About us

RisingHF is a national qualified high-tech enterprise and specialized-refined company focusing on the innovation and development of the new generation Internet of Things communication technology and intelligent hardware.

The core research and development team is composed of senior technical experts from famous international company of communication, sensing and industrial equipment with many years of accumulation and innovation experience in the field of LPWAN communication, especially in the physical layer, communication protocols and communication systems. we provide customers end-to-end iot solutions inclouding LPWAN modules /SIP, smart sensors, gateways and cloud servers/iot platforms.

Our products and solutions have been widely used in smart city, smart security, smart metering, Industry 4.0, personnel and equipment tracking and other fields.
Company has more than 50 patents and copyright.

Our products,certieid by CE/FCC/IC/TELEC/ANATEL/ROHs, have been widely used in EU,US,Japan,Australia and Asia markets and widely recognized by customers wordwide.

RISINGHF

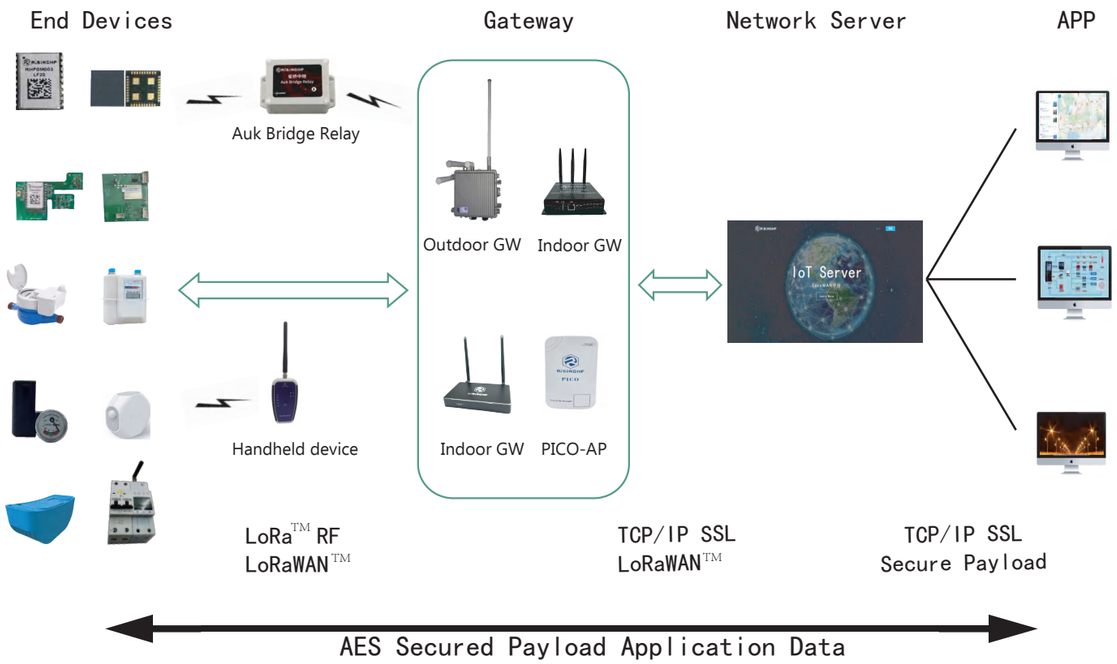
A leading supplier of IOT communication solutions and intelligent hardwares

RisingHF Network (shenzhen) Co., Ltd

Address: Room 13D, 13th Floor FuSen building, HuaXia 2nd Road, GuangMing District, Shenzhen 518106 China
Website: www.risinghf.com
Email: saleswww@risinghf.com Tel: +86 755 86529656

2025

Low Power IoT Solutions



The low-power IoT solution of RisingHF has been widely used in many domains and applications such as smart city, smart metering, smart security, industry 4.0, human and asset tracking etc.

* Low Power and Battery Life

Down to 1.4uA Sleep Current could satisfy the low power requirement of most IoT applications. Up to 10 years batter life lower down battery cost and minimize maintenance.

