AltRTU600 Industrial Cellular RTU Specification

Support 5G/4G Industrial Data Acquisition instrument

AltRTU600 is an industrial cellular RTU developed based on 5G/4G LTE connectivity. It adopts high-powered industrial 32 bits CPU and industrial wireless module, and embedded real time operating system to realize comprehensive functions such as data acquisition, storage, display, control, alarm, remote transmission and remote management.

AltRTU600 supports RS232, RS485, Ethernet, Tipping bucket Rain gauge, Analog Input, Digital Input (dry and wet contacts), Digital Output, Relay Output and other interfaces. It supports internal flash and external expansion Micro-SD card to store data, and network communication through 5G or 4G, NB IoT, Lora, Ultra-short wave and other ways. It has powerful functions, stable performance, and supports low power consumption working mode.

AltRTU600 has been widely used in flood mitigation, hydrology, water resources, water pollution, environmental monitoring, meteorological monitoring, and so on.

Product advantages

- ✓ Trigger collection Rainfall data
- ✓ Regularly collection Water Level, Rainfall , Water Quality, and other data
- ✓ Regularly upload Rainfall, Water Level, Flow rate, Water Quality, and other data
- ✓ Alarm trigger and upload Rainfall, Water Level, Flow rate, Water Quality, and other data
- ✓ Support local storage Rainfall, Water Level, Flow rate, Water Quality, and other data
- ✓ Remote measurement current Rainfall, Water Level, Flow rate, Water Quality, and other data
- ✓ Remote query local historical data
- ✓ Local export historical data
- ✓ Support upload battery voltage
- ✓ Support capture image
- ✓ Support local manual setting data
- ✓ Backup data through 5G/4G network data communication and SMS
- ✓ Built in temperature and humidity sensors
- ✓ Support automatic upload when main power failure(Only AltRTU600E enhanced version support)
- ✓ Support GPS positioning (optional)
- ✓ Support PoE(PSE)(optional)

Interface description

Serial ports：3 RS232 and 3RS485

-- Form: 3.5mm pitch industrial terminal

Debug serial：1 RS232--Form:DB9 Female

Ethernet: one 10/100Mbps Ethernet ports(RJ45)

Antenna: Standard SMA female interface, 50 ohm

SIM/UIM : Standard drawer type user card interface

Micro SD card：Standard self-propelled Micro SD card interface

Power : 1 main power supply and 1 backup power supply

　--Form: 4PIN 3.81MM pitch industrial terminal

Wake up button: Tact switch

Grounding terminal: M3 screw grounding protection terminal

LCD screen: 128 * 64 dot matrix LCD display screen

Keyboard: Standard 2 * 8 keyboard

Indicator lights: Power, Online, SIM1, SIM2, Run, Rain, DI0-7, Relay0-3 and other working status indicators

Udometer interface: 1 tipping bucket Udometer interface

ADC: 6-channels analog input interface, 4-20mA&0-5V

DI: 8-channels　digital input interface (optical isolation)

DO: 2-channels digital output interface (optical isolation, OC gate output)

Relay: 4-channels relay output interface

Power output: 5-channels controllable output power supply (single channel rated output current 1A, 5-channel rated output current total 2A, built-in overcurrent protection)

Electrical parameters

Power supply range: DC 9~35V (12VDC recommended)

Communication current (AltRTU600): 100mA@12VDC (HIGH mode, 100B/S data transmission)

Communication current (AltRTU600E): 200mA@12VDC

Collection current(AltRTU600): <10mA@12VDC

Sleep(Static duty) current: <2mA@12VDC

Deep Sleep current: < 40uA @ 12VDC

Environmental parameters

Operating temperature: -35~+75ºC(-31~+167℉)

Storage temperature: -40~+85ºC(-40~+185℉)

Relative humidity: 95% (non-condensing)

Mechanical parameters

Shell Material: Iron

Dimensions: 166.2x147.8x44.5mm (excluding accessories)

Weight: approximately 1200g (excluding accessories)

Installation: Mount Kit or DIN Rail35mm (optional)

