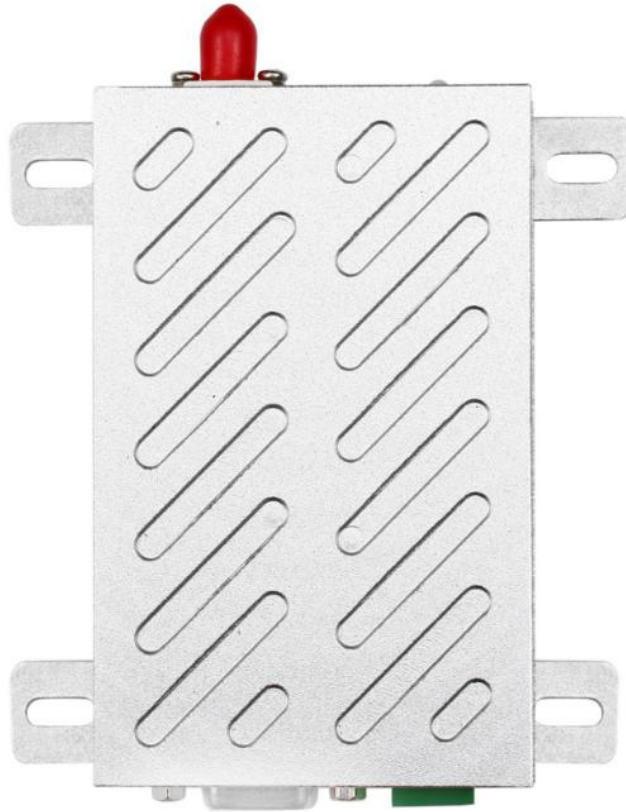

LS-U5000 5W Long Range Radio Module

User Manual



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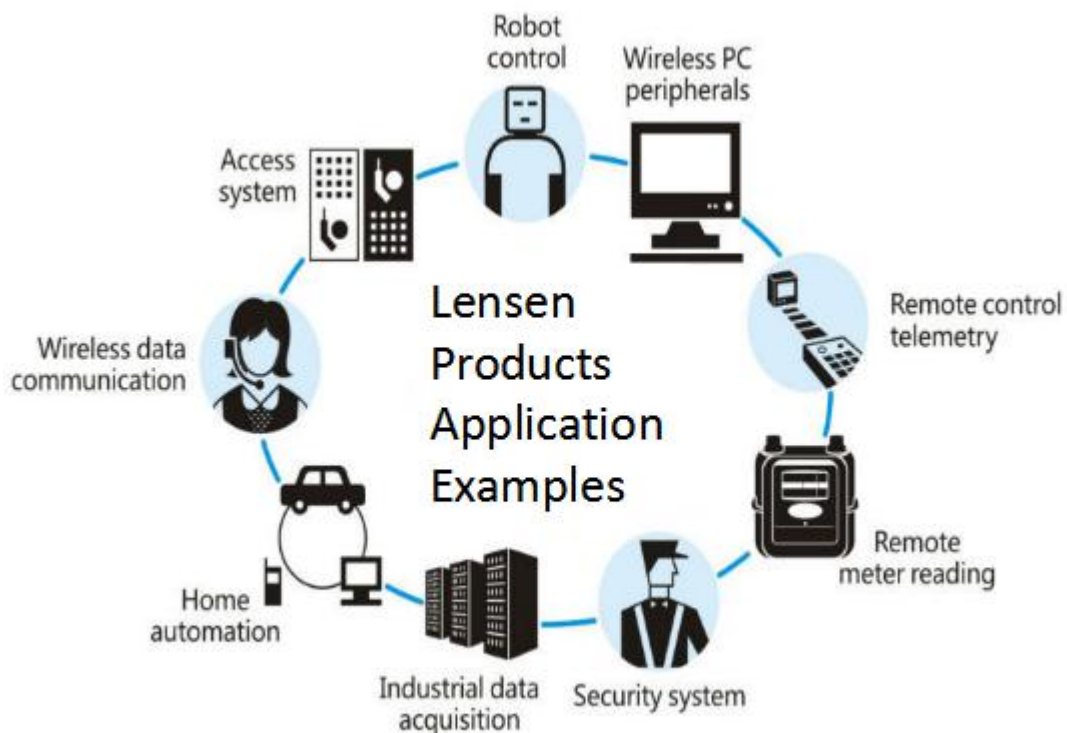
Address: Xixiang, Baoan, Shenzhen, China

