RS400H3

Wireless data transmission radio, an external radio for RTK applications

Summary

RS400H3-M wireless dataradio is a wireless radio solution for surveying applica-tions as a reference station. It provides reliable datacommunication for critical applications requiring stabi-lity, excellent performance, and long-range coverage.

The RS400H3-M delivers high-speed, high-power wireless data links engineered to withstand rigorous GNSS/RTK measurement and positioning applications. With up to 35W transmission power, it maximizes operational range and enables deployment in challenging urban environments. The device features a high-definition OLED display with tactile buttons for real-time status monitoring, channel switching, and power adjustment. It also supports intelligent serial port baud rate detection, automatic power-on status recognition, and interference detection capabilities.

Main Features

- 60MHz bandwidth, covering the 410-470 MHz frequency band
- Advanced data chain design enables high performance across the entire frequency band
- Multi-function user interface with OLED display
- Designed for easy application in harsh field conditions
- Supports three transmission power switches
- Compatible with 12.5KHz and 25KHz radios
- Supports mobile app configuration
- IP67 high protection rating

Technical Parameter

General Parameters

Frequency range：	410~470MH
Work pattern：	Single send, single receive, radio relay
Channel spacing：	12.5KHz， 25KHz
Number of channels:	32
Working voltage：	9~16V DC
Power consumption (typical value):	
-High transmission power (35W)	85W @ DC12V
-Transmission power (22W)	60W @ DC12V
-Low transmission power (5W)	35W @ DC12V
- await the opportune moment：	2W @ DC12V
Frequency stability	≤±1.0ppm

Physical parameters

Size：	175x130x86.5mm
Weight：	≈2kg
Data interface：	LEMO 5 needles
Antenna interface:	TNC head

Enviromental parameter

Working temperature：	-40℃～+65℃
Storage temperature:	-50℃～+85℃
Waterproof and dustproof：	IP67

Data Interface Definition

Interface type：	RS232
1 foot:	Power supply, 9 to 16V DC
2 feet:	Power ground, Power GND
3 legs:	Serial port data reception, RXD
4 legs:	Signal ground, Signal GND
5 feet:	Serial data transmission, TXD

ejector

Radio frequency output power (typical value):	
-High power (35W)	45.4±0.5dBm@DC12V
-Medium power (22W)	43.4±0.5dBm@DC12V
-Low power (5W)	37±1dBm@DC12V
RF power stability:	±1dB
Adjacent lane power:	> 50dB
Standard distance (typical value):	18-21KM

Acceptor

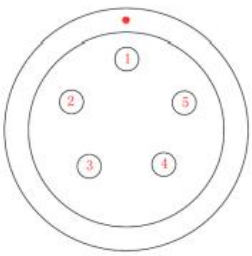
Sensitivity：	<-114dBm@BER 10^{-3}， 9600bps
Common channel suppression:	>-12dB

Modem

Port rate for aerial:	4800 / 9600 / 19200 bps
Modulation mode：	GMSK/4FSK
Serial port baud rate:	9600/19200/38400/57600/115200 bps
Protocol：	Transparent, TrimTalk, TrimMark3, South， SATEL

Wireless communication

PDA：	V2.0/4.0
Bluetooth antenna:	Built-in



View the interface diagram from the outside to the inside of the radio