



**SUNTRONT TECH**  
Stock code: 300259

# Remote Reading M-bus Gas Meter

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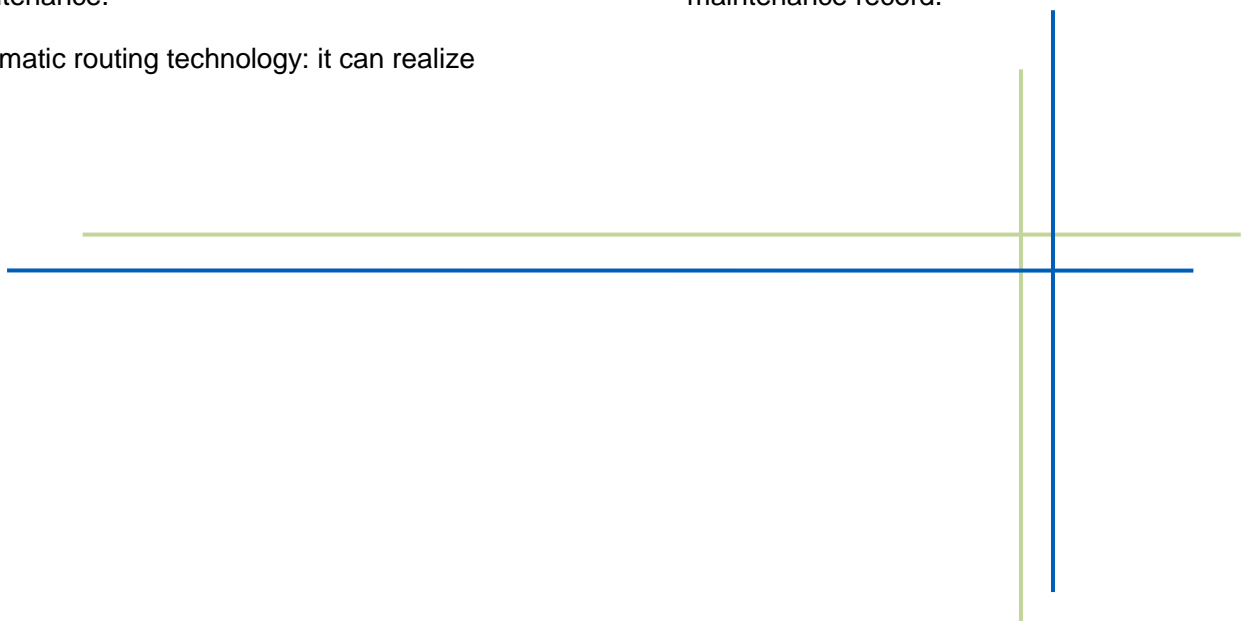
## OVERVIEW

M-bus type of smart gas meter is used to measure the gas flow inside of pipeline. M-bus remote smart gas meter has the function of remote communication to read the meter remotely, and can control the valve remotely.

It adopts absolute encode manner to realize the remote direct reading of mechanical wheel. This gas meter adopts M-BUS, RS-485 communication way to realize remotely meter-reading and greatly avoid all of the problems that caused by house-to-house meter reading.

## Special Features

- ✧ The microprocessor adopts nanowatt technology, with wide working pressure and low power consumption, the inner EEPROM can rewrite for more than 100,000 times.
- ✧ Data hold and restoration function: the data in the gas meter can be stored for ten years when there is no power, when the power is on, with the data restoration function, the data can be read back by devices.
- ✧ Replaceable battery design, 4 pieces of AA dry batteries, replaces by user self. Easy for maintenance.
- ✧ Automatic routing technology: it can realize automatic route network between meters to maintain the network path in time, which can improve the meter reading efficiency.
- ✧ When attack by magnetic or in low battery status, the indicator light will alarm and the meter will close valve.
- ✧ Electrically operated valve technology: reliable operation and less loss of pressure with electrically operated valve technology.
- ✧ Each meter has a unique ID No., and has complete production, debugging, usage and maintenance record.



