



2G/3G/4G RTU

*Data acquisition, transmission and intelligent control over IoT devices
Support a range of cellular networks like GSM, WCDMA and LTE 4G
High reliability, cloud-based, high-performance embedded processor*

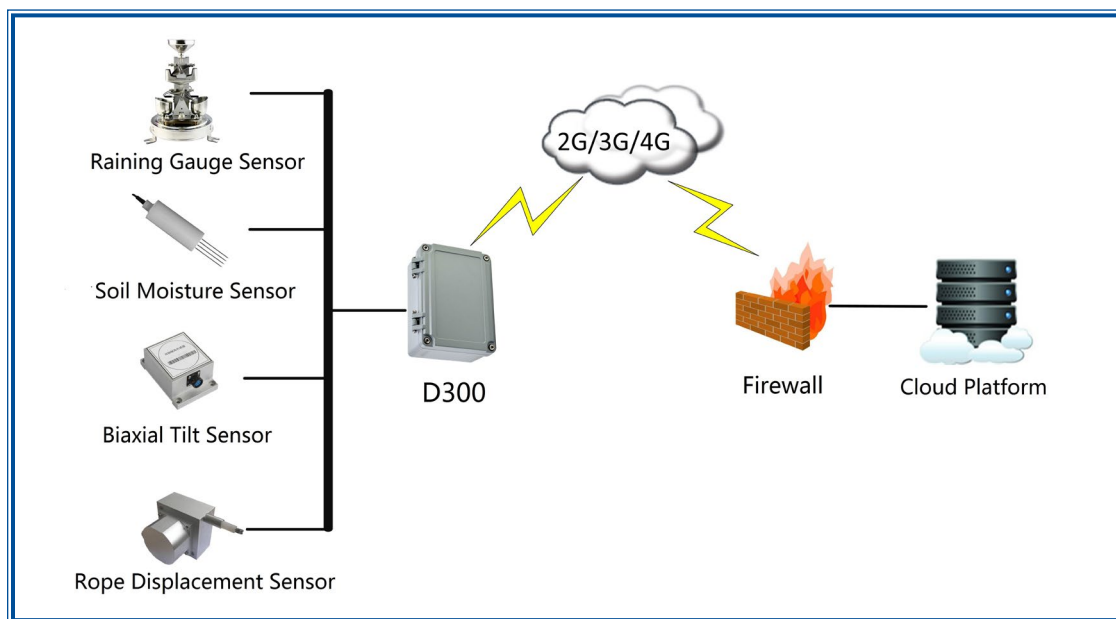
RTU D300 transmission unit, is a type of industrial-grade remote wireless data transmission equipment, supporting 4G LTE, 3G and 2G wireless network. These wireless protocols include GPRS/WCDMA/TDSCDMA/LTE-FDD/LTE-TDD.

RTU adopts industrial-grade ARM processor, real-time operating system as its software platform. With high capacity RAM and embedded MQTT protocol, online maintenance technology, Synway's RTU assures the data terminal online, smooth data transmission and achieve high-speed and reliable data transmission.

The cloud management platform is the software management platform for monitoring and operating D300 devices. Synway RTU D300 is connected to the cloud administration platform via the MQTT interface and reports the data to center. The platform helps to acquire real-time device data, store it to the database, and synchronize among users. The cloud platform can obtain and send the configuration data of the device on remote.

Typical Application:

Synway's RTU series have been widely adopted in landslides, mudslides, ground collapse, ground cracks and other geological disaster-prevention activities. Through a variety of data acquired by Synway RTU product, we could monitor the complex and changeable geological environments, and effectively avoid the geological disasters.



Key Features and Benefits:

Industrial Grade Design

- Industrial-grade design with high-performance embedded processors
- Support dual data center backup, and simultaneous data receptions in 4 data centers
- High RAM and TCP/IP stacks with Synway's own intellectual property rights

RTU D300



- For data acquisition, data transmission and intelligent control over IoT devices
- Support remote online maintenance technology to ensure 24X7 operation & connectivity
- High-speed, stable and reliable TCP/UDP transparent data transfer
- Support voice, SMS, data trigger mode and automatic timeout disconnect
- Minimize data stream and power consumption for high efficiency
- Supports designated sampling cycles to fit into diverse acquisition

High-reliability and Robustness

- WDT watchdog design to ensure system stability
- Adopt FreeRTOS system for high stability and reliability
- Intelligent off-line detection, automatic reconnection and data transmit
- SIM/USIM built-in 15KV ESD protection, 1.8V/3V push-rod SIM card interface
- RS232/RS485 interface built-in 15KV ESD protection P
- Power interface built-in reverse protection and overvoltage protection
- Metal shell(IP67 class) protection suitable for a variety of industrial applications

Product Specifications:

Product models:

D300: 1*SIM port, 1*Serial RS232 port and 2* Serial RS485 port

Theoretical bandwidth

LTE features:

Maximum support non-CA CAT4, Support 14-20MHz RF bandwidth, Downlink support multi-user MIMO

FDD: Maximum uplink rate of 50Mbps, maximum downlink rate of 150Mbps.