* Low Cost

Low cost of device with NO monthly fee as Cellular technology.

* Efficient Deployment and Fast to the market

ISM band and open LoRaWAN protocol with low cost HW help the operators and SI deploy the network and provide service more efficiently.

* Long Range with Deep-in-door coverage

Up-to 10Km range in LOS environment and very suitable for deep-in-door coverage. Very easy for metering even installed in tough environment.

* Network Deployment on Demand

With License-free ISM band, customers could add network according to the deployment of sensors and end devices to make seamless coverage with blind-points removed. The dedicated network with encryption will keep the privacy of uses' data.

* Geo-location

The signal from end devices could be received by many GW, so it's feasible to make geo-location with RSSI and TDOA. This will be very useful for tracking and those applications which require position information.

* Open ECO-system with Mature Industrial Chain

The open and unique LoRaWAN standard allow the inter-operation and compatibility between devices from different vendors.This make industrial chain get mature even with different of vertical applications in one network.

Module and SIP

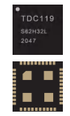
LoRaWAN module/SIP

RHF0M003

* Low Power: down to 1.4uA Sleep Current
* Size: 14×20mm
* Support LoRaWAN Class A/B/C
* Certified by CE/FCC/LoRa Alliance
* Worldwide band-plan support
* Support ReeLink

RHF0M0E5

* Low Power: 2.1uA Sleep Current (WOR mode)
* Size: 12×12mm
* Support LoRaWAN Class A/B/C
* Certified by CE/FCC/LoRa Alliance
* Worldwide band-plan support



TDC119

* SIP design
* Size: 12×12mm
* Support LoRaWAN Class A/B/C
* Support LoRaWAN and ReeLink networking protocol
* 256KB Flash, Support FUOTA

GW Module

RHF0M302

Features:

* 8 CH half-duplex GW module
* Support Class A/B/C
* SPI interface
* Worldwide band-plan support
* 24 pin package/mini-pcie port Optional
* *Supports independent background noise scanning LBT

Performance:

* -141dBm RReceiving sensitivity /SF12 125KHz
* Max 27dbm/22dBm TX power
* 5V DC Supply

2.4G Module

RHF0M083

* Low Power: down to 2.7uA Sleep Current
* Size: 23 x 28 mm & 33 pins SMT
* Support 2.4GHz ISM band

RHF0M084

* Low Power: down to 2uA Sleep Current (WOR mode)
* Size: 23 x 28 mm & 33 pins SMT
* Support 2.4GHz ISM band & Sub-GHz LoRa

Application:

A.Provide network coverage solutions for long-distance cold chain transportation
B.Address the cost of small privatized lorawan networks and gateways
C.Other application scenarios requiring small networks and portable mobile gateways

Gateway

Outdoor GW

* High reliability
* One of the designated brand products of mainstream operators
* Large scale products applied to city level network coverage

RHF2S208

* Support LoRaWAN Class A/B/C
* Carrier Level full-duplex or half-duplex GW with 8CH or optional 16CH
* Power Supply: POE or external DC Supply
  Internal battery could last for >4hours under full-load conditions
* Industrial temperature range: - 40℃ to 75℃
* Worldwide LTE band support
* IP67 water-proof
* With Web UI for quick configuration and diagnosis
* Support noise floor scan
* Worldwide LoRaWAN band-plan support

Economical outdoor GW

RHF2S225

* Worldwide LoRaWAN band-plan support
* Economy: 8-channel half-duplex
* Power Supply: external DC Supply
* Industrial temperature range: - 40℃to 75℃
* Worldwide LTE band support
* IP67 water-proof
* With Web UI for quick configuration and diagnosis
* Support noise floor scan
* Support LoRaWAN Class A/B/C

Indoor GW

RHF2S025

* 8CH full-duplex or half-duplex GW
* Temperature Range: - 20℃ to 65℃
* WiFi and Ethernet for backhaul
* Worldwide LoRaWAN band-plan support
* Suitable for different industrial use cases
* Support Class A/B/C
* 12V DC Supply
* Optional 4G LTE
* Support AP and STA mode
* Support noise floor scan

Auk Bridge Relay

RHF3MR01

* Compatible with LoRaWAN Class A standard
* IP68 ABS waterproof housing
* Ultra-low power consumption, maintenance-free during the life cycle
* 12Ah battery, typical service life is more than 3 years
* Support devicehealth monitoring
* Built-in temperature sensor for real-time temperature monitoring
* Battery voltage and capacity detection
* Support remote wireless upgrade function (FUOTA)

Network Server

IoTSquare

https://iotsquare.xyz

Integral Data Recovery for User

* Support online data dissemination and tracking
* Provide Integral data stream from protocol layer to application layer

User-friendly Network Server Platform

* Device On-line and off-line notice
* Device Management, communication with Cloud according to authorization
* Well finished Device Management, device registration and on-line debug

Simple and easy-to-use Data Interface

* Support Push by HTTP/HTTPS
* Provide Push service for NAT Local network user
* Open interface support via token Authentication to get the configuration of end devices and GW

Worldwide LoRaWAN Band-plan Support

* Support all V1.0.x version of LoRaWAN protocol
* Support Class A, B and C join network
* Support MACCMD dissemination
* Support ADR
* Support CN470, EU868, IN865, AS923, US915 etc

Extensible architecture with flexible deployment support

* Flexible deployment on cloud worldwide
* Support On-premise installation
* Extensible micro-server architecture and container support

Flexible Interface for GW

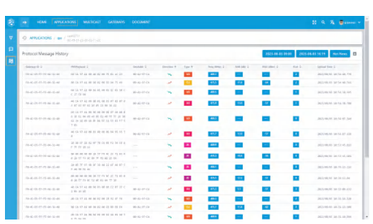
* SDK for IoTSquare
* Support UDP and compatible with Semtech Packet Forwarder

Multicast and Broadcast Support

* Device grouping management
* Multicast and broadcast via Class B and Class C
* Support FW update OTA based on broadcast feature of Class C

Packet segment and re-assembly Features

* Support packet segment for long packet of uplink and recover at NS side
* Resolve the packet-length limit issue of LoRaWA protocol and suitable for industrial applications with long packet transmission

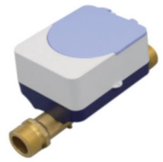


Intelligent Hardware

Smart meter

Non-magnetic
smart water meter
RHF1S052

* Low power consumption, typical 8 years battery life time
* Optional DN 15/20/25
* Flow ratio Q3/Q1: 100
* Support relay function
* Ingress protection: IP68
* Worldwide band-plan support
*Support：LoRaWAN/NB-IOT



Ultrasonic
smart water meter
RHF1S213

* Low Power Consumption 6/10 years of operation
* Various Pipe Diameter: DN15/20/25/40
* Q3/Q1: R160/R250/R400
* Water temp Range: 0.1°C to 30/50°C
* Protection Class : IP68
* Support：LoRaWAN/NB-IOT
*With valve or NO valve

Single phase
smart meter
RHF168

* Measurement accuracy：Active electric energy level 1
* Size:160 x 112 x 60mm
* Rated current:10 (80)A
* Rated voltage:220V
* Protocols：Modbus-RTU、DL/T645-2007 and DLMS
* Support：LoRaWAN / 4G

Smart gas meter
RHF1S061

* Low power consumption
* Nominal flow G1.6/2.5/4(optional)
* The on-off valve current is less than 150mA
* The static working current less than 25uA
* Measurement accuracy Class 1.5
* Total pressure loss is less than 250Pa
* Maximum working pressure 50kPa
* LoRaWAN/NB-IOT/Cat-1/Cat-M1