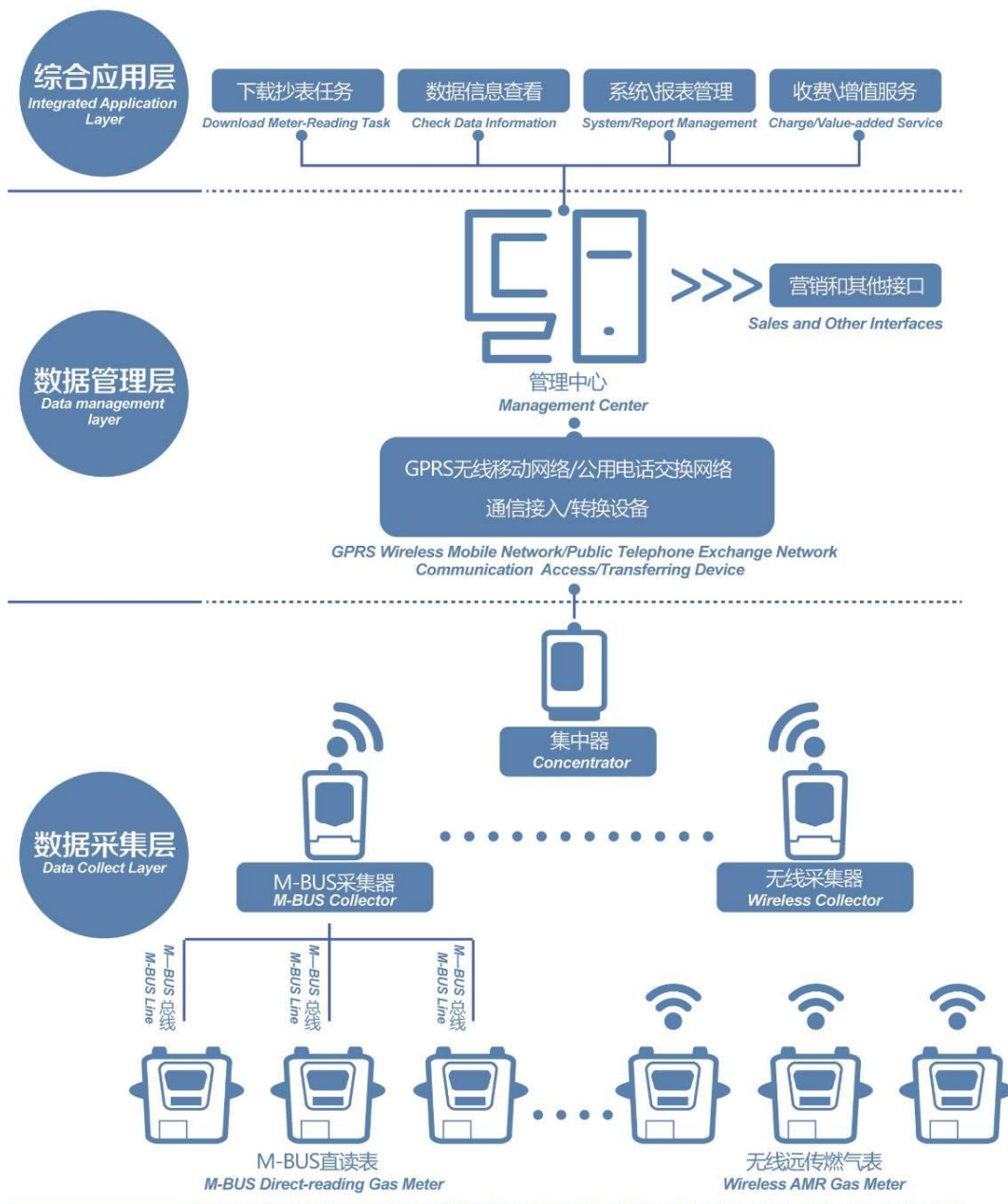
## Network structure

1. The AMR gas meter is mainly composed of data collection layer, data management layer and integrated application layer.
2. Data collection layer consist of ultrasonic gas meter (M-BUS or wireless), collector (M-BUS or wireless) and concentrator.
3. The connection way between the gas meter and collector is M-BUS or wireless, and the

