



RS400H3-A/RS400H3-U

Wireless Data Transceiver, External Radio for RTK Applications

Overview

The Tersus radio RS400H3-A and RS400H3-U are base radio solutions for RTK applications. They provide reliable data communications for mission-critical applications where a combination of stability, superior performance and long range are required.

The RS400H3-A and RS400H3-U provide high speed, high power, wireless data links and have been designed to survive the rigors of GNSS/RTK surveying and precise positioning applications. Up to 35W transmit power maximizes range and supports operation in difficult urban areas. The RS400H3-A and RS400H3-U are equipped with OLED display and keypads which are used for checking the operating status, changing the operating channel, and transmitting power level.

Key Features

60MHz bandwidth coverage 410-470MHz bands

Advanced data link design for high performance over entire bands

Multi-function user interface

It is designed for easy mobile use in demanding field conditions

Supports three transmission power switching

Compatible with 12.5KHz and 25KHz radios

Support mobile app configuration

RS400H3-U supports network repeater

IP67 environmental protection rating



Technical Specifications



General

Frequency range:	410~470MHz
Operating mode ⁽¹⁾ :	Transmitter, Receiver Radio Repeater, Network Repeater
Channel width:	12.5KHz, 25KHz
Channels:	32/200
Operation voltage:	9~16V DC
Power consumption (typical):	
– High power level (35W)	85W @ DC12V
– Medium power level (22W)	60W @ DC12V
– Low power level (5W)	35W @ DC12V
– Standby:	2W @ DC12V
Frequency stability:	$\leq \pm 1.0\text{ppm}$

Physical

Dimension:	175x130x86.5mm
Weight:	≈2kg
Data interface:	LEMO 5pin
Antenna port:	TNC Female

Environmental

Operation temperature:	-40°C ~ +65°C
Storage temperature:	-50°C ~ +85°C
Dust and water proof:	IP67

Data Interface Definition

Type:	RS232
Pin 1:	Power, 9~16V DC
Pin 2:	Power ground, GND
Pin 3:	Serial data receiving, RXD
Pin 4:	Signal ground, GND
Pin 5:	Serial data transmitting, TXD

Note:

- (1) RS400H3-A supports transmitter, receiver and radio repeater; RS400H3-U supports transmitter, receiver, radio repeater and network repeater.
- (2) The 4G/3G/2G bands can be customized according to different regions.

Transmitter

RF output power (typical):	
– High (35W)	45.4±0.5dBm@DC12V
– Medium (22W)	43.4±0.5dBm@DC12V
– Low (5W)	37±1dBm@DC12V
RF power stability:	±1dB
Adjacent channel power:	>50dB
Distance(Typical):	18-21KM

Receiver

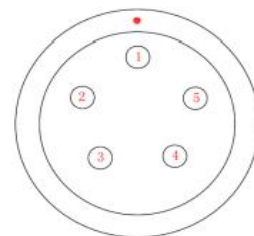
Sensitivity:	<-114dBm@BER 10 ⁻³ , 9600bps
Co-channel rejection:	>-12dB

Modem

Air baud rate:	4800 / 9600 / 19200 bps
Modulation type:	GMSK/4FSK
Serial port baud rate:	9600/19200/38400/57600/115200 bps
Protocol:	TrimTalk, TrimMark3, Transparent-EOT, SATEL

Wireless Communication

Bluetooth:	V2.0/4.0
4G/3G/2G bands ⁽²⁾ :	
4G(MHz):	B1(2100), B3(1800), B7(2600), B8(900), B20(800)
3G(MHz):	B2(2100), B8(900)
2G(MHz):	B3(1800), B8(900)



View from outside to radio



RS400H3 Options



Radio Version	RS400H3-A	RS400H3-U
Transmitter	√	√
Receiver	√	√
Radio Repeater	√	√
Network Repeater	×	√
OLED	√	√
Channels	32	200
Bluetooth	√	√
4G	×	√
GPS Module	×	√
CSMA	√	√
Call Sign	√	√
Warranty Period	ONE Year	ONE Year

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