LoRaWAN cyble sensor
RHF1S056

* IP68 waterproof design
* Size:105 x 73 x 60mm
* Battery life exceeds six years
* Replaceable battery
* Support：LoRaWAN
* Built-in NFC function module
* Portable installation, no wiring required, no external power supply required
* Good compatibility, fully compatible with all water meters equipped with Cyble targets

Smart End Node

Temperature & Humidity Sensor RHF1S001

* Battery life 10 years
* Measurement humidity range: 0% to 100%RH
* Measuring temperature range: -40℃ to 80℃
* Operating temperature -40℃ to 85℃
* Protection Class : IP64
* Support：LoRaWAN

RS232/RS485 to LoRa transparent transmission DTU（RHF3M485）

* Supports RS485 and RS232 interfaces
* High isolation RS485 interface
* Built-in 2KB data buffer for automatic subcontracting
* Compatible with EIA RS485, EIA RS232 and global LoRaWAN protocols

Smart Fire Extinguisher Sensor RHF1SFE2

* Battery life : 3years
* Low power consumption
* Monitor the inside pressure, ambient temperature and position move detection
* Support：LoRaWAN

Color Sensor RHF1S020RGB

* Battery life : 3years
* Detect RGB color value (light triggered)
* Support mobile alarm and temperature and humidity detection
* Support：LoRaWAN

Intelligent Hardware

Edge Computing Gateway

Industrial Grade
Edge Computing Gateway
RHF2SG01

RHF2SG01 is an intelligent edge gateway designed for industrial field IoT projects that address the access of various protocols of terminal devices, with data collection and equipment monitoring.

* Network communication: Support 10M/100M Ethernet and 4G Cat-1 with intelligent switching function
* LTE Cat.1 band:
  LTE-FDD：Band1/3/5/8 LTE-TDD：Band34/38/39/40/41
* Device communication interfaces: 3 x RS485, 1x RS232
* Communication protocols: Supports Modbus, CJ/T188, DL/T 645, IEC 104, DL/T 698.42, Q/GDW 1376.2, DL/T 860, Q/GDW 1242, Q/GDW 739, CoAP, DL/T 634.5103, DL/T 634.5104, Q/GDW 376.1
* DC 5-24V input,peak power consumption less than 10W (MAX), with stable power consumption less than 4W.
* IP40 rating for water and dust protection
* Working temperature range: -30~70℃
* Installation methods: Wall mounting or DIN-rail mounting

Industrial Air Conditioning Controller

Air Conditioning Controller
For Energy Saving
RHF2SG02

RHF2SG02 is an intelligent controller for industrial precision air conditioners. It connects and controls via RS485 interface, supports various air conditioning protocols to achieve the goal of energy saving and emission reduction.

* Network communication : 4G Cat-1
* LTE Cat.1 band:
  LTE-FDD：Band1/3/5/8 LTE-TDD：Band34/38/39/40/41
* Temperature sensing interface: Supports external NTC resistors for flexible monitoring of ambient temperature and intelligent linkage control of air conditioner
* Air conditioning control: Supports remote command control, local timer rule control, and intelligent linkage control with the environment
* Peak power consumption ＜ 8W (MAX), stable power consumption ＜4W
* Energy cosumption measurement: Monitors voltage, current, active power, and active energy, power factor with a precision of Class 1 (tolerance<1%)
* Power supply input and output: Three-phase AC input and output, 3* 220VAC, with a load capacity of 3*60A
* Working temperature range: -30~70℃
* Installation method: DIN rail mounting

Smart Circuit Breaker
RHF8B001

* Supports energy measurement functions: voltage, current, active power, reactive power, power factor,leakage current
* Calibrated measurement tolerance：+/-0.5%
* Can monitor the power usage status of equipment in real-time and accurately measure the energy consumption of devices
* Supports remote opening or disconnect
* Supports metering functions, providing detailed data support when problems occur, enabling accurate identification of the cause
* Supports remote self-check (such as performing leakage inspection)
* Supports communication via 4G Cat1 or LoRaWAN or RS485 or PLC
* Supports super-cap energy storage, report status even after power shut off
* Comes with a display and can be used as an electricity meter
* Reserve RS485 for equipment control used for energy consumption management and implementation of energy-saving and emission-reduction measures