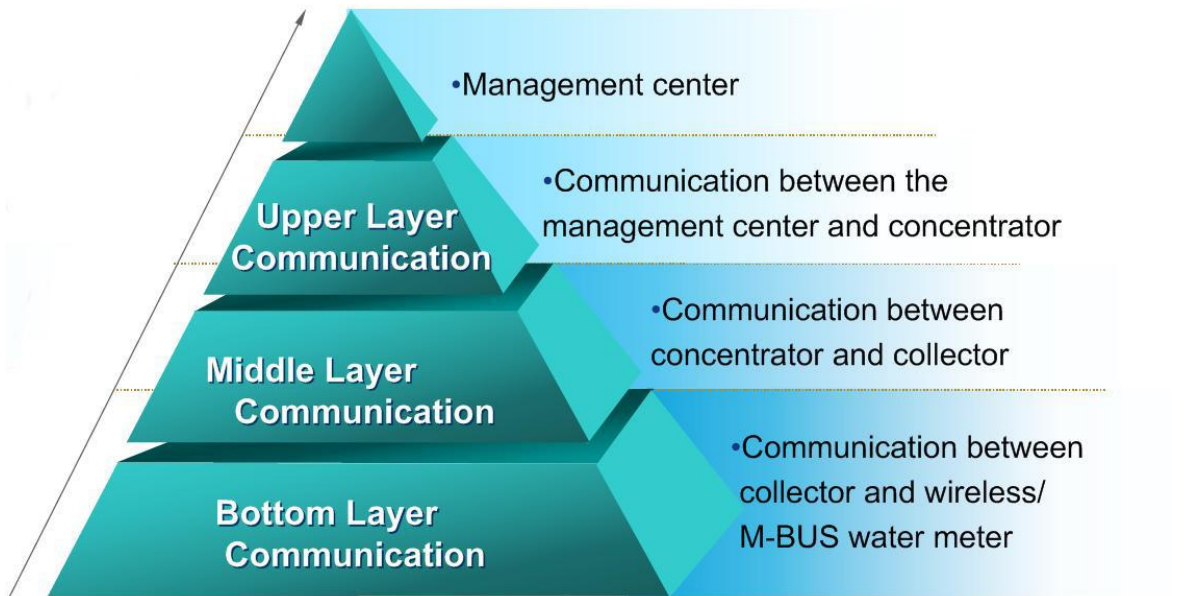
connection way between collector and the concentrator is wireless.

4. The concentrator can transmit data with management center through Ethernet, GPRS with fixed IP, GPRS with unfixed IP, telephone lines or 232 serial way.

See below structure showing:



## Communication Mode



### 1) Upper Layer Communication

Communication method indicated below can be selected between concentrator and management center.

- (a)GPRS Communication Mode
- (b)Telephone Line Communication Mode
- (C) RS232 Communication Mode
- (d) Ethernet Communication Mode

### 2) Middle layer Communication

Middle layer communication means the communication between the concentrator and collector. This communication is by wireless RF way, no need of communication line. The wireless communication distance between the

concentrator and collector can be about 3km at open environment.

Each piece of concentrator can manage 255 pieces of collector maximally.

### 3) Bottom Layer Communication

M-BUS collector and measurement meter transmit data by M-BUS line with 4 channels, and can connect the meter according to any topological structure. Build in backup battery, could works for 48 hours normally, and the data can be saved for 10 years if power is cut off.

One collector can connect with 255 pieces of meter.

## Picture for Collector and Concentrator



Collector



Concentrator

## Technical Specification

Item	FQ Smart Gas Meter		
Model	G1.6	G2.5	G4.0
Nominal Flow Rate	1.6 m <sup>3</sup> /h	2.5 m <sup>3</sup> /h	4.0 m <sup>3</sup> /h
Maximum Flow Rate	2.5 m <sup>3</sup> /h	4.0 m <sup>3</sup> /h	6.0 m <sup>3</sup> /h
Minimum Flow Rate	0.016 m <sup>3</sup> /h	0.025 m <sup>3</sup> /h	0.040 m <sup>3</sup> /h
Demarcation Flow Rate	0.25 m <sup>3</sup> /h	0.4 m <sup>3</sup> /h	0.6 m <sup>3</sup> /h
Total Pressure Loss	≤250Pa		
Cyclic Volume of Gas Volume Meter	1.20dm <sup>3</sup>		
Minimum Reading	0.0001m <sup>3</sup> or 0.0002m <sup>3</sup>		
Maximum Reading	99999. 999m <sup>3</sup> (when read remotely, it only get the integer)		
Accuracy Level	Class 1.5		
Leak Tightness	No leakage when ≤15kPa		
Error	$q_{\min} \leq q < q_t \leq \pm 3\%$ ; $q_t \leq q \leq q_{\max} \leq \pm 1.5\%$		
Working Temperature	-10℃ ~ 40℃		
Working Pressure	≤10kPa		
Transmission Speed	2400bps		

## Technical Parameter for collector

- + Working voltage: AC 220V±20%, 50HZ
- + Downward communication: M-BUS line, the utmost transmit distance can reach 300m
- + Static power consumption: ≤5W
- + Working temperature: -25℃ ~ +65℃
- + Load capacity: 255 pieces of meter maximally.
- + Relative humidity: 5% ~ 85% (with no condensation)

