DELTA

Multi-Purpose GNSS Receiver

Key Features

- All GNSS Constellations
- CORS Receiver
- Portable Base Station
- NTRIP Server & Caster
- Web User Interface
- Bluetooth & WiFi
- CAN, Event, 1PPS
- External Frequency I/O

The DELTA receiver enclosure is designed for multiple GNSS applications where reliable correction data, timing, and event markers are required. Based on the TRIUMPH-3 ASIC, the receiver tracks all GNSS constellations with patented antijamming, anti-spoofing and multipath reduction technologies to excel with reliability and signal quality.

A simple Web User Interface sets up a Continuously Operating Reference Station (CORS) or Portable Base Station, with integrated NTRIP Caster and Server functions to transmit RTCM corrections via TCP or NTRIP.

DELTA Specifications

Number of Channels	874		
GNSS Constellations	GPS	L1 C/A, L1C (P+D), P1, P2, L2C (L+M), L5 (I+Q)	
	GLONASS	L1 C/A, L1 (P+D), P1, P2, L2C, L2 (P+D), L3 (I+Q)	
	GALILEO	E1 (B+C), E5A (I+Q), E5B (I+Q), AltBoc, E6 (B+C)	
	BeiDou	B1, B1C (P+D), B2, B2A (I+Q), B2B (I+Q), AltBOC, B3	
	QZSS	L1 C/A, L1 C/B, L1C (P+D), L2C (L+M), L5 (I+Q), L6 (L61/L62), L1S, L1Sb, L5S	
	SBAS	L1, L5 (P+D)	
	NavIC	L1 (P+D), L5, S-band	
Position Accuracy (rms)	Autonomous (Stand alone)	< 2 m	
	SBAS	< 1 m	
	DGPS	< 0.5 m	
	J-Star (PPP)	Horizontal: 10 mm	Vertical: 20 mm
	Single Baseline RTK	Horizontal: 8 mm + 1 ppm	Vertical: 15 mm + 1 ppm
	Network RTK	Horizontal: 8 mm + 0.5 ppm	Vertical: 15 mm + 0.5 ppm
	Static/Fast Static	Horizontal: 3 mm + 0.1 ppm	Vertical: 3.5 mm + 0.4 ppm
	Roll / Pitch / Heading	Roll / Pitch: 0.10 deg, Heading: 0.09 deg (2m baseline)	
Time To First Fix	Cold Start	< 35 s	
	Hot Start	< 5 s	
	Reacquisition	< 1 s	
	RTK Initialization	2 to 6 s	
Output Rate	Position / Measurements	Up to 200 Hz (3S, 3SW), up to 100 Hz (DI,DIW)	
	Heading	Up to 50 Hz (DI, DIW)	
Communication	Ethernet	10BASE-T/100BASE-TX, 7-pin ODU	
	Wi-Fi	802.11 a/b/g/n/ac, 5 GHz & 2.4 GHz, R-SMA	
	Bluetooth	5.1, Class 2, R-SMA	
	USB 2.0	Host & Device, 5-pin ODU	
	Serial	2 ports: 1 x RS232, 1 x RS232/RS422, up to 406800 bps, 7-pin ODU	
	Serial/CAN	RS232/RS422, up to 406800 bps, CAN 2.0, 8-pin M12	
	IRIG	Timecode A, B, BNC	
	1PPS	2 ports, BNC	
	Event Marker	2 ports, BNC	
	External Frequency I/O	BNC	
	GNSS Antenna	TNC	
Power	Input	2 ports, 5-pin ODU, 4.5-40 VDC	
	Consumption	4.5W, Typical	
Physical & Environmental	Operating Temperature	-40 °C to +75 °C	
	Storage Temperature	-40 °C to +85 °C	
	Humidity	95%	
	Shock	MIL-STD-810H Method 516.8	
	Vibration	MIL-STD-810H Method 514.8	
	Dimensions	132 x 61 x 190 mm	
	Weight	0.75 kg	

MODEL	Option A (Standard)	Option B	Option C
DELTA-3S	Front: PWR, USB, Port A, Port C, ETHR Back: ANT	Back: ANT, Event A, 1PPS A, Frequency I/O	Back: ANT, EVENT A, 1PPS A, RS/CAN
DELTA-3SW	Front: PWR, PWR2, USB, Port A, Port C, ETHR BT, RS/CAN, WiFi, ANT Back:		Back: 1PPS B, EVENT B, 1PPS A, EVENT A, IRIG, Freq I/O
DELTA-DI	Front: PWR, USB, Port A, Port C, ETHR Back: ANT2, ANT1	Back: ANT2, EVENT A, 1PPS A, ANT1	Back: ANT2, RS/CAN, 1PPS A, ANT1
DELTA-DIW	Front: PWR, PWR2, USB, Port A, Port C, ETHR BT, RS/CAN, WiFi Back: ANT2, ANT1		Back: EVENT B, 1PPS B, IRIG, ANT2, EVENT A, IPPS A, ANT1

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