1. General Introduction

LS-U5000 radio modem, designed with high efficiency FEC technology, good performance IC and high speed MCU, is an excellent data transceiver. Its power output is 5W, transmission distance reaches 8-10km LOS. It has the advantage of long transmission distance, good sensibility, strong anti-interference ability. LS-U5000 adopts transparent transmission. Users don't need any program knowledge.

2. Application field

- * SCADA
- * Wireless alarm and security systems
- * Industrial automation, Access Control System;
- * Wireless data transmission, automatic data collection system;
- * Oil field monitoring, wireless DTU
- * PLC wireless communication;
- * Industry automation, wireless telemetry and so on.

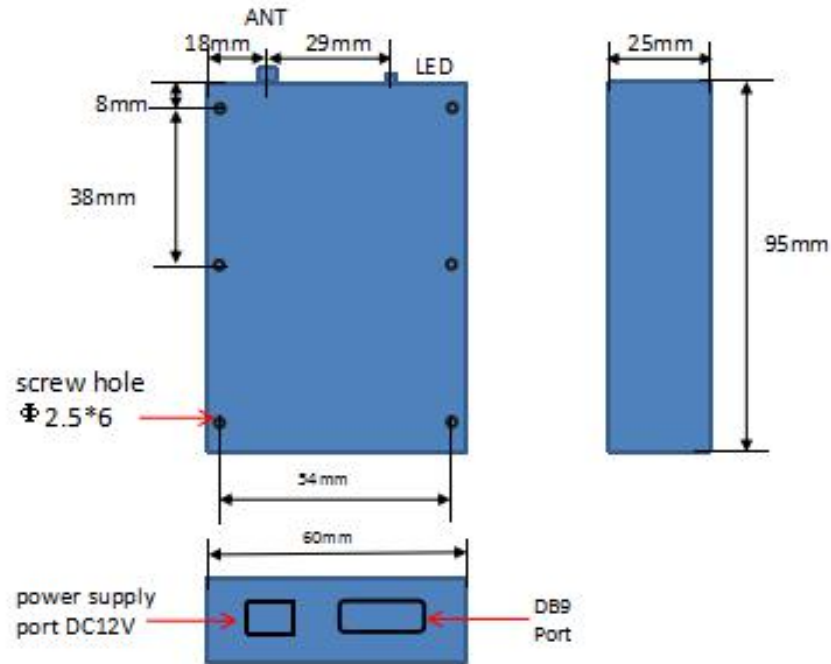


3. Technical specification

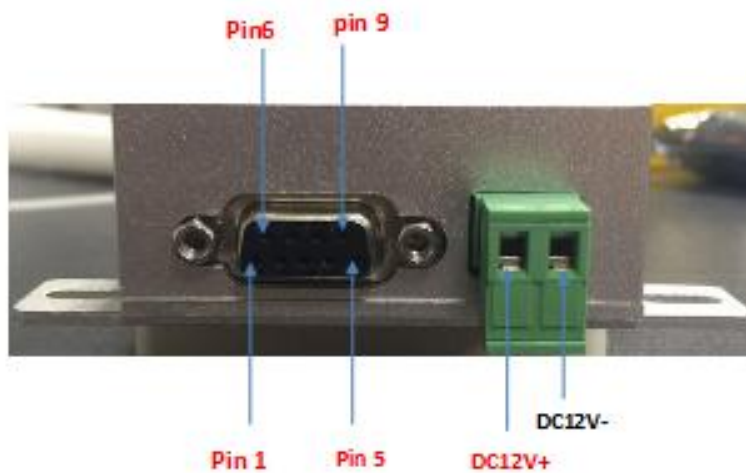
PERFORMANCE	
Power Output:	5W
RF Line-of-sight Range:	10Km@1200bps; 8Km@9600bps
RF Effective Rate:	1200/2400/4800/9600/19200bps
Space Channel:	1MHz(Default),
Bandwidth:	<25KHz
Receiver Sensitivity:	-123dBm@1200bps (1% BER)
NETWORKING	
Networking Topology:	Point-to-point, point-to-multipoint
COMPATIBILITY	
LS-U series, LS-RDIO series, LS-RAIO series, LS-R series	
POWER	
Supply Voltage:	12V DC
Transmit Current:	<1.5A
Receive Current:	<60mA
Sleep current:	<1mA
GENERAL	
Communication Mode:	Half-duplex
Frequency Band:	470MHz (400/433/450MHz optional)
Channel:	8(default),16/32/64(optional)
Interface:	RS485 (TTL/ RS232/USB optional)
PHYSICAL PROPERTIES	
Size:	95mm*60mm*25mm (excluding antenna base and data pin)
Weight:	400g
Antenna Base:	50Ω, SMA
Operating Temperature:	Industrial: -40℃~+80℃(TCXO)

4. How to Use It

4.1 Install Dimension



4.2 About Pin Port



4.3 Pin Definition

Pin No.	Signal Name	Function	Level	Connection with terminal	Remarks
1	GND	Grounding of power supply		Ground	
2	B(TxD)	RS-485 B or TxD of RS-232		RS485 B RxD of RS232	
