Hybrid Robotic System

TOPCON

Integrated GNSS and Total Station

- GNSS and Optical Rover
- Auto-tracking of Prism
- Network or Local RTK
- LongLink™ Communication
- Rugged, Waterproof Design
- Improved Data Workflow

Hybrid Robotic System Integrated GPS and Total Station

Hybrid Robotic System
Software – Hardware – Technology

The most advanced productivity enhancing, integrated GNSS and robotic total station system, in a never before seen small design.

Topcon's commitment to automating data workflows and increasing your productivity can be seen in this latest system of combined technology. Topcon's slogan of "Your Productivity, Our Technology" is our commitment to providing industry leading productivity systems based on software, hardware, and technology. Systems that improve the way you work.

The Hybrid Robotic System is the combination of GNSS positioning, an optical total station, and automated data workflow. By utilizing both GNSS and optical measurements, any job site project can be completed faster, and with the precision needed. In addition, by adding new efficient data workflows from MAGNET™, productivity overall will increase.

The precision and tracking ability of the DS robotic instrument provides precise measurements anywhere the prism can be seen. The GNSS positioning of the RTK rover pole can be used for measurements that are not in the line of site. The Topcon Tesla is the perfect balance between large screen MAGNET Field viewing and an all-day handheld controller. More than just an integrated surveying solution, the Hybrid Robotic System includes the data flow connection to the office. Exchange data files in real-time with MAGNET Enterprise.

There are many additional hardware configurations from Topcon that can benefit from the use of hybrid positioning. This technology is compatible with other robotic instruments such as the Topcon PS, IS, QS, and GNSS receivers such as the HiPer V, GRS-1, HiPer+, and others.

HiPer SR Rover
- Unbelievably small
- Rugged, waterproof design
- Network RTK rover
- Local base/rover RTK

DS-AC+ Total Station
- Small, compact robotic instrument
- Rugged, waterproof design
- Superior angle accuracy
- Powerful tracking EDM

Topcon Tesla
- Large bright screen
- Graphical MAGNET™ Field interface
- Internal cellular data (optional)
- Internal NMEA GPS (optional)

Field and Office Connected
- Exchange files
- Chat with other crews
- Track assets
- Observe productivity

Network RTK, MAGNET™ Relay, or Local RTK

Use any type of GNSS positioning in your hybrid system to enhance your robotic re-acqusition and jobsite localization routines. TopNET live, Network RTK, MAGNET Relay, or a local base station RTK message will provide the best hybrid positioning solution. TopNET live networks can be found at www.topnetlive.com

TopNET *live*

HYBRID ROBOTIC SYSTEM

Hybrid Positioning Performance

Using the Hybrid Positioning System, job site measurements can be completed faster. Productivity will be increased with fewer robotic tripod setups. Collect measurements with GNSS or the robotic total station anywhere on the job site.

Hybrid Robotic System

SPECIFICATIONS

DS-AC+ Instrument Accuracy	
DS-101	1 arc second
DS-103	3 arc seconds
DS-105	5 arc seconds
Distance Measurement	
Prism EDM Range	6,000m
Prism EDM Accuracy	1.5mm + 2ppm
Non-Prism Range	1,000m
Non-Prism Accuracy	2mm + 2ppm
HiPer SR Receiver	
Number of Channels	226-channel Vanguard Technology™ with Universal Tracking Channels
Signals Tracked	GPS, GLONASS, SBAS, QZSS, Galileo, and COMPASS*
RTK Accurcay	
Horizontal	10.0mm + 1.0ppm
Vertical	15mm + 1.0ppm
Dust/Water Protection	IP67
LongLink™ Range	300+m
Topcon Tesla Geo 3G	
CPU	806 MHz PXA320 Processor
Memory	256MB RAM ,4GB Flash storage, SD/SDHC slot, user accessible
Display	5.7" (145 mm) color VGA LCD (640 x 480) Portrait or landscape orientation
GSM	Penta-band 3G GSM/GPRS/ EDGE/HSDPA 850/900/ 1800/1900/2100 MHz
Dust/Water Protection	IP67
Wireless Connection	*Bluetooth*® and Wifi

** Galileo and COMPASS support will be incorporated into HiPerSR when these constellations have matured and are ready for commercial use.*

For more specification information:
www.topconpositioning.com

SOFTWARE

Hybrid Robotic System

Choice of GNSS hybrid positioning performance.

Network RTK

With a network RTK solution from the HiPer SR, your Hybrid Positioning System will perform at maximum efficiency.

MAGNET™ Relay RTK

If a network RTK solution is not available, then consider setting up your own mobile reference RTK base with MAGNET Relay. The MAGNET Relay service provides RTK performance similar to network RTK.

** Not available in all regions*

Local Base/Rover RTK

The HiPer SR can be used as a local base/rover combination using LongLink™, interference-free communication. Position one HiPer SR on the handle of the DS robot and another on the rover pole.

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Your local Authorized Topcon dealer is: