5W Wireless Data(Voice) Radio Modem

XZ-DT25-M1

XZ-DT25-M2

XZ-DT25-M4

XZ-DA25-XXX(See Remark 1)

1. Products Features

- Max.transmitting power up to 5W, the highest sensitivity up to -123dBm;
- RS-232 and RS-485 coexist to meet different needs;ttl can be customized in factory;
- Com baud rate 1200-115200 settable， over-the-air data rate 1200-115200 settable;
- short Transmitting-receiving transfer time; communication delay less than 3Ms;
- High anti-interference ability and low bit error rate, using efficient forward error correction channel coding technology;
- Long range transmission distance, at the line of sight reliable transmission distance up to 8km-12Km;
- Industrial grade, operating temperature range of -40 ℃～+80 ℃;
- Transparent data transmission, intelligent data control, users do not need to compile redundant programs.

2. Applications

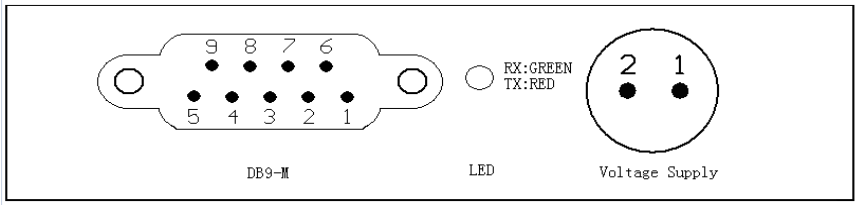
- Oil and gas production, pipeline monitoring, gas distribution, heat network monitoring
- water wells, water and waste water treatment monitoring system
- Power scheduling, distribution automation, load control
- GPS positioning system, mobile data transmission
- Earthquake, meteorology, environmental protection and urban lighting control
- Railway, transportation, metallurgy, chemical industry and industrial automation process control
- Vessel (UMV) monitoring and control, robot control data link
- Army, police communications
- Industrial remote control, telemetry, automated data acquisition system

3. XZ-DT25-MX Series Model No. Comparison Table

Model Number	Over-the-air data rate (bps)	Interface data rate (bps)	Frequency (MMZ)
XZ-DT25-M1	1200-115200	1200-115200	136-174
XZ-DT25-M2	1200-115200	1200-115200	220-240
XZ-DT25-M4	1200-115200	1200-115200	410-470

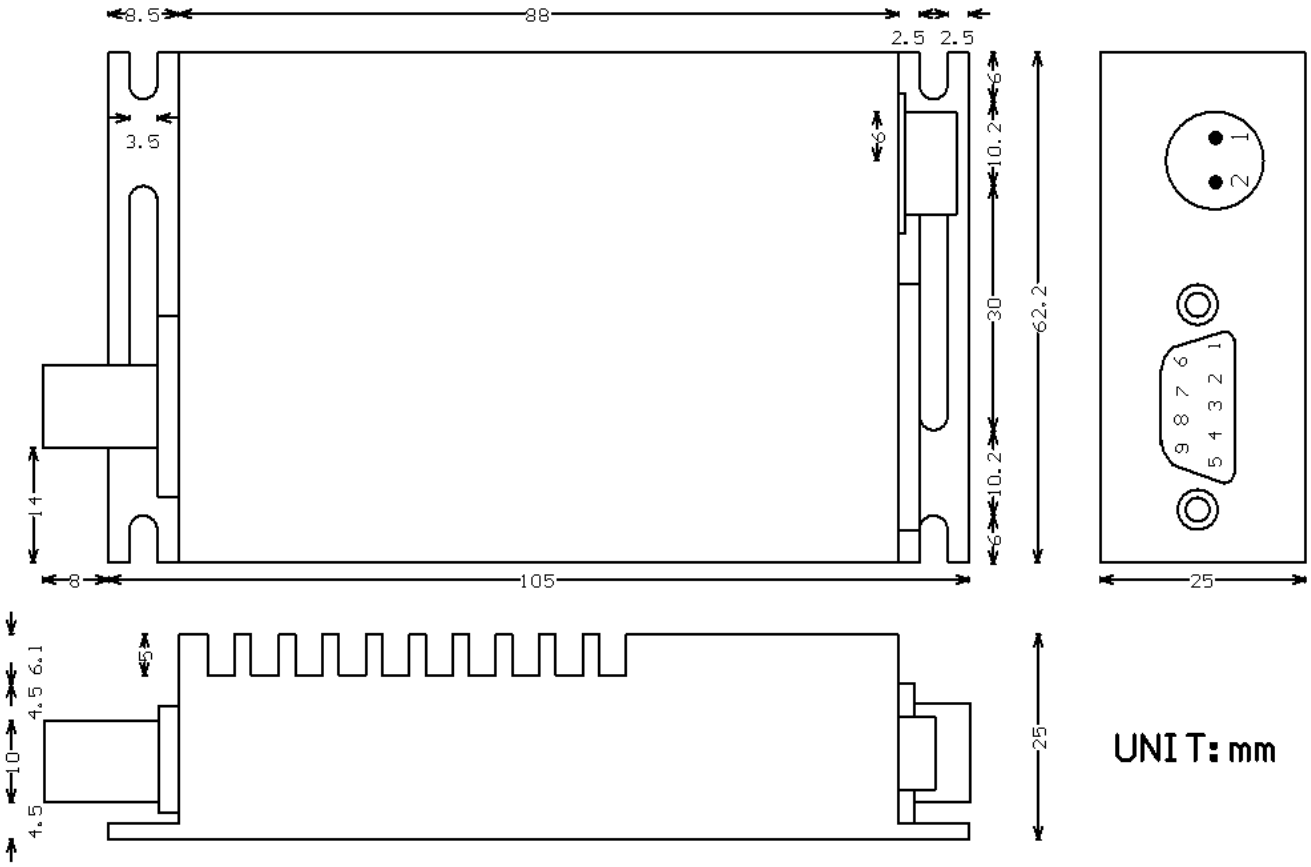
Remark 1: The above models can be added (XZ-DA10-01) to upgrade with voice function, after upgrading, the whole model is called XZ-DA25-MXX. Upgraded radio is with data and half-duplex voice calls function, and voice function is priority

