

WL-RT600 Series

Rugged, compact cellular RTU

- 4G/3G/2G network optional
- Multiple operation modes
- Rich Serial and I/O ports
- Programmable for user-defined I/O and Modbus
- Flexible and practical data communications
- GPS/DB Optional
- Built-in RTC Clock
- Data storage optional
- Friendly configuration tool
- WLINK RTU Management Platform
- Wide operating temperature range: -30 to 75°C



Introduction

WLINK rugged RT600 series RTU (Remote Terminal Unit) is a cellular communication device installed at a remote location that collect data, codes the data into a format that is transmittable and transmit the data back to a central station or master, it's been developed especially for data collection and data transmission in IoT / M2M application.

RT600 offers two serial ports and I/O ports, enabling it to connect to a variety of fields devices. With PPP, TCP/IP protocol, it could convert user serial port data to mobile 4G/3G/2G IP network data and transmit the data to customer's data master via transparent TCP/UDP protocol. DI ports support various of digital signal such as door sensor and smoke detector. AI ports support 4~20mA/0~5V signal such as temperature sensor and humidity sensor. Especially, WL-RT600 is programmable for users to customize DI/AI ports and Modbus properties according to various application requirements.

RT600 is a smart remote internet-ready RTU with unique compact hardware and software designs, making it an ideal solution for a variety of industrial automation and monitoring applications including Cold Chain Logistics, Oil & Gas, Power, Environment Protection, Water Conservancy and Lighting control monitoring etc.

Basic Features

- Integrated 4G/3G/2G cellular communication
- Support programmable function
- Standard PPP, TCP/IP and UDP/IP protocol
- Industrial pluggable terminal block
- RS232 port for Configuration
- RS485 port for Modbus RTU
- 2 analog inputs and 2 Digital inputs
- Memory data storage optional
- Built-in RTC, support real-time clock
- Optimized EMC design
- Support APN and VPDN private network
- Support short message service (SMS)
- Support transparent data transmission
- Support data service center with dynamic IP address
- Support LED status indication
- Wide range voltage input
- External power on/off control
- GPS Optional

Enhanced Features

Multiple operation modes

- Always online, automatically connect to 4G/3G/2G when powered on
- Off-line when idle, online mode will be triggered by user data/ring/SMS
- Online/offline control by commands via user equipment
- Data loop Test

Flexible and utilitarian data communications

- Supports TCP/IP, UDP/IP, SMS and AT
- Self-defines transparent or protocol communications
- Self-defines customized data frame separator
- Self-defines reconnecting interval
- Self-defines heart-beat data frame

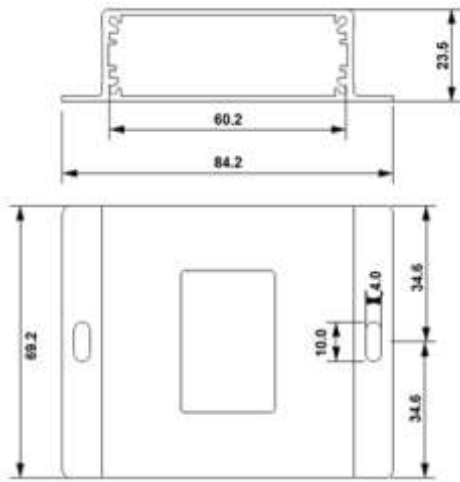
Parameters configuration and remote management

- Built-in parameters configuration menu
- RTU Configuration tool based on PC
- Remote parameters configuration via RTU Management Platform
- Remote parameters configuration by SMS
- Parameters configuration via AT+ command

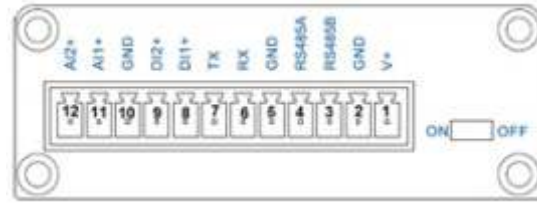
Specification

Cellular Features	Physical Characteristics
<ul style="list-style-type: none"> • Network: FDD 4G/TDD 4G HSPA/UMTS EDGE/GPRS • Output Power: Class4(2W)@900MHz; Class1(1W) @1800MHz • Protocol: PPP/TCP/UDP/ICMP • Gain: 1.4dBi@900MHz, 3dBi@1800MHz • RF impedance: 50Ω 	<ul style="list-style-type: none"> • Dimension: 69mm x 84mm x 23.5mm (84mm includes Wall mount kits) • Weight: 110g (not including accessories) • Mount: Wall Mount • Shock and Vibration: SAE J1455 • Operation temperature: -30~ + 75 °C • Storage temperature: -40~ +85 °C • Relative humidity: 0~95% (non-condensing) • Guarantee: one year
Interface	Power
<ul style="list-style-type: none"> • Cellular Antenna: SMA-K(Female) • Standard Micro SIM/R UIM interface • 12Pin Terminal block connector • GPS Antenna: SMA-K(Female) (optional) 	<ul style="list-style-type: none"> • Voltage: DC +7.5~32V (standard 12V/1A power adapter) • SIM/R-UIM Card: 1.8/3V • Consumption: Transfer mode: 30mA/12v (Average), Idle: 7mA/12V (GPS off)
Serial Communication Port	Device Management
<ul style="list-style-type: none"> • 1x RS232, RXD,TXD,GND • 1xRS485, A, B • Baud Rate: 300 – 115200bps • Protocol: ModBus RTU 	<ul style="list-style-type: none"> • RTU Configuration Tool • Support parameter configuration and firmware Upgrade via WLINK RTU Platform • Support remote parameters configuration by SMS • Support parameters configuration via AT+ commands
Analog Input	GPS /DB (Optional)
<ul style="list-style-type: none"> • Analog Inputs: 2 channels • Resolution: 12 bits • Input Range: 4~20mA, 0~5V 	<ul style="list-style-type: none"> • GPS sensitivity: -160dBm • GPS accuracy: 2.5m CEP • Update Rate: 1Hz@5Hz • Time To First Fix: Cold status 27s, Hot status 1s • AGPRS: Support
Digital Input	Certification
<ul style="list-style-type: none"> • Digital I/O: 2 Channels • Sensor Type: Dry contact 	<ul style="list-style-type: none"> • CE, CCC, RoHS

