

# TRIUMPH-1

## 216 channels

GPS + GLONASS + Galileo



**Better than 30 cm GIS... instantly  
or 5 cm static**



Actual size

**GISmore** stand-alone or  
inside the hat

**Bluetooth wireless  
connection to GISmore**

- GPS L1
- Galileo E1
- GLONASS L1
- 100 Hz update rate
- RAIM
- Rechargeable Li-Ion Battery
- GNSS Antenna
- GSM Module
- Bluetooth® Interface
- Bluetooth/GSM Antenna



**Many  
ways  
to use**

GPS + GLONASS + Galileo

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# TRIUMPH

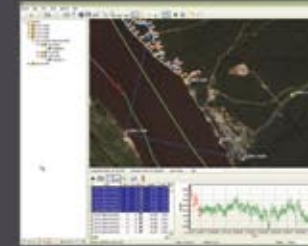
# TRIUMPH

216 sophisticated channels

- Equivalent of 110,000 correlators for fast acquisition
- Five adaptive In-Band Interference Rejection filters
- Hardware Viterbi decoder for WAAS/EGNOS/SBAS
- Powerful processor with FPU

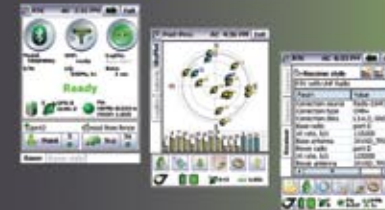
## • Justin

*A comprehensive Survey and GIS software*



## • Tracy

*A versatile and powerful field software*



## • Giodis

*Full-featured office post-processing software*



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**TRIUMPH**

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*Experience  
Vision  
Commitment*

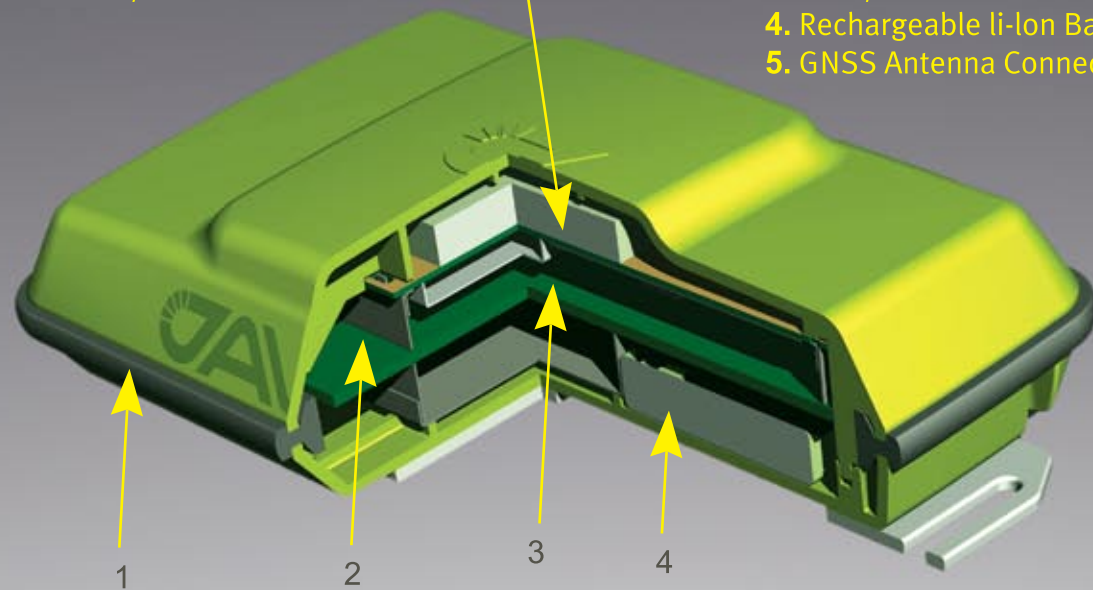
**216**  
channels



- *Integrated Antenna*
- *UHF modem*
- *WiFi*
- *Ethernet*
- *Bluetooth*
- *GSM*
- *Battery (20 hours)*
- *charger*

- 1. Guard Bumper
- 2. Bluetooth/GSM Antenna

- 3. GNSS Receiver, Power Board, GSM/Bluetooth and Memory
- 4. Rechargeable li-Ion Battery
- 5. GNSS Antenna Connectors



# Our GLONASS is as good as GPS

We dynamically and continuously calibrate GLONASS inter-channel biases with an accuracy of 0.2 millimeter

## 216-channel TRIUMPH

### Tracking Specification

Tracking Channels  
GPS L1/Galileo E1/GLONASS L1

Signals Tracked  
L1 C/A, Code & Carrier

### Power Specification

Battery  
Internal Li-Ion battery (3.7 V, 1.05 Ah) with internal charger

Operating modes Standby mode  
Call mode

Input Voltage +4.5 to +6.5 volts

### GNSS Antenna Specifications

GNSS Antenna Internal  
Antenna Type Microstrip (Zero Centered)  
Ground Plane Antenna on a flat ground plane

### Radio Specifications

GSM/GPRS Module  
Internal GSM/GPRS quad-band module, GPRS Class 10

GSM/GPRS Antenna Internal

### I/O

Internal Communication Port  
Bluetooth V2.0+EDR Class 2 supporting SPP Slave and Master Profiles

External Power port 1 port

GSM Status Indicator One LED

### Performance Specifications

Static, Fast Static Accuracy  
Horizontal: 5 cm + 0.5 ppm \* base\_line\_length  
Vertical: 5 cm + 0.5 ppm \* base\_line\_length

Kinematic Accuracy  
Horizontal: 5 cm + 1 ppm \* base\_line\_length  
Vertical: 5 cm + 1.5 ppm \* base\_line\_length

RTK(OTF) Accuracy  
Horizontal: 5 cm + 1 ppm \* base\_line\_length  
Vertical: 5 cm + 1.5 ppm \* base\_line\_length

DGPS Accuracy < 0.25 m Post Processing,  
< 0.5 m Real Time

Cold Start <65 seconds

Warm Start <5 seconds

Reacquisition <1 second

### Memory & Recording

Internal Memory  
Up to 256 MB of onboard non-removable memory for data storage

Raw Data Recording  
Up to 100 times per second (100 Hz)

Data Type  
Code and Carrier from GPS L1/Galileo E1/GLONASS L1

### Environmental Specifications

Enclosure High impact plastic, waterproof

Operating Temperature -4° C to +55° C

Dimensions W: 79 mm x H: 33 mm x D: 131 mm

Weight 210 g



**JAVAD**  
WWW.JAVAD.COM