4. XZ-DT25-MX (XZ-DA25-MXX) Interface Pin Definitions



	Pins	XZ-DT25-MX	XZ-DA25-MXX	Remark
Airline Male Connector	1	Grounding of power supply	Grounding of power supply	
	2	DC12V power supply	DC12V power supply	DC12V±10%
DB9 Male Connector	1	NC	PTT (Voice Transmitting Enable)	Active Low Level
	2	RS-232/RXD	RS-232/RXD	
	3	RS-232/TXD	RS-232/TXD	
	4	NC	AGND (Analog Signal GND)	
	5	GND	GND	
	6	RS-485/A	RS-485/A	
	7	RS-485/B	RS-485/B	
	8	Setup Enable	MIC (MIC Signal Input)	
	9	SQ (Receiving Signal Indicator)	SP (Speak Output, 8Ohm 1W)	Active Low Level

5. XZ-DT25-MX Installation Dimension



Remark 2：

1, radio power supply requirements: The maximum output current is not less than 3A, and the linear DC power supply is the best choice. If using switching power supply, the power supply with smaller ripple and better EMC characteristics should be selected.

2, the radio must be connected the antenna before the radio is powered on, a long-time antenna open-circuit working may cause damage to the radio.

3, The radio shell is used for heat dissipation. When working do not touch the radio with hands to avoid the scald.

6. Technical Parameters

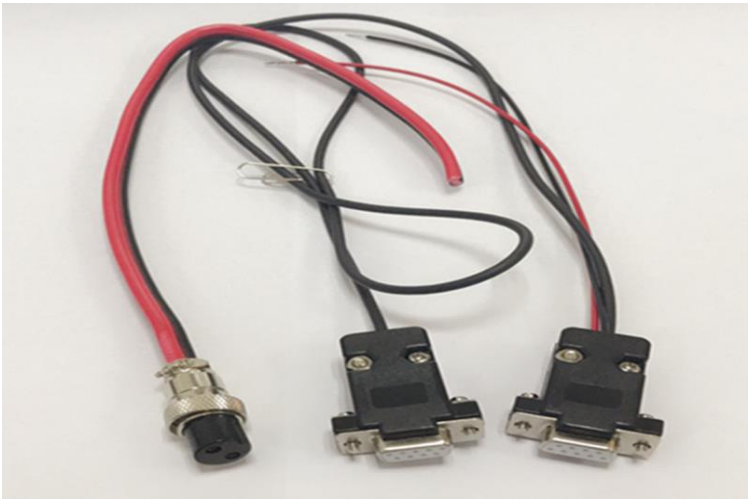
Frequency stability:	≤±2.5PPm
Modulation Mode:	GFSK
Transmitting power ：	5W
Receiving sensitivity:	-123dBm@1200bps/-120dBm@9600bps
Channel bandwidth ：	10KHZ@1200bps/25KHZ@9600bps
Interface data format:	8N1/8E1/8O1
Working temperature:	-40℃～80℃(industrial grade)
Transmitting current: ≤2A	（Recommend max.output current of power supply no less than 3A）
Receiving current:	≤80mA
Working Humidity:	10%~90%relative humidity，no condensation
Dimension:	105mm×62mm×25mm
Weight:	≤300g

7. Standard Accessories

1m power cable

232&485 data cable

Small magnet antenna



Remark 3:

We suggest users use high gain antenna (big clip antenna, fiberglass antenna, Yagi antenna) for this radio to get better performance.

