

RS400H3-A

Wireless Data Transceiver, External Radio
for RTK Applications

Overview

The Tersus radio RS400H3-A is a base radio solution for RTK applications. It provides reliable data communications for mission-critical applications where a combination of stability, superior performance and long range are required.

The RS400H3-A provides high speed, high power, wireless data links and has 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 is 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 5W, 22W and 35W power switching

IP67 environmental protection rating

Supports mobile app data configuration

Supports Call Sign



Technical Specifications



General

Frequency range:	410~470MHz
Operating mode:	Transmitter, Receiver Radio Repeater
Channel width:	12.5KHz
Channels:	32
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:	$\approx 2\text{kg}$
Data interface:	LEMO 5pin
Antenna port:	TNC Female

Environmental

Operation temperature:	$-40^{\circ}\text{C} \sim +65^{\circ}\text{C}$
Storage temperature:	$-50^{\circ}\text{C} \sim +85^{\circ}\text{C}$
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

Transmitter

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

Receiver

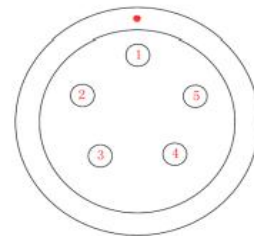
Sensitivity:	$< -114\text{dBm@BER } 10^{-3}, 9600\text{bps}$
Co-channel rejection:	$> -12\text{dB}$

Modem

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

Wireless Communication

Bluetooth version:	V2.0/4.0
Bluetooth Antenna:	Built-in



View from outside to radio

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