



RS05B

Base Radio Station

Overview

The Tersus RS05B radio station is a base radio solution for wireless applications. It provides reliable data communications for mission-critical applications where a combination of stability, superior performance and long range are required.

The RS05B 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 RS05B is equipped with a LED display and a keypad which is used for checking the operating status, changing the operating channel, and transmitting power level.



Key Features

60 MHz bandwidth coverage over 410-470 MHz 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

Configurable transmit power

Supports 5W, 10W, 15W, 20W, 30W, and 35W power switching

Software-derived channel bandwidth

Compatible with both 12.5 kHz and 25 kHz channel radios

High environmental protection rating of IP67

Repeater function in the same or different frequency

Technical Specifications

General

Frequency Range:	410MHz~470MHz
Operating Mode:	Half-duplex
Channel Spacing:	25KHz, 12.5 KHz
Operation Voltage:	10.5V~16V DC
Power Dissipation (typical):	
– High Power Level:	
35W:	≤110W@DC12V
30W:	≤100W@DC12V
20W:	≤75W@DC12V
– Low Power Level:	
15W:	≤60W@DC12V
10W:	≤45W@DC12V
5W:	≤25W@DC12V
– Standby:	≤1.5W@DC12V
Frequency Stability:	≤±1.0ppm
Size:	186x140x73mm
Weight:	≈1.5kg
Operation Temperature:	-30°C ~ +60°C
Storage Temperature:	-40°C ~ +70°C
Antenna Port:	TNC Female
Antenna Impedance:	50Ω
Data Interface:	LEMO 5pin

Other

Sensitivity:	-114dBm@BER 10-3, 9600bps
Co-channel Rejection:	>-12dB
Adjacent Channel Selectivity:	>50dB@12.5KHz
Spurious Response Immunity:	>55dB

Transmitter

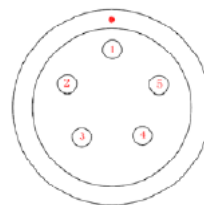
Power Dissipation (typical):	
– High Power Level:	
35W:	45.5±0.5dBm@DC12V
30W:	44.8±0.5dBm@DC12V
20W:	43±1dBm@DC12V
– Low Power Level:	
15W:	41.8±1dBm@DC12V
10W:	40±1dBm@DC12V
5W:	37.5±1dBm@DC12V
– Standby:	≤1.5W@DC12V
Power Stability:	±1dB
Harmonics:	>50dB

Modem

Air Baud Rate:	9600bps, 19200bps
Modulation Type:	GMSK

Interface (Pin) Definition

Type:	RS232
Pin 1:	Power, 10.5V~16V DC
Pin 2:	Power Ground, GND
Pin 3:	RXD
Pin 4:	Signal Ground, GND
Pin 5:	TXD



Overview of Interface (Pin)

