Last revised May 2, 2017

Specifications are subject to change without notice

Features/Board	TRH-G2	TRH-G2P	TR-G2	TR-G2T	TR-G3	TR-G3T	TR-3N	TRE-G2T	TRE-3	TRE-3N	TRE-DUO	TRE- QUATTRO
Total channels	216	216	216	216	216	216	864	216	864	864	864	864
GPS C/A, L1C (P+D)	yes											
GPS L2C (L+M), P1, P2	-	-	-	yes	-	yes	yes	yes	yes	yes	yes	yes
GPS L5(I+Q)	-	-	-	yes	-	yes	yes	yes	yes	yes	yes	-
GLONASS C/A	-	-	-	-	yes	yes	yes	-	yes	yes	yes	yes
GLONASS L2C, P1, P2	-	-	-	-	-	yes	yes	-	yes	yes	yes	yes
GLONASS L3 (I+Q)	-	-	-	-	-	-	yes	-	yes	yes	yes	-
Galileo E1 (B+C)	yes											
Galileo E5A (I+Q)	-	-	-	yes	-	yes	yes	yes	yes	yes	yes	-
Galileo E5B (I+Q)	-	-	-	-	-	-	yes	-	yes	yes	yes	-
Galileo AltBoc	-	-	-	-	-	-	yes	-	yes	yes	yes	-
Galileo E6(B+C)	-	-	-	-	-	-	-	-	yes	-	-	-
BeiDou B1	yes											
BeiDou B1-2, B1C(P+D)	-	-	-	-	-	-	yes	-	yes	yes	yes	yes
BeiDou B5A (I+Q)	-	-	-	-	-	-	yes	-	yes	yes	yes	-
BeiDou B2	-	-	-	-	-	-	yes	-	yes	yes	yes	-
BeiDou B5B (I+Q)	-	-	-	-	-	-	yes	-	yes	yes	yes	-
BeiDou B3	-	-	-	-	-	-	-	-	yes	-	-	-
QZSS C/A, L1C (P+D)	yes											
QZSS L2C (L+M)	-	-	-	yes	-	yes	yes	yes	yes	yes	yes	-
QZSS L5 (I+Q)	-	-		yes		yes	yes	yes	yes	yes	yes	-
QZSS SAIF	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
QZSS LEX	-	-	-	-	-	-	-	-	yes	-	-	
SBAS L1	yes											
SBAS L5	-	-	-	yes	-	yes	yes	yes	yes	yes	yes	-
IRNSS L5	-	-	-	yes	-	yes	yes	yes	yes	yes	yes	-
Independent signal tracking	-	-	-	-	-	-	yes	-	yes	yes	yes	yes
Separate pilot/data tracking	-	-	-	-	-	-	yes	-	yes	yes	yes	yes
In-Band Interference Rejection	-	-	-	-	-	-	-	-	yes	yes	-	-
Advanced Multipath Reduction	yes											
Fast acquisition channels	yes											
High accuracy velocity measurement	yes											
Almost unlimited altitude and velocity	yes											
Up to 100 Hz update rate for real time position and raw data (code and carrier)	yes											
IEEE 1588 protocol support	-	-	-	-	-	-	-	-	yes	yes	-	-
Hardware Viterbi decoder	yes											
RTCM SC104 ver. 2.x and 3.x input/output	yes											
CMR/CMR+ input/output	yes											
NMEA 0183 ver. 2.x and 3.0 output	yes											
SBAS/QZSS SAIF/BeiDou/IRNSS wide area code differential mode (available for corresponding systems)	yes											

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Code Differential Base	yes											
Code Differential Rover	yes											
Phase differential (RTK) rover	yes											
Phase differential (RTK) base	yes											
Different models of tropospheric delay	yes											
Different models of ionospheric delay	yes											
Support of upload of user geoid data	yes											
Geoid and Magnetic Variation models	yes											
RAIM	yes											
Different DATUMs support	yes											
Different map projections support	yes											
Output of grid coordinates	yes											
Onboard non-removable memory for data storage	up to 256MB	up to 256MB	up to 256MB	up to 256MB	up to 256MB	up to 256MB	up to 16 GB	up to 2048MB	up to 16 GB	up to 16 GB	up to 16 GB	up to 16 GB
High speed RS232 serial ports (up to 460.8 Kbps)	-		1	1	1	1	1	2	2	2	2	2
High speed configurable RS232/RS422 serial ports (up to 460.8 Kbps)	-		2	2	2	2	2	-2	2	2	2	2
High speed UART port (up to 460.8 Kbps)	1	1	-	-	-	-	-	-	-	-	-	-
Built-in USB to UART FTDI bridge with up to 1.5M baud rate	-	-	1	1	1	1	1	-	-	-	-	-
High speed USB 2.0 device port (480 Mbps)	-	-	-	-	-	-	-	1	1	1	1	1
Full-duplex 10BASE-T/100BASE-TX Ethernet port	-	-	-	-	-	-	-	1	1	1	1	1
CAN port	-	-	1	1	1	1	1	2	2	2	2	2
IRIG timecode output	-	-	1	1	1	1	1	1	1	1	1	1
1 PPS output synchronized to GPS, GLONASS or UTC	-	1	1	1	1	1	1	2	2	2	2	2
Event Marker input	-	-	1	1	1	1	1	2	2	2	2	2
External Reference Frequency Input/Output	-	-	-	-	-	-	-	yes	yes	yes	-	-
MinPad interface	-	-	2 external LED drive	4 external LED drivers, ON/OFF control and External Command inputs								
Configurable Logic-Level GPIO ports	-	-	2	2	2	2	2	4	4	4	4	4
On-board power supply input voltage	+4.5 to +4 0 Volts										+6.0 to +40 Volts	
Keep-Alive input voltage	+4.5 to +4 0 Volts											
RF connector	MMCX Jack, edge mount. Amphenol p/n 908-22100											
The central pin of the antenna connector outputs to power LNA	+5 VDC											
The sourced current, nominal	0.12A	0.12A	Up to rev.6.1- 0.1 A; from rev.6.2 - 0.12 A	Up to rev.6.2 - 0.1 A; from rev.6.3 - 0.12 A	Up to rev.6.3 - 0.1 A; from rev.6.4 - 0.12 A	Up to rev.5.2 - 0.1 A; from rev.5.3 - 0.12 A	0.12 A max	Up to rev.7.1 - 0.1 A; from rev.7.2 - 0.12 A	0.12 A	0.12 A	0.12 A	0.12 A
Power consumption	1 Watt	1W	1.2 Watt	1.6 Watt	1.5 Watt	2.5 Watt	3.5 Watt	2.7 Watt	8 Watt	4.5 Watt	4.3 Watt	7.2 Watt
Dimensions	101.6x25.4 mm	101.6x25.4 mm	55x40 mm	57x66 mm	57 x 66 mm	57x88 mm	57x88	100x80 mm	100x80 mm	100x80 mm	100x120mm	100x120mm
Weight	14 g	14 g	21 g	34 g	34 g	47 g	54 g	70 g	87 g	87 g	120 g	130 g

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Digital connector	Header, 2x6 pins, 0.100" pitch,0.025" SQ post, Samtec p/n TSW-106-07-G-D	Header, 2x7 pins, 2.00 mm pitch, 0.50 mm SQ post, Samtec p/n TMM-107-03-S-D	Micro Header 2x20 pos, 0.050" pitch. Samtec p/n FTSH-120-01-L-DV-K-A					64-pin DIN41612 type B Right Angle, AMP p/n 536052-5				