TDD: Maximum uplink rate 35Mbps, maximum downlink rate of 130Mbps

WCDMA features:

Support 3GPP R8 DC-HSPA; Support 16-QAM, 64-QAM and QPSK modulation

3GPP R6 CAT6 HSUPA: Maximum upstream rate of 5.76Mbps

scenarios

- Trigger SMS alarm at defined threshold and give out honk alarm
- Export captured data by software configuration and download data on remote
- Support built-in Lithium battery power supply for data security in power-off
- Directly trigger alert signal by RTU on the field
- Support for local SD card expansion

Cloud-Based Platform

- Add on and remove RTU, check and change RTU information
- Real-time monitor data or changeable data in defined cycles
- Real-time detect RTU parameters include: flash, signal, voltage, temperature and humidity to assure RTU performance on remote
- Configure sensors and help them restart on remote
- Remote control operating mode of RTU, log upload frequency and other parameters
- Support firmware upgrade on remote

3GPP R8 CAT24 DC-HSPA: Maximum downlink rate 42Mbps

ID-SCDMA features:

Support CCSA Release 3

Maximum upstream rate 2.2Mbps, maximum downlink rate 4.2Mbps

CDMA features:

Support CDMA 1X Advanced, 1XEV-DORevA

Maximum upstream rate 1.8Mbps, maximum downlink rate 3.1Mbps

GSM features:

R99: and CSD transfer rate: 9.6kbps, 14.4kbps

RTU D300



Product Specifications

Transmitting Power:

Class 4 (33dBm \pm 2dB) for GSM900

Class 1 (30dBm \pm 2dB) for DCS1800

Class E2 (27dBm \pm 3dB) for GSM900 8-PSK

Class E2 (26dBm \pm 3dB) for DCS1800 8-PSK

Class 3 (24dBm \pm 1dB) for CDMA BCO

Class 3 (24dBm 1/–3dB) for WCDMA bands

Class 2 (24dBm 1/–3dB) for TD-SCDMA bands

Class 3 (23dBm \pm 2dB) for LTE FDD Bands

Class 3 (23dBm \pm 2dB) for LTE TDD bands

Receive Sensitivity

<-93.3dBm

Antenna interface

RF antenna interface

GNSS antenna interface (optional)

Impedance: 50 Ω

Physical Interface

Serial port: 1* RS232 and 2* RS485

Analog port : 1*voltage and 1* current

1* switch port and 2* relay port

Connectivity: RS232, RS485, TTL

Serial parameter: Baud rate: 1200/2400/4800/9600/14400/19200/38400/57600/115200; Data bits: 5/6/7/8; Check bit: none/odd/coupled; Stop bit: 1/2

SIM card interface: Adaptive support for 1.8V/3.0V SIM

Optional Power supply Types

3 types mixed: Solar energy, built-in lithium batteries, external battery

2 types mixed: Solar energy, built-in lithium batteries

External storage battery

Mains Power

Power Supply Requirement

voltage range: 9V to 15V

Typical supply voltage: DC12V/1A

Complimentary Adapter: 12V@1A

Power consumption: 35 to 45mA@12VDC in standby; 80 to 95mA@12VDC in operational mode

Physical characteristics

Dimensions: 101 x 76 x 21.8mm

Shell security grade: IP67, isolated from system, suitable for industrial field applications

Weight Net Weight: TBD

Other Parameters

Operating temperature: -40 to 85°C (-40 to 185 degrees F)

Storage temperature: -40 to 85°C (-40 to 185 degrees F)

Relative humidity: 8 to 90% (no condensation)

Storage humidity: 8 to 90% (no condensation)

About Synway

As a major manufacturer and supplier of communication products and solutions, Synway specializes in providing superior Multimedia Gateway, Integrated Multimedia Switch, Telephony Hardware in use for Telecom communications. www.synway.net

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