Tracking scheme

Animal and Asset tracking

RiSingHF	RiSingHF/ Operator	RiSingHF/ Operator	RiSingHF/ Client	Client
Intelligent positioning terminal	Network	IOT	SAAS	App

Cattle and sheep positioning/Pet location

Asset positioning /Vehicle location

Cat-1/Cat-M/ LoRaWAN

LoRaWAN Server

Carrier cloud platform

Equipment management
Sales statistics
Location management
Health management

Application cloud platform

APP/ Web

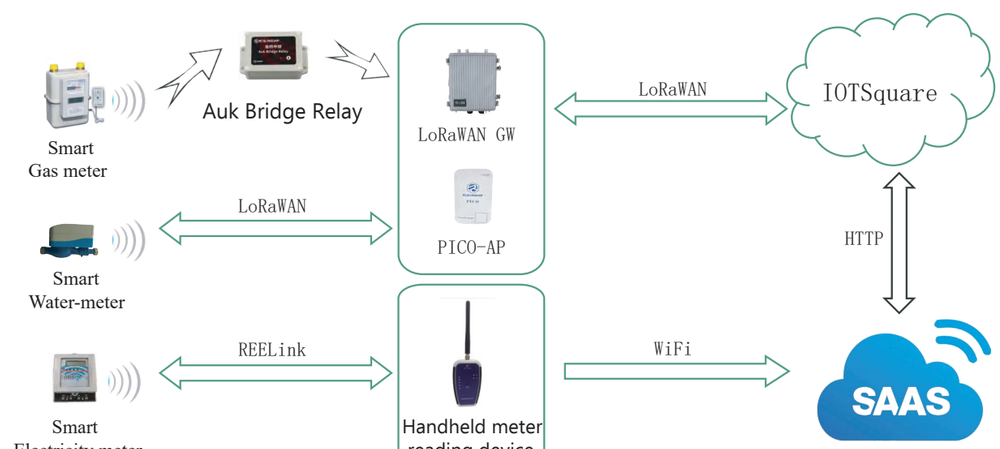
GN1S067

* Operating temperature: meet industrial requirements, -40~+85 ℃
* Multi protection design: IP67 waterproof, shock-proof, dust-proof
* Location function: Support outdoor GPS/ Beidou + indoor Bluetooth accurate positioning, seamless connection and switching
* Long battery life: (Typical application scenarios)
  LoRaWAN version, more than 5 years
  Cat-1/Cat-M version, more than 3 years
* Temperature detection: Periodically detects the ambient temperature and humidity
* Event alarm: low power alarm, shutdown alarm, SOS alarm (reserved), etc
* Multi-communication scheme: optional LoRaWAN, Cat-1, Cat-M and other versions
* Local configuration: parameters configuration via Bluetooth

Cattle and goat positioning tracker supports step counting function: built-in acceleration motion sensor can judge the motion state and assist positioning to optimize power consumption

Smart Metering Solution

In metering industry, there are many problems in solving the pain points of water supply enterprises with traditional and some smart meters. The LPWAN smart meter solution introduced by RisingHF has low power consumption, wide coverage with high security, which can better solve the problems of traditional and original smart meters and meet the development requirement of the metering industry.



01

Features:

A.Compatible with standard LoRaWAN protocol, interconnected with LoRaWAN ecological equipment, and keep compatible with handheld reader of private protocol
B.Support the increase of handheld meter reading to ensure the flexibility of the network to the greatest extent
C.The meter reading mode of broadcast wake-up or point reading can be selected to improve efficiency, reduce false wake-up and reduce system power consumption
D.The extremely low-cost dual channel small gateway and lorawan repeater can solve the problems of small LAN coverage and cover the blind areas

