

## Feature

### 1. Ultra low power transmission

ATC-863 Transmission power less than of 100mW, high receiving sensitivity: -110dbm ,

ATC-871 Transmission power less than of 100mW, high receiving sensitivity: -121dbm

ATC-873 Transmission power less than of 100mW, high receiving sensitivity: -123dbm

### 2. ISM frequency band, not requiring on application of frequency point

Carrier frequency of 433MHz, also capable of providing 315/868/915MHz carrier frequency.

### 3. High anti-interference and low BER (Bit error Rate)

Based on the GFSK modulation mode, it adopts the efficient communication protocol. The actual bit error rate of  $10^{-5}$  ~  $10^{-6}$  can be achieved when channel bit error rate is  $10^{-2}$ .

### 4. Long transmission distance

Within the range of visibility, the reliable transmission distance is >300m when the antenna height is greater than >3m

### 5. Transparent data transmission

Transparent data interface is offered to suit any standard or nonstandard user protocol. Any false data generated in the air can be filtrated automatically (What has been received is exactly what has been transmitted). The charge time for receiving and sending <10ms.

### 6. Multi-channel and speed

The standard ATC-863/871 configuration provides 8 channels. ATC-863/871 configuration provides 16 channels. to meet the multiple communication combination mode of the users. It has baud rate to be chosen such as 1200bps, 2400bps, 4800bps, 9600bps, 19200bps, 38400bps. The wireless transmission rate is direct ratio with baud rate of interface to meet user's equipment requirement.

### 7. Low power consumption

Receiving current<20mA, transmission current<40mA, sleeping current <1uA.



### 8. High speed wireless communication and large data buffer

When the speed rate in the air is quicker than interface's, allowing to transmit unlimited length data at one time, when the speed rate is slower or equal the interface's, allowing the transmission of 255 Bytes long data frames at one time for more flexible programming by users.

### 9. Intelligent data control and the user doesn't need to prepare excessive programs

Even for semi duplex communication, the user doesn't need to prepare excessive programs, only receiving/transmitting the data from the interface. Module will automatically complete the other operations, such as transmission /receiving conversion in the air, control, etc.

### 10. High reliability, small and light

Single chip radio- frequency integrated circuit and single chip MCU are used for lessened peripheral circuits, high reliability, and low failure rate.

### 11. Watchdog monitor

Watchdog monitors the inner function, so that change the traditional product structure and improve the product reliability.

### 12. Antenna choose

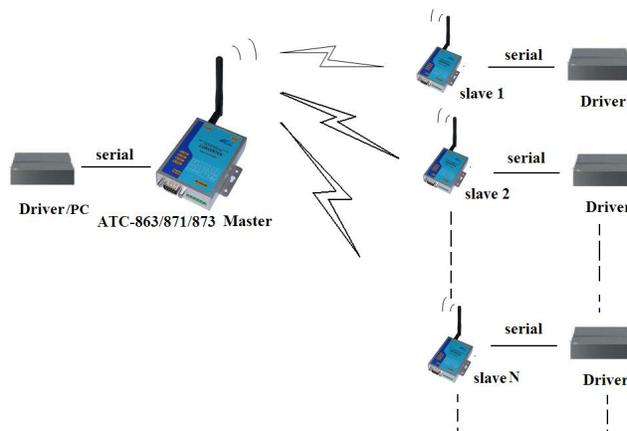
Users can choose various antenna-setting project and antenna according to user's different need to achieve a optimal effect.

## Introduction

ATC-863/871/873 wireless digital transmission module offers standard RS-232, RS-485 and UART/TTL level interfaces for direct connection with computers, use's RS-485 equipments, SCM or other UART parts. ATC-863/871/873 has adopted half duplex communication channel most suitable for point to multi-point communication mode. The primary station takes full control of communication harmony, and adopts data frames with address codes for data or command transmitting. The secondary station shall fully receive them and select response by comparing address codes; all the work shall be fulfilled by upper layer protocols, which shall ensure that only one wireless module in the communication network is in the transmitting state in any instant to avoid mutual interference. Therefore, the transmission channel built by ATC-863/871/873 is transparent to the user. ATC-863/871/873 can also be applied to point to point communication, making it easier and smoothly upgrade wire (RS232/485/TTL) transmission mode in original system.

## Technical indicators:

Modulation mode:	FSK/GFSK	
Working frequency:	433MHz/868MHz/915MHz	
Transmission power:	ATC-863/871	100mW
	ATC-873	500mW
Receiving sensitivity:	ATC-863	-110dBm
	ATC-871	-121dBm
	ATC-873	-123dBm
Transmitting current:	ATC-863/871	<75mA
	ATC-873	<360mA
Receiving current:	ATC-863	<11mA
	ATC-871	<30mA
	ATC-873	<45mA
Sleeping current:	ATC-863/871	<10uA
	ATC-873	<1mA
Channel speed rate:	ATC-863	1200/2400/4800/9600/19200Bit/s
	ATC-871/873	1200/2400/4800/9600/19200/38400Bit/s
Interface speed rate:	ATC-863	1200/2400/4800/9600/19200Bit/s
	ATC-871/873	1200/2400/4800/9600/19200/38400Bit/s
Change time for receiving and sending:	<10ms	
Interface data format:	8E1/8N1/8O1	



Power supply:	9-12V@200mA
Working temperature:	-20°C~70°C
Working humidity:	10% ~ 90% relative humidity without condensation
Dimension:	100mm*86mm*26mm
Weight:	0.6kg

## Application

ATC-863/871/873 the Micro Power Data Radio Module is used as the wireless data transmission in short distance. With the small size, weight and power consumption and good stability and reliability, it has the function of bi-directional data transmission, test and control. It is used for Wireless meter reading, such as water meter, electric meter and gas meter, parking meter, intellectual card, electronic weighing apparatus, meter for checking on work attendance, queue wireless meter, building control, shipping company control, alarm system, intelligent equipment, Automatic data collecting system; Industrial remote control and remote test building automation, safety and security, powerhouse equipment wireless monitor, entrance control system, etc. It provides the USB power interface to be convenient for the mini computer and PC users if necessary.

## Order information

ATC-863-S0	300m Micro Power Data Radio Module	433M/868M/915M	5V TTL
ATC-863-S1			RS-232
ATC-863-S2			RS-485
ATC-871-S0	500m Micro Power Data Radio Module	433M/868M/915M	5V TTL
ATC-871-S1			RS-232
ATC-871-S2			RS-485
ATC-873-S0	1000m Micro Power Data Radio Module	433M/868M/915M	5V TTL
ATC-873-S1			RS-232
ATC-873-S2			RS-485
ATC-875-S0	2km~10km middle power data transmission radio	433M/868M/915M	5V TTL
ATC-875-S1			RS-232
ATC-875-S2			RS-485

Contact us now for more information:

**SHENZHEN ATC TECHNOLOGY CO., LTD**

Agent: