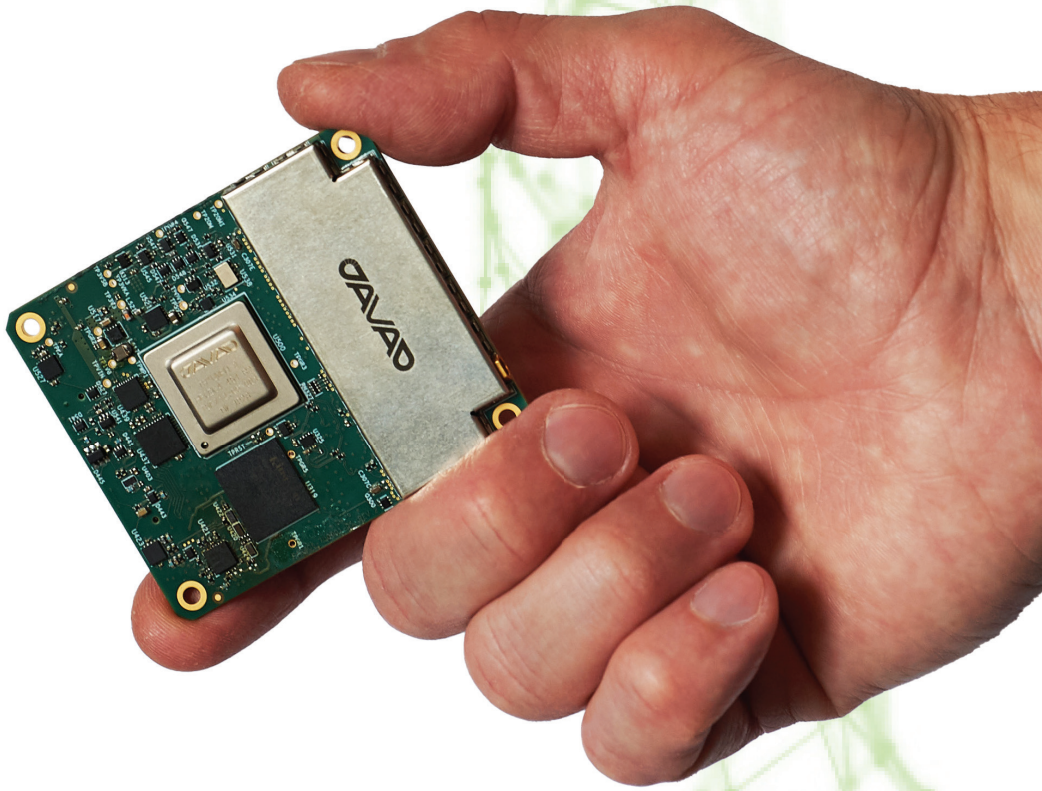
TR-3S

OEM GNSS Board



Key Features

- Spoofing Detection
- Advanced Multipath Mitigation
- 874 Channels, All-In-View Tracking
- MIL-STD-810G Shock & Vibration
- Fast Acquisition Channels
- Up to 200 Hz Output
- CAN, IRIG, Event Mark, 1PPS
- 16 GB On Board Storage

The TR-3S is a small-sized OEM GNSS board with 874 channels for all-in-view tracking capability of multi-constellation, multi-frequency GNSS. The TR-3S is ready for any application requiring high precision and small size. Patented anti-spoofing and jamming detection allow deployment in the most demanding environments together with a full suite of interfaces. Users have an easy status and configuration tool with JAVAD's NetView software and may also interface by line commands within their system.

TR-3S Specifications

Number of Channels	874		
GNSS Constellations	GPS	L1 C/A, L1C (P+D), TMBOC, P1, P2, L2C (L+M), L5 (I+Q)	
	GLONASS	L1 C/A, P1, P2, L2C, L3(I+Q)	
	Galileo	E1(B+C), CBOC, E5A(I+Q), E5B(I+Q), AltBoc, E6(B+C)	
	BeiDou	B1, B1C(P+D), TMBOC, B2B(I+Q), B2, B2A(I+Q), AltBoc, B3	
	QZSS	L1 C/A, L1C (P+D), TMBOC, L2C (L+M), L5 (I+Q), L6 (L61/L62), L1S, L1Sb, L5S	
	SBAS	L1, L5(P+D)	
	IRNSS	L5, S-Band	
	L-band	1525-1560 MHz	
Position Accuracy	Autonomous	< 2.0 m	
	DGPS	< 0.5 m	
	RTK	Horizontal: 0.008 m + 1.0 ppm	Vertical: 0.015 m + 1.0 ppm
	Static/Fast Static	Horizontal: 0.003 m + 0.1 ppm	Vertical: 0.005 m + 0.4 ppm
Time To First Fix	Cold Start	< 35 s	
	Warm Start	< 5 s	
	Reacquisition	< 1 second	
Input/Output	Serial	1 x RS232 Serial Port (up to 460.8 Kbps)	
		2 x Configurable RS232 / RS422 Serial Ports (up to 460.8 Kbps)	
	USB	1 x USB 2.0 Full Speed. Up to 1.5 Mbps RS232 speed	
	IRIG	Timecode Output	
	Event Marker	1 x Event Mark Input	
	1PPS	1 x 1PPS Output Synchronized to GPS or UTC	
	CAN	1 x CANBUS Port	
	GPIO	2 x Configurable Logic-Level GPIO Ports	
	Status	4 External LED drivers, On / Off Control, External Command Input	
	GNSS Antenna	1 x MMCX, +5 VDC up to 0.16 A	
	Main Connector	Micro Header, 2 x 20 pos, 0.050” pitch	
Storage	Memory	16 GB internal, non-removable	
Physical & Electrical	Dimensions	66 x 57 x 11 mm	
	Weight	30 g	
	Power Input	+4 to +40 VDC	
	Power Consumption	GPS + GLO L1: 1.4 W	
		GPS + GLO + GAL + BDS L1: 1.5 W	
		All in view, L-Band Off: 2.0 W	
		All in view + L-Band: 2.3 W	
Environmental	Operating Temperature	-40° C to +80° C	
	Storage Temperature	-40° C to +85° C	
	Shock	MIL-STD-810G(C1) Method 516.7 Shock Procedure I (Functional)	
		MIL-STD-810G(C1) Method 516.7 Shock Procedure V (Crash Hazard)	
		ISO-9022-31-06 Shock, Severity 5	
	Vibration	MIL-STD-810G(C1) Method 514.7 Category 24 Minimum Integrity Vibration	
		MIL-STD-810G(C1) Method 514.7 Category 24 Helicopter Vibration	
		IEC 60068-2-6 Sine Vibration	

GNSS performance is dependent on signal quality, satellite geometry, ionospheric and tropospheric conditions, baseline length, multipath effects and RF interference. Specifications may be changed without notice.