Supported frequency bands

5G NR SA/NSA:n1/2/3/5/7/8/12/20/28/41/ 66/71/77 /78/79
TDD-LTE:B38/39/40/41
FDD-LTE:B1/2/3/4/5/7/8/13/17/20/25/28
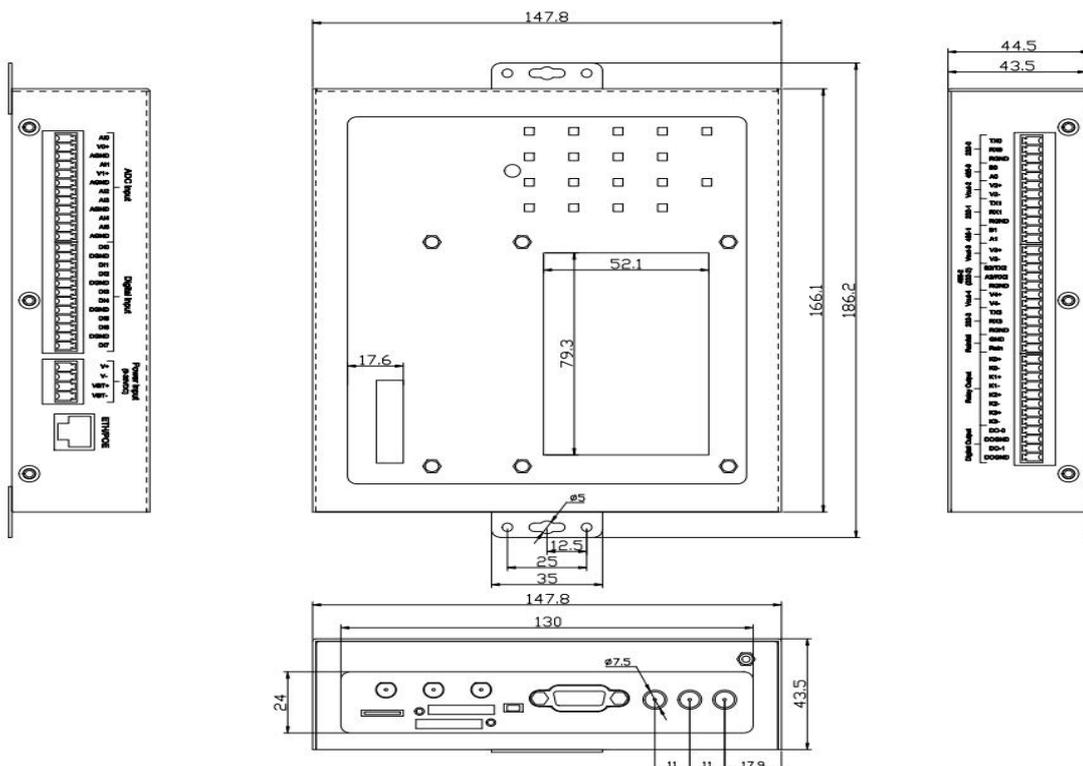**WCDMA:**850/900/1900/2100MHz
TD-SCDMA:1880-1920/2010-2025MHz(A/F)
CDMA2000 1x/ EVDO Rev. A:800/1900MHz
GSM/GPRS/EDGE:850/900/1800/1900MHz
CDMA:800/1900MHz

Dimension: (Unit: mm)

Applicable Models:

Product Type	Model	Product Name
Standard (low-power consumption)	AltRTU600-R	5G industrial cellular RTU
	AltRTU600-L	5G Redcap industrial cellular RTU
	AltRTU600-A	4G industrial cellular RTU
	AltRTU600-F	4G FDD industrial cellular RTU
	AltRTU600-Q	4G FDD/TDD industrial cellular RTU
	AltRTU600-H	4G Cat1 industrial cellular RTU
Dual SIM (low-power consumption)	AltRTU600-RS	5G Dual SIM industrial cellular RTU
	AltRTU600-LS	5G Redcap Dual SIM industrial cellular RTU
	AltRTU600-AS	4G Dual SIM industrial cellular RTU
	AltRTU600-FS	4G FDD Dual SIM industrial cellular RTU
	AltRTU600-QS	4G FDD/TDD Dual SIM industrial cellular RTU
	AltRTU600-HS	4G Cat1 Dual SIM industrial cellular RTU
GPS (low-power consumption)	AltRTU600-RP	GPS+5G industrial cellular RTU
	AltRTU600-LP	GPS+5G Redcap industrial cellular RTU
	AltRTU600-AP	GPS+4G industrial cellular RTU
	AltRTU600-FP	GPS+4G FDD industrial cellular RTU
	AltRTU600-QP	GPS+4G FDD/TDD industrial cellular RTU
	AltRTU600-HP	GPS+4G Cat1 industrial cellular RTU
GPS+Dual SIM (low-power consumption)	AltRTU600-RSP	GPS+5G Dual SIM industrial cellular RTU
	AltRTU600-LSP	GPS+5G Redcap Dual SIM industrial cellular RTU
	AltRTU600-ASP	GPS+4G Dual SIM industrial cellular RTU
	AltRTU600-FSP	GPS+4G FDD Dual SIM industrial cellular RTU
	AltRTU600-QSP	GPS+4G FDD/TDD Dual SIM industrial cellular RTU
	AltRTU600-HSP	GPS+4G Cat1 Dual SIM industrial cellular RTU
Enhanced	AltRTU600E-R	5G enhanced industrial cellular RTU
	AltRTU600E-L	5G Redcap enhanced industrial cellular RTU
	AltRTU600E-A	4G enhanced industrial cellular RTU
	AltRTU600E-F	4G FDD enhanced industrial cellular RTU
	AltRTU600E-Q	4G FDD/TDD enhanced industrial cellular RTU
	AltRTU600E-H	4G Cat1 enhanced industrial cellular RTU