02

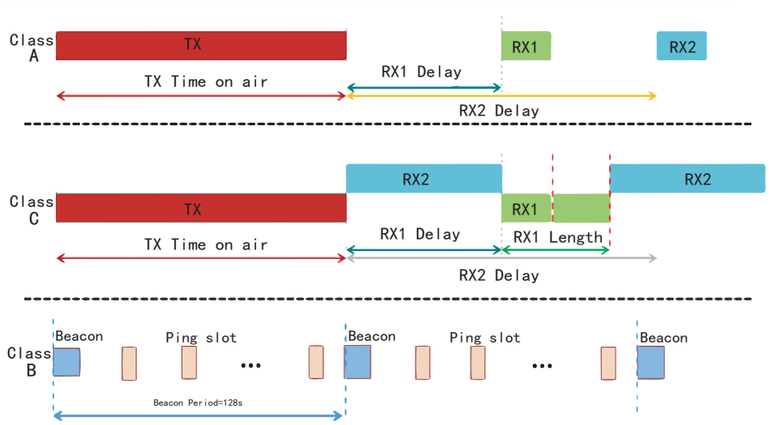
Functional:

A.Long distance ultra-low power communication, support active reporting + passive wake-up
B.Support broadcast wake-up and parallel reporting, greatly improve the reading efficiency, and improve the real-time performance and power consumption of downlink control
C.Low cost indoor clock synchronization technology supports multicast communication in low-power mode
D.Support fuota file transfer and application upgrade of battery powered devices in low power consumption mode

The solution of LoRaWAN Class B

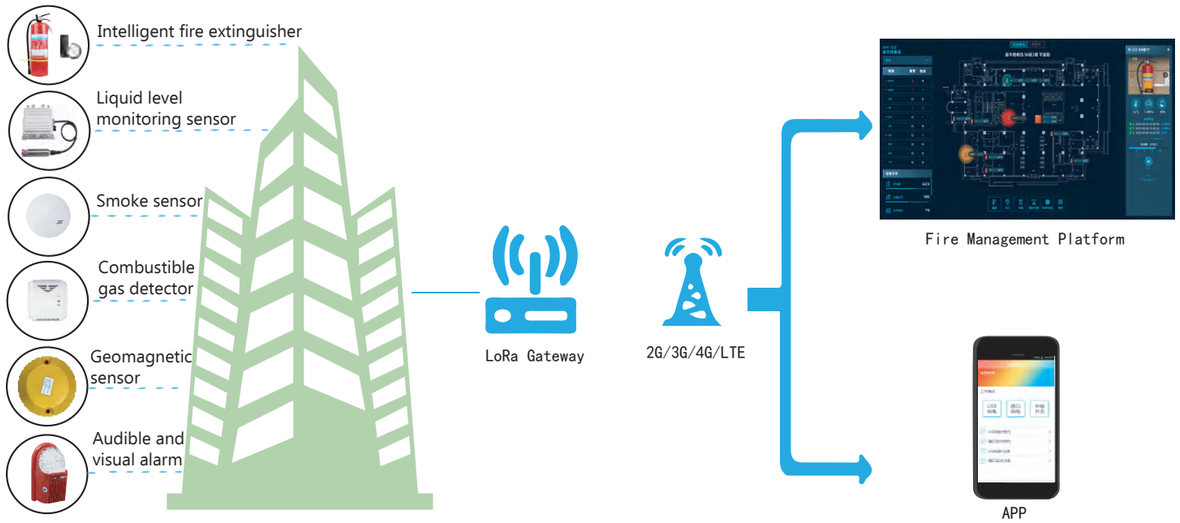
Features:
A.Taking into account both power consumption and real-time response
B.Uplink regularly and real-time downlink meter reading support
C.10 years life with 2600mAh battery

Application:
A.Suitable for metering with valve contorl
B.Unque Class B solution that can be commercially used



Smart Fire Alarm Solution

With the rapid development of city urbanization, the situation of fire safety is becoming more and more serious. The total amount of fire accident is increasing year by year. Traditional and non-traditional fire safety factors interweave and penetrate each other. The risk and pressure of maintaining fire situation is increasing. Building a scientific and intelligent fire management system has become a hot spot in the construction of intelligent cities.



