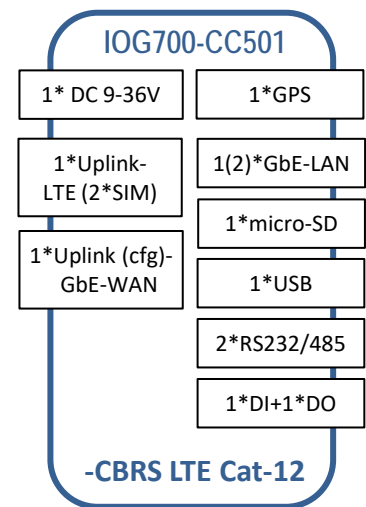
Besides Cellular WAN, there is also configurable Ether-WAN for fail-over function. It can guarantee reliable transfer. Capable of various VPN technologies, it can build tunnel with famous VPN server for scenario requirement. Built in both IPv4/IPv6 and routing protocol are compatible with most ISP network. 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 advanced requirement. Built-in TR-069 can work with AMIT-NMS and SNMP for remote device management.

### Intelligent Protocol Conversion

Built-in both Ethernet and serial interface, it can connect not only IP-based equipment but also legacy serial devices. It is the Modbus gateway connect SCADA server and remote machine to perform intelligent protocol conversion between Modbus/TCP and Modbus/RTU/ASCII. It can also be set as slave mode 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.



### Application:

- Infrastructure: ITS, Utility, AMR, Lighting, Water Pipe, Electricity, Security Surveillance, Facility
- Industry: Livestock, Agriculture, Factory/Manufacturing. In-Building Network
- Environmental Monitoring, Natural Disaster Detection

### Application Description:



1. Independent and close network make it securer for transmitting sensitive data.
2. Work at 3.5GHz CBRS spectrum with less interference and no additional cost.
3. Support Modbus protocol conversion between RS232/485 and IP-based devices.
4. Digital I/O with event handling allows to integrate sensors and alarm in the field.
5. DC 9-36V and -30-70C working temperature can work in a harsh environment.

## Specification Summary

### Device Interface

- **LTE Module:** 1\*Cat-12 LTE-TDD, 2\*SIM
- **LTE Band:** Band 42/43/48(CBRS)
  - 2x CA (Downlink):
    - B42+B42
    - B48+B48
  - 2x CA (Uplink):
    - B42+B42
    - B48+B48\*
  - 3x CA (Downlink):
    - B42+B42+B42
    - B48+B48+B48
- **Ethernet:** 1(2)\*RJ45 Gigabit Ethernet
- **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:** CBRS LTE, Ether-WAN; Failover
- **Cellular:** CBRS LTE, IP Pass-through, IPv4/v6
- **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:** Virtual Server, Virtual Computer, DMZ, 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 / Viewer

### 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, URL Blocking, MAC Filter

### Administration

- **Configuration & Mgmt.:** Web, Telnet & SSH, Command Script, SNMPv3 Std. & Proprietary 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, DIN-Rail, Mounting Bracket (sold separately)
- **Dimension:** 31x 99 x131mm (w/o DIN-Rail kit)  
31x108x131mm (with DIN-Rail kit)

### Certification

- FCC
- FCC Part 96 for CBRS(\*)

### Package Accessory

- 1\*IOG700-CC501
- 1\*Power Adapter DC 12V/1A
- 2\*CBRS LTE Antenna
- 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

## Mechanical Drawing



Front View



Left View

### Note

- FCC certification is under planning.
- B48+B48 CA for uplink is under development.
- Specifications are subject to change without prior notice.

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