

 **TOPCON**®



PRECISION GPS+



# HiPer Pro

Completely cable-free, GPS+ RTK system with integrated UHF radio



## Topcon is proud to introduce the next addition to the popular HiPer family of GPS+ receivers, the new HiPer Pro!



This revolutionary receiver is truly worthy to join this extremely successful lineup of precision GPS+ products. The HiPer Pro also is consistent with Topcon's tradition of innovation not imitation; by being the World's First completely cable free base and rover RTK system with an integrated UHF radio system.

Just as the Topcon HiPer Lite and HiPer Lite+ revolutionized the design of modern GPS receiver technology, the HiPer Pro offers the same completely cable free system design and operational advantages. With the added extended range performance of a UHF style radio system.

Topcon engineers and scientists have once again developed a revolutionary, integrated design that incorporates a transmitting UHF radio in the base receiver, eliminating the need for external radios and batteries. The new HiPer Pro will provide up to 4 miles of coverage with the internal radio, a 1 watt transceiver working in the 380 – 470 MHz range. Topcon also offers a simple, but powerful repeater system to extend your range as your needs change.

In order to eliminate the radio interference hassles of traditional UHF radio designs, the Topcon Hiper Pro incorporates advanced radio technology called "Free Channel Scan", which automatically detects disruptive radio interference and changes channels to compensate.

The new HiPer pro offers you a complete RTK GPS system that leaves behind the mess of complicated, tangled cables we have come to expect at the typical RTK base station. Compare HiPer Pro to the competition. You will find that although they have tried to make efforts to improve the rover end of the RTK system, the base station still includes a complex design with a slew of cables and modular components!

That's right, no more hassles of an RTK Base Station with it's convoluted mess of external batteries, antennas, and RTK radios that are all connected with fragile cables. Topcon has designed a complete, integrated RTK Base & Rover system that is completely cable free. No more cables to break, and no more wasted time of a complicated base receiver setup.

At Topcon, we strive to produce advanced product designs that make your life easier by solving the everyday problems you encounter on the job site such as broken cables and complicated systems setups. The new HiPer Pro offers the advantages of less equipment to carry into the field, and less to forget back at the office!

The Topcon HiPer Pro also incorporates Topcon's industry leading GPS+GLONASS satellite tracking technology. The added advantage of dual constellation tracking provides more satellite coverage, increased performance, and improved precision over GPS only systems. Topcon leads all others in the GPS industry as the only dual-frequency, dual-constellation system manufacturer.

Topcon is proud to be leading the precision GPS industry with the most advanced technology, the most innovative system designs, and the most complete and diverse precision product lineup available. Contact your local dealer to find out why more professionals are choosing Topcon GPS+ solutions over all the rest!

Specifications subject to change without notice  
Patents Pending

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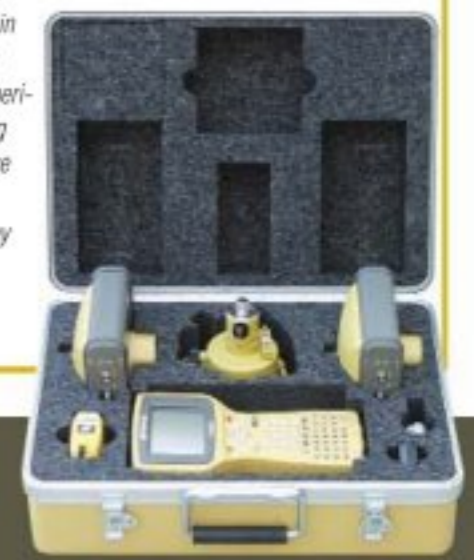
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**FC-100**  
Rugged Window CE™  
Field Computer



**GB-1000**  
Modular GPS+  
Base Receiver



### Description

40 channel integrated GPS+ receiver/antenna with MINTER interface.

### Tracking Specifications

Tracking Channels, standard 40 L1 GPS (20 GPS L1+L2 on Cinderella<sup>2</sup> days)  
Tracking Channels, optional 20 GPS L1+L2 (GD), GPS L1 + GLONASS (GG),  
20 GPS L1+L2+GLONASS (GGD)  
Signals Tracked L1/L2 C/A and P Code & Carrier and GLONASS

### Performance Specifications

Static, Rapid Static H: 3mm + 0.5ppm  
V: 5mm + 0.5ppm  
RTK H: 10mm + 1ppm  
V: 15mm + 1ppm

### Power Specifications

Battery Internal Lithium-Ion batteries for up to 14+ hours of operation (10 hrs TX)  
External power input 6 to 28 volts DC  
Power consumption Less than 4.2 watts

### GPS+ Antenna Specifications

GPS / GLONASS Antenna Integrated  
Ground Plane Integrated flat ground plane  
Radio Antenna Center-mount UHF Antenna

### Radio Specifications

Radio Type Internal Tx/Rx UHF (Selectable frequency range)  
Power Output 1.0W/0.25W (selectable)

### Wireless communication\*

Communication Bluetooth™ version 1.1 comp.

### I/O

Communication Ports 2x serial (RS232)  
Other I/O Signals 1pps, Event Marker  
Status Indicator 4x3-color LED's, two-function keys (MINTER)  
Control & Display Unit External Field Controller

### Memory & Recording

Internal Memory Up to 128 MB  
Data Update Rate Up to 20 times per second (20Hz)  
Data Type Code and Carrier from L1 and L2, GPS and GLONASS

### Data Input/Output

Real time data outputs RTCM SC104 ver 2.1, 2.2, 2.3, 3.0, CMR, CMR+  
ASCII Output NMEA 0183 version 3.0  
Other Outputs TPS format  
Output Rate Up to 20 times per second (20Hz)

### Environmental Specifications

Enclosure Aluminum extrusion, waterproof  
Operating Temperature -30°C to 55°C  
Dimensions W:159 x H:172 x D:88 mm / 6.25 x 6.75 x 3.5 in  
Weight 1.65 kg / 3.64 lbs

\*Bluetooth™ type approvals are country specific. Please contact your Topcon representative for more information.

<sup>1</sup> Specifications are subject to change without notice. Performance specifications assume a minimum of 6 GPS or 7 GPS/GLONASS satellites above 15 degrees in elevation and adherence to procedures recommended by TPS in the appropriate manuals. In areas of high