3	A(RXD)	RS-485 A or RXD of RS-232		RS485 A TxD of RS232	
4	NC				
5	SGND	Signal			
6	RXD/TTL	Data receiving		TxD of TTL	
7	TXD/TTL	Data transmitting		RxD of TTL	
8	SLEEP	Sleep control	TTL	Sleep signal	Low level valid
9	TEST	Factory testing	TTL		

4.4. The Function-indicator light

- a. The LED indicator blinks red for 0.5S when power on.
- b. The LED indicator blinks blue when receiving data..
- c. The LED indicator blinks red when transmitting data.

4.5 Parameter setting by our software

You can use our software to read or set the parameter on computer.

Channel No.	Frequency	Channel No.	Frequency
1	429.0325MHZ	5	433.0325MHZ
2	430.0325MHZ	6	434.0325MHZ
3	431.0325MHZ	7	435.0325MHZ
4	432.0325MHZ	8	436.0325MHZ

Note: the frequency points corresponding to each channel can be adjusted based on the user's needs.

6. Accessories

1) Antenna

To reach better effects, you are recommended to buy high gain antenna like the

following at least, they are 5.5dBi. Fiber glass antenna is more recommended.



2) Standard unit

- a. LS-U5000 radio module 1pc
- b. Power cable cable 1pc
- c. Port cable 1pc (RS485, RS232 or TTL)
- d. Testing antenna (A3)

3) Other accessories you may be interested in

- a. Power supply D.C.(12V, 3A)
- b. RS232 program cable (for module with RS232 interface, use this to connect PC)
- c. TTL program cable (for module with TTL interface, use this to connect PC)
- d. RS232-RS485 converter (for module with RS485 interface, if you need to program module on PC, you need a converter)
- e. Arrest (to Prevent Lightning Strikes)

Note:

1. To keep good communication effects, please use power supply D.C. with lower ripple coefficient whose max current need to be higher than $1.5 \times$ module's max current.
(Suggest 12V, 3A)
2. TTL, RS232, RS485 interface, please choose one when you place order.
3. Baud rate: interface rate are programmable by our software. Air rate is fixed; please indicate when you place order.