HPT901BT

HPT901BT is the up-to-date unsurpassed 1W ISM radio transceiver with USB and Bluetooth® capacity, and internal rechargeable Li-Ion batteries. The unmatched features of HPT901BT include:

- 8 miles (12.87 km) maximum distance range
- Full speed USB 2.0 device port
- Bluetooth® Interface
- Data speed over the air 64000 bps
- Programmable Output Power (32 mW to 1 W)

- Advanced Forward Error Correction (FEC)
- Serial port configurable as RS-232 or RS-422, or RS-485
- Data speed over the serial port 9600 to 115200 bps
- Testing, monitoring and control of the unit over the air

It uses 902-928 MHz ISM (industrial, scientific and medical) license free USA band frequency hopping transmission techniques for excellent reliability in noisy plant environments and European CEPT license free 868-870 MHz band, allocated for narrow band telemetry, alarms and data transfer applications.

Thanks to its small size, and multiple functions, the HPT901BT is specifically well suited for amount of applications within industrial complexes, for various indoor as well as medium-range applications.
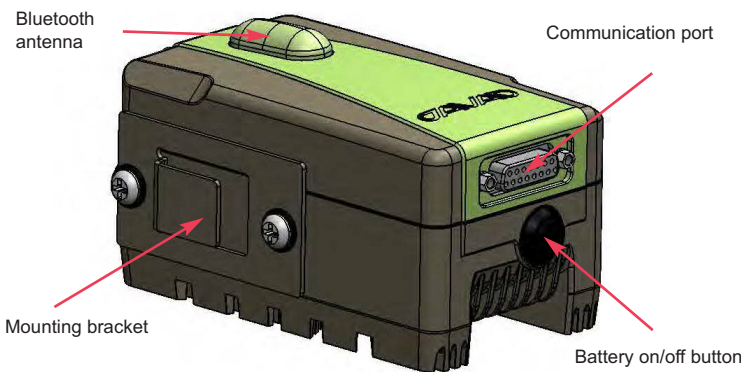
The unmatched features of HPT901BT include data scrambling, frequency hopping, user selectable transmit output power level, low power consumption sleep modes, repeater mode, and plug-and-play installation for remote terminals.

The built-in software tools provide the wireless link testing, unit's status and error statistics monitoring as well as unit's settings change over the air. The firmware of the HPT901BT radio modem resides in a flash memory. The updating of the radio modem programs is entirely software-based. The flash memory is re-programmable through an RS-232 interface, USB, or Bluetooth.

HPT901BT

General Radio Specifications

Parameter	Specification
Operating Frequency Range	902-928 MHz (USA) 915-928 MHz (Australia) 868-870 MHz (EU) with 25/12.5 kHz Channel Bandwith
Link Rate, symbols/second	16000, 32000, 64000 (USA/Australia) 4800, 9600 (EU)
Data Speed of Serial Interface	9600 - 115200 bps
Modulation	GMSK
End to End delay	60 ms
Forward Error Correction (FEC)	Convolution Code R=1/2, Viterbi Decoding
Data scrambling	Yes
Communication Mode	Simplex, Half duplex, Repeater
Serial port	Serial (RS-232) up to 115200 bps. Serial port configurable as RS-232 or RS-422, or RS-485
USB	Built-in USB to RS232 FTDI converter.12Mbps USB 2.0 Full-Speed
Bluetooth	Bluetooth V2.0 Class 2 supporting SPP Slave and Master Profiles
Bluetooth Antenna	Embedded
Battery	One embedded, 7.2V, 5850 mAh
Operation Time (battery-powered) in transmission mode	25 hours (typical)

Bluetooth antenna

Communication port

Mounting bracket

Battery on/off button

DB15 Connector Specification

Pin #	Signal Name	I/O	Description
1	DCD_OUT	O	Data Carrier Detect (RS-232)
2	DTR_OUT	O	Data Terminal Ready (RS-232)
3	RX+/CTS_IN	I	Receive Data positive line (RS-422)/ Clear to Send (RS-232)
4	RX-/RX_IN	I	Receive Data negative line (RS-422)/ Receive Data (RS-232)
5	PWR_IN	I	+9 to +36 VDC Power Input
6	USB_PWR	I	Power Input line (USB)
7	Ground	-	Power Ground
8	PWR_IN	I	+9 to +36 VDC Power Input
9	DSR_IN	I	Data Set Ready (RS-232)
10	TX+/RTS_OUT	O	Transmit Data positive line (RS-422) / Request to Send (RS-232)
11	TX-/TX_OUT	O	Transmit Data negative line (RS-422) / Transmit Data (RS-232)
12	Ground	-	Power Ground
13	USB_D+	I/O	Positive line (USB)
14	USB_D-	I/O	Negative line (USB)
15	Ground	-	Power Ground

Environmental Specifications

Parameter	Specification
Temperature	Operating –20ºC to +45ºC* Storage –20ºC to +60ºC*
Environmental	IP 67
Dimensions (H x W x D)	3.11 x 5.94 x 2.87 inches (79 x 151 x 73 mm)
Weight	2.2 lbs (1.0 kg)
Power Supply Voltage	+5.5...36V without battery charging, 1.4A max @ 5.5V +12...34V when the battery is charged, 2.4A max @12 V
Power Consumption (Average)	8W / 2W / 0.01W – Transmit / Receive / Sleep (without charging)
Housing/Color	Aluminum / Green / Gray
Antenna Connector	TNC-RP, 50 Ohm

* The Li-Ion batteries are the temperature limiting factor

Transmitter Specifications

Component	Details
Transmitter Output Power	+15...+30 dBm in 1dB step/50 (USA/Australia) +7...+27 dBm in 1dB step/50 (EU)

Receiver Specifications

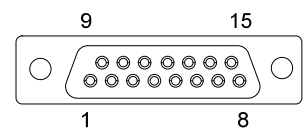| Component	Details
Receiver Sensitivity for GMSK (BER 1x 10-4)	-110 dBm for 25 kHz CS -112 dBm for 12.5 kHz CS
Receiver Dynamic Range	-119 to -10 dBm

Compliance

Parameter	Specification
FCC	Part 15.247
ETSI	EN 300 220-1, EN 301 489-1

This connector provides DB15 connectivity for the HPT901BT with DTE.

About using and configuration RS-485 and RS-422 please contact support@javad.com

9   15

1   8

Specifications are subject to change without notice.

JAVAD GNSS
www.javad.com
Rev. 1.2 June 3, 2014