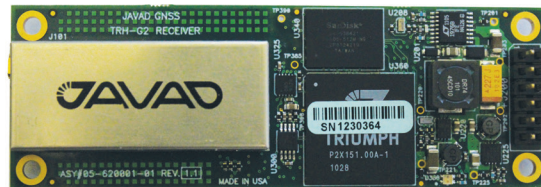




OEM BOARD

## TRH-G2



GPS L1; GALILEO E1; BEIDOU B1; QZSS L1

TRH-G2 OEM board is based on our TRIUMPH Technology implemented in our 216-channels TRIUMPH Chip. For the first time in the GNSS history we offer up to 100 Hz RTK.

The TRH-G2 board tracks GPS L1, Galileo E1, BeiDou B1, and QZSS L1. The on-board power supply on TRH-G2 OEM board accepts any voltage from +4.5 to +40 Volts and delivers clean filtered voltage where needed.

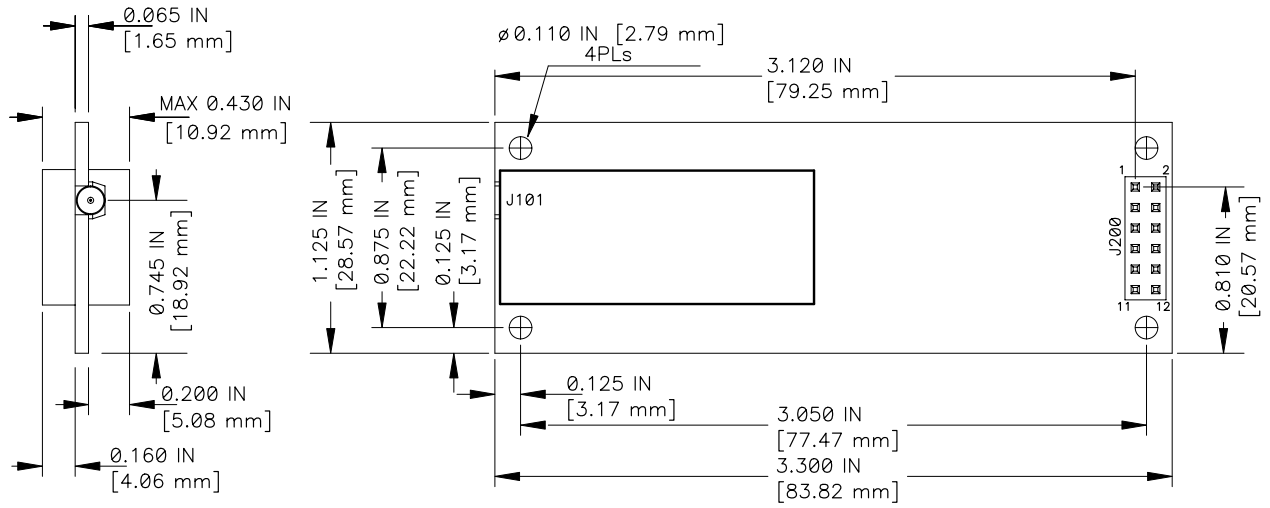
This eliminates the risk of power contamination (ripples) that can be created when clean power is generated elsewhere and delivered to the board via cables.

TRH-G2 provides UART interface. In addition, the board comes with large amount of flash for data storage.

The dimensions are just 4x1 inches.

# TRH-G2

## JAVAD GNSS TRH-G2 RECEIVER TOP SIDE



## SPECIFICATIONS

### TRACKING FEATURES

- Total 216 channels: all-in-view
- GPS C/A, P1
- Galileo E1 (B+C)
- QZSS C/A, L1C(I+Q), SAIF
- BeiDou B1
- SBAS L1
- Advanced Multipath Reduction
- Fast acquisition channels
- High accuracy velocity measurement
- Almost unlimited altitude and velocity

### DATA FEATURES

- Up to 100 Hz update rate for real time position and raw data (code and carrier)
- 10 cm code phase and 1 mm carrier phase precision
- Hardware Viterbi decoder
- JPS, RTCM SC104 versions 2.x, and 3.x Input/ Output
- NMEA 0183 versions 2.x and 3.0 Output, BINEX
- Code Differential Base
- Code Differential Rover
- Geoid and Magnetic Variation models
- RAIM
- Different DATUMs support
- Output of grid coordinates

### DATA STORAGE

- Up to 256MB of onboard non-removable memory for data storage
- Raw Data Recording Up to 100 times per second (100Hz)

### INPUT / OUTPUT

- One high speed serial port (up to 460.8 Kbps, UART, Logical signals)

### ELECTRICAL

- On-board power supply accepts any unregulated voltage between +4.5 to +40 V DC
- Central pin of the antenna connector is power supply for LNA, +5 VDC and sourced current up to 0.12A (max)
- Power consumption: 1 W (typical, without antenna current)

### GNSS ANTENNA

- Type: External
- LNA gain: 30 dB
- Noise Figure: 1.8 dB typ.
- Current consumption: up to 120 mA @ 5 V DC

### RF

- Input sensitivity level: -134 dBm/Hz (acquisition mode)
- Input sensitivity level: -145 dBm/Hz (tracking mode)

### ENVIRONMENTAL

- Operating Temperature: -40°C to +80°C
- Storage Temperature: -40°C to +85°C
- High shock and vibration resistance

### PHYSICAL

- Dimensions: 101.6 x 25.4 mm (4 x1 inches)
- Weight: 14 g
- Digital connector: Header, 2x6 pins, 0.100" pitch, 0.025" SQ post, Samtec p/n TSW-106-07-G-D.
- RF connector: MMCX Jack, edge mount. Amphenol p/n 908-22100.

# TRH-G2

## PINOUT

Pin #	Signal Name	I/O	Description
1	PWR_IN	I	+4.5V to +40 VDC Power input
2	PWR_IN	I	+4.5V to +40 VDC Power input
3	PGND (1)	-	Power Ground
4	PGND (1)	-	Power Ground
5	-	-	Factory Use Only. Must be left open or connected to Ground
6	-	-	Factory Use Only. Must be left open or connected to Ground
7	RESET_IN* (2)	-	Active Low Reset Input
8	GND (1)	-	Signal Ground
9	CTSL* (3)	I	Serial port CTS line
10	TXDL* (3)	O	Serial port TXD line
11	RXDL* (3)	I	Serial port RXD line
12	RTSL* (3)	O	Serial port RTS line

(1) Power Ground and Signal Ground internally connected into the board.

(2) Connect to Ground to activate. Internal pull-up 2.2 kOhm to +3.0V.

(3) UART Logical signals (default - High, active - Low) with 3.0V CMOS level for output and input. Inputs 5V tolerant.



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