Appendix：1 Module Setup

1.1 Enter setup mode

Hardware: connect the 8th foot with Ground and green led keeps lighting, the module enters setup mode, serial port rate is 9600 8N1

Software: at the current baud rate, 3 + numbers are sent continuously, XZ-DT25 enters setup mode, and the serial port output is OK

Format + + +

Return OK

1.2 Channel 0 Frequency Setting(this frequency is the working frequency of 0 channel

Format >WF0/RX:453.25000/TX: 453.25000

Return <Channel_0:RX:453.25000/TX:453.25000

Explain >WF0 means working frequency of writing channel 0

RX: means receiving frequency 453.25000 MHz, please notice frequency needs be accurate to 5 digits after the decimal point；

TX: means transmitting frequency 453.25000 MHz, please notice frequency needs be accurate to 5 digits after the decimal point；

The same XZ-DT25 receiving and transmitting frequency setup can be the same or different, but modules in the same communication system must have the same receiving and transmitting frequency. Dip Switch can only set frequency in Channel 0.

1.3 Interface Baud rate setup

Format >WBA

Return <Com_Rate:1200

Explain >WB means writing interface baud rate

A~G means 1200~115200bps；A=1200、B=2400、C=4800、D=9600、E=19200 、F=38400、G=115200

1.4 Parity Bits Setup

Format >WVN

Return <Verify:8N1

Explain >WV means Interface Parity Bit

N、E、O means 8N1、8E1、8O1

1.5 Air Baud Rate Setting

Format >WAA

Return <Air_Rate:1200

Explain >WA means Air baud rate

A~G means 1200~115200bps；A=1200，B=2400，C=4800，D=9600，E=19200，F=38400,G=115200

Notice: if air baud rate and interface baud rate are set the same, can transmit data continuously. To transmit longer distance, air baud rate can be set lower, while interface baud rate can be set higher.

1.6 Read all Parameters Command

Format >R

Return <Channel_0:RX:453.25000/TX:453.25000

<Com_Rate:1200

<Air_Rate:1200

<Verify:8N1

Explain Output XZ-DT25current working parameters

1.7 Exit Setup Mode

Format >WE

Return OK

XZ-DT25 exit setup mode, if XZ-DT25 enters setup mode it will exit when it does not have any command actions at continuous 60S.

2. XZ-DT25-MX（XZ-DA25-LXX）Frequency Table

Dip switch can choose 0-16channels, ch1 to ch15 are fixed, frequency of ch0 can be set arbitrarily via software and save. Dip switch dials to“ON”means“1”, dials to“OFF”means“0”,1byte is high byte,4byte is low byte.

Channel (1234)	XZ-DT25-H1 XZ-DA25-H1X	XZ-DT25-H2 XZ-DA25-H2X	XZ-DT25-H4 XZ-DA25-H4X
0(0000)	156.025MHZ	230.025MHZ	430.025MHZ
1(0001)	140.025MHZ	221.025MHZ	410.025MHZ
2(0010)	142.025MHZ	223.025MHZ	414.025MHZ
3(0011)	144.025MHZ	224.025MHZ	418.025MHZ
4(0100)	146.025MHZ	225.025MHZ	422.025MHZ
5(0101)	148.025MHZ	226.025MHZ	426.025MHZ
6(0110)	150.025MHZ	227.025MHZ	434.025MHZ
7(0111)	152.025MHZ	228.025MHZ	437.025MHZ
8(1000)	154.025MHZ	229.025MHZ	441.025MHZ
9(1001)	158.025MHZ	231.025MHZ	445.025MHZ
10(1010)	160.025MHZ	232.025MHZ	449.025MHZ
11(1011)	162.025MHZ	233.025MHZ	453.025MHZ
12(1100)	164.025MHZ	234.025MHZ	457.025MHZ
13(1101)	166.025MHZ	235.025MHZ	461.025MHZ
14(1110)	168.025MHZ	236.025MHZ	465.025MHZ
15(1111)	170.025MHZ	237.025MHZ	469.525MHZ