1. A list of safety conditions of all areas and equipment, and one click query of safety conditions of key fire supervision areas.
2. Visually display the operation status of the fire extinguisher, timely remind of abnormal conditions, such as expiration, low pressure, damage, loss, etc., and timely eliminate potential fire hazards.
3. Fire reminder: when the equipment senses abnormal conditions such as ambient temperature, it will immediately send an alarm to inform relevant management personnel, accurately control the fire point and fire development through positioning, put out the fire in time, and comprehensively improve the fire prevention and control ability of enterprises and institutions.

Smart Fire Extinguisher Sensor RHF1SFE2

The smart fire extinguisher sensor can monitor the inside pressure of tank, ambient temperature, falling and motion of the extinguisher, battery level, obstacle detection and alram

Product features

A.Real time monitoring of fire extinguisher pressure state
B.Reliable pressure and temperature measurement algorithm, fast and stable response
C.Mechanical pressure indicator can be installed
D.Wireless ad hoc network technology is adopted to collect and send pressure data in real time
E.Pressure data can be viewed in real time through mobile app and cloud platform
F.Ultra low power algorithm, battery life over 3 years
G.Alarm occur when the tank motion falling down and obstacle detected

The strongest adaptability

Fire extinguishers are required in any public place and places where fire may occur, and the scene adaptability is the strongest.

Lowest rework cost

Fire extinguishers are the products with the lowest rework cost among all fire-fighting equipment. New and old fire extinguishers only need to be equipped with smart terminal products to realize smart IOT, with the lowest rework cost.

The most simple and convenient maintenance

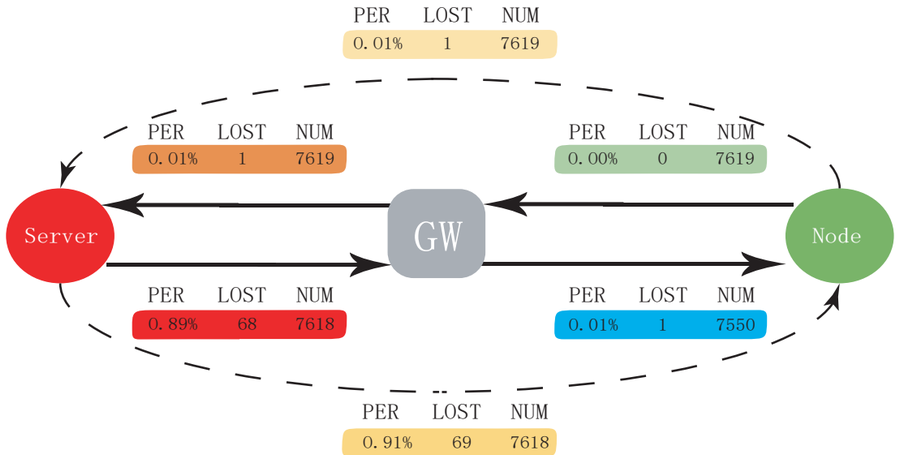
The smart terminal can be used for 3-5 years with only two AAA batteries. It has strong moisture-proof, high-temperature and vibration resistance, and the equipment has self-test function and advaned warning.

LPWAN Network Deployment and Optimization

Handheld Field Tester RHF4TR03

* Wireless Communication: Relink、LoRaWAN®、BLE
* Work In Reelink-Slave Mode, Implement Automatic Metering Reading Through APP
* Work In Reelink-Master Mode, Implement End Device Data Reading Demo Through APP
* Work In LoRaWAN® Mode, Implement LoRaWAN® Network Deployment And Gateway Evaluation Through APP
* Work In Noise Scan Mode, Implement Environment Noise Floor Scan Through APP
* Operating Temperature: -20~55℃

LoRaWAN network optimization



Smart Agriculture(irrigation)