Dimensions

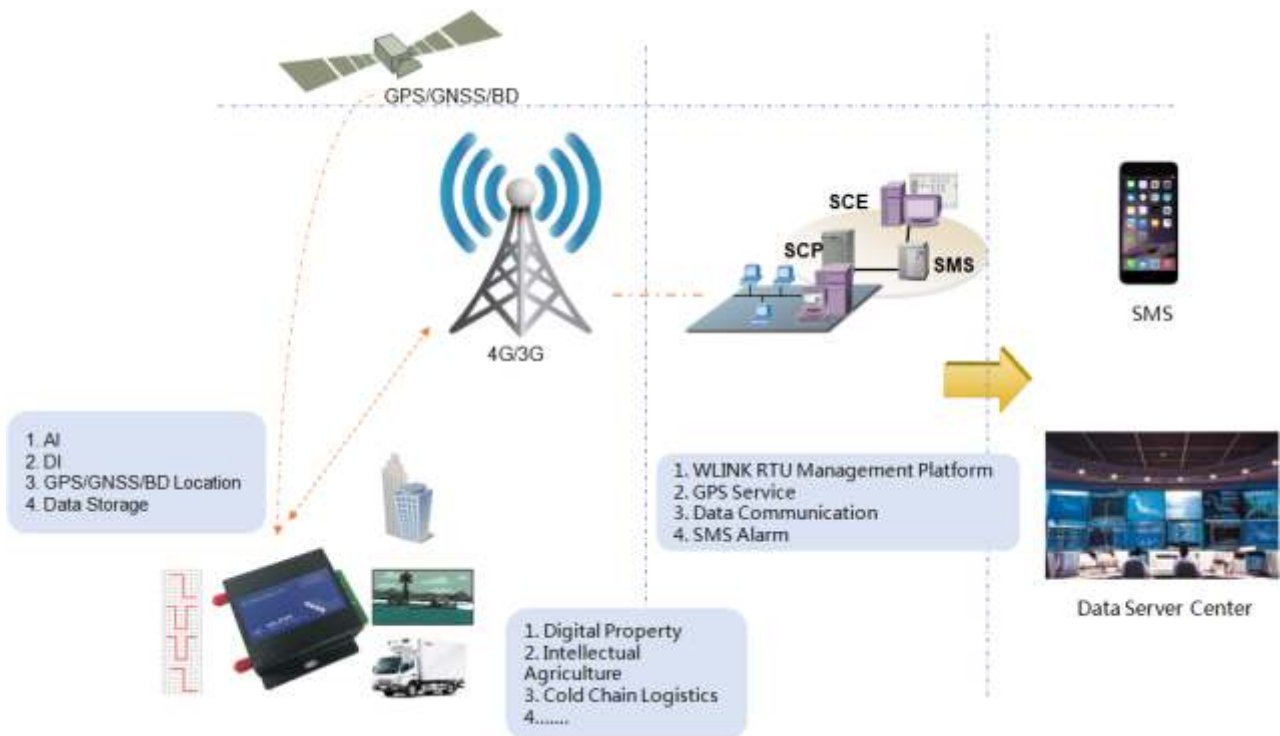


Interface Indication



Pin	Interface	Description
1	V+	Power Vin+, Anti reverse
2	GND	Power GND
3	RS485-B	RS485 B, 57600bps as default
4	RS485-A	RS485 A
5	GND	GND for RS232 communication
6	RX	RS232 RX, 57600bps as default
7	TX	RS232 TX
8	Di1+	Digital Input, Dry Contact
9	Di2+	Digital Input, Dry Contact
10	GND	Short to DI
11	Ai1+, Ai12+	Analog Inputs, 4~20mA or 0~+5V, 12bits Resolution

Typical Diagram



Package Contents

- RT600 Unit
- 1x 12VDC Power Supply Adaptor
- 1x Power connection cable
- 1x RS-232 connection Cable
- 1x 4G/3G antenna
- 1x GPS antenna (option for the models with GPS only)

Ordering Information

- WL-RT600-S: EDGE/GRPS
- WL-RT600-S-g: EDGE/GPRS, GPS
- WL-R600-Q: HSDPA
- WL-R600-Q-g: HSDPA, GPS
- WL-RT600-LQ: FDD-LTE/ TDD-LTE 4G
- WL-RT600-LQ-g : FDD-LTE/ TDD-LTE 4G, GPS