www.instrumentation.it
Via Acquanera 29, 22100 COMO (Italy) tel. +39.031.525391 - fax +39.031.507984 - info@instrumentation.it

INSTRUMENTATION DEVICES SRL

DELTAS

for TRE-G2T, TRE-G3T, TRE-G3TAJ

DELTAS receiver is based on our TRIUMPH Technology implemented in our TRIUMPH Chip. For the first time in the GNSS history we offer up to 100 Hz RTK.

216 channels of single or dual frequency GPS, Galileo and GLONASS in a small attractive, sturdy, and watertight box, which contains either TRE-G2T, TRE-G3T, or TRE-G3TAJ board.

The on-board power supply on the DELTAS receiver accepts any voltage from +4.5 to +35 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. The DELTAS receiver also includes TriPad (two LEDs, ON/OFF and function button). In addition, the receiver comes with large amount of flash for data storage. The CAN interface in the DELTAS receiver is provided complete with all associated hardware and firmware, not just the CAN bus. The same is true with all the serial RS232/RS422 ports in our receiver. Simply stated, additional functions are not needed to incorporate any of our DELTAS receiver in most applications.
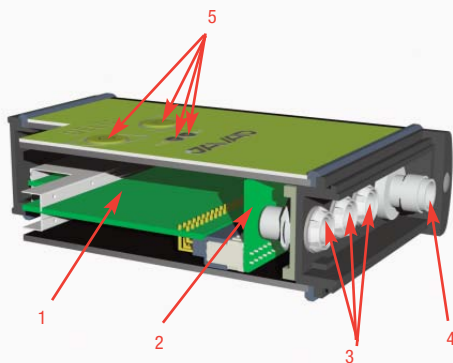
In addition to timing strobe and event marker, the DELTAS receiver includes the option of complete IRIG timing system.

DELTAS

Standard Configuration

- DELTAS Receiver (0 MB)
- GPS L1/L2/L5
- GLONASS L1/L2 (G3T, G3TAJ only)
- RAIM
- TriPad Interface
- RS232 Serial Port (460.8 kbps)
- External GNSS Antenna TNC Female connector

Optional Feature

- Galileo E1/E5A
- Update Rate 1 Hz, 5Hz, 10Hz, 20Hz, 50Hz & 100Hz
- RTK Rate 1 Hz, 5Hz, 10Hz, 20Hz, 50Hz & 100Hz
- Data Recording up to 2048MB
- Multi-Base Code Differential Rover
- Code Differential Base
- Advanced Multipath Reduction
- In-Band Interference Rejection
- Two Event Markers
- Two 1 PPS timing strobes
- CAN 2.0 port
- External Reference Frequency input
- Up to 3 high Speed (460.8 kbps) RS232 Serial Ports
- High speed RS422 serial port (up to 460.8 Kbps)
- USB port
- Ethernet
- KFK WAAS/EGNOS (SBAS)

1. GNSS Receiver with on-board Memory
2. GNSS Interconnect Board
3. Communication and Power Ports
4. External GNSS Antenna Connectors
5. On/Off and Function Buttons and LEDs

Description

Total 216 channels: all-in-view (GPS L1/L2/L5, Galileo E1/E5A, GLONASS L1/L2, SBAS) integrated receiver, rugged aluminum housing complete with TriPad interface

Tracking Specification

Tracking Channels	
DeltaS -G2T	GPS L1/L2/L5, Galileo E1/E5A, SBAS
DeltaS-G3T DeltaS-G3TAJ	GPS L1/L2/L2C/L5, Galileo E1/E5A, GLONASS L1/L2, SBAS
Signals Tracked	L1/L2 C/A and P Code & Carrier

Performance Specifications

Autonomous	<2 m
Static, Fast Static Accuracy	Horizontal: 0.3 cm + 0.5 ppm $*$ base_line_length
	Vertical: 0.5 cm + 0.5 ppm $*$ base_line_length
Kinematic Accuracy	Horizontal: 1 cm + 1 ppm $*$ base_line_length
	Vertical: 1.5 cm + 1.5 ppm $*$ base_line_length
RTK (OTF) Accuracy	Horizontal: 1 cm + 1 ppm $*$ base_line_length
	Vertical: 1.5 cm + 1.5 ppm $*$ base_line_length
DGPS Accuracy	< 0.25 m Post Processing, < 0.5 m Real Time
Cold Start	<35 seconds
Warm Start	<5 seconds
Reacquisition	<1 second

Power Specification

Battery	External
External Input Voltage	+4.5 to +35 volts

GNSS Antenna Specifications

GNSS Antenna	External

Radio Specifications

Type	External, UHF/VHF radio modem
Base Power Output	2.0W/35W

I/O

External Power port	1 port
Communication Ports	3x serial RS232 port up to 460.8 kbps
	High speed RS422 serial port (up to 460.8 Kbps)
	High speed USB 2.0 device port (480 Mbps)
	Full-duplex 10BASE-T/100BASE-TX Ethernet port
Other I/O Signals	CAN 2x 1 PPS synchronized 2x Event Marker IRIG
Status Indicator	Two LEDs, two function keys (TriPad)

Memory & Recording

Internal Memory	Up to 2048MB of onboard non-removable memory for data storage
Raw Data Recording	Up to 100 times per second (100Hz)
Data Type	Code and Carrier from GPS); GPS L1/L2/L5/Galileo E1/E5A/ (G2T); GPS L1/L2/L5/Galileo E1/E5A/ GLONASS L1/L2 (G3T, G3TAJ);

Data Output

Real time data outputs	RTCM SC104 versions 2.x and 3.x Input/Output
ASCII Output	NMEA 0183 versions 2.x and 3.0 Output
Output Rate	Code and Carrier

Environmental Specifications

Enclosure	Aluminum extrusion, waterproof IP66
Operating Temperature	-40° C to +80° C
Storage Temperature	-45° C to +85° C
Humidity	95% non-condensing
Dimensions	W: 109 mm x H: 35 mm x D: 169 mm
Weight	
DeltaS-G2T	394 g
DeltaS-G3T, G3AJ	401 g

JAVAD GNSS
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