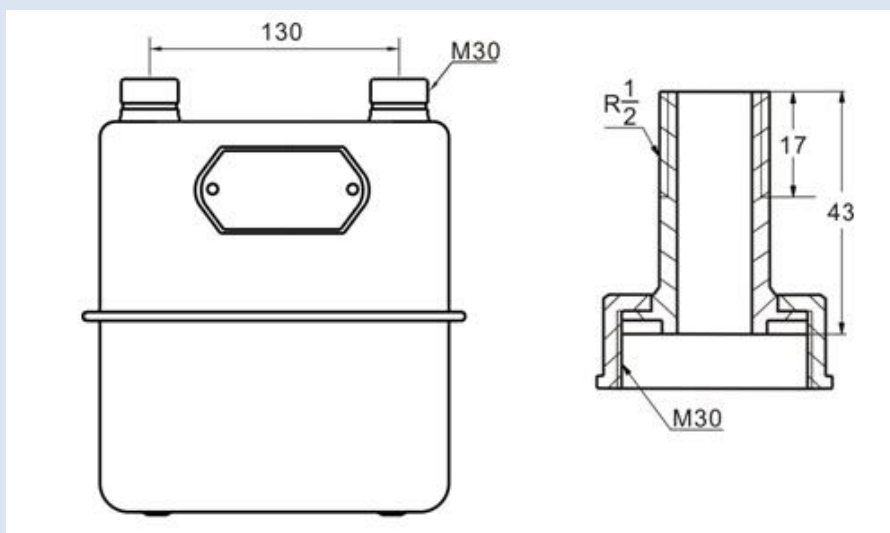


## Technical Parameter for concentrator

- + Working power supply: AC 220V±20%, 50HZ
- + Upward communication: GRRS wireless network  
or public telephone exchange network
- + Downward communication: RF model
- + Static power consumption: <5W
- + Load capacity: can manage 255 pieces collectors
- + Working temperature: -25°C ~ +65°C
- + Relative humidity: 5% ~ 85% (with no condensation)



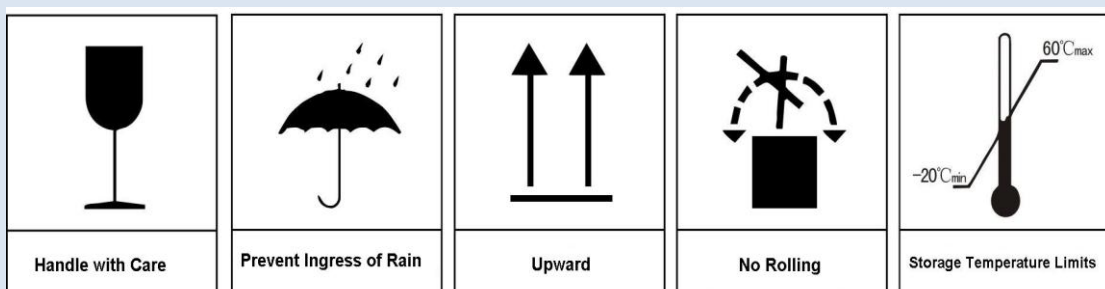
## Dimensions



Smart Gas Meter

Adaptor

## Transportation and Storage



## >> Company Profile

Established in 2000, Suntront Tech Co., Ltd has listed on the stock market on August, 2011, with registered capital of RMB272.448 million. Now, it has rapidly grown up to be one of the largest manufactures of smart meters in China.

Suntront Tech have modernized factories, advanced R&D equipments, systematic and scientific quality control system passed ISO9001, ISO14001, CQC and CE certificate, etc. Presently, the four main series, which cover more than 1000 kinds of products, such as smart water meters/heat meters/gas meters/energy meters are sold at more than 30 provinces and autonomous and exported to Turkey, South Africa, Indonesia, Nigeria, Malaysia, Polynesia, Mozambique, Zambia, Egypt, Mexico, India and other countries.

In 2015, New Suntront Technology Park, with investment of RMB400 million, covers an area of 110,000 m<sup>2</sup> will put into use. Then Suntront will own a world-class R&D Centre, an automatic and mass production base with annual output of 4 million pieces of smart meters and systems.

Depending on advanced enterprise culture, key technologies, excellent product quality, routing management, flexible network service, strong R&D team, we keep our products in line with the latest demands of the market and our passion for new products development keeps us going forward.

We wish to lead the development of local and global smart meter industry by providing the customers with trustable and satisfied service and open up a new horizon of the smart meter industry by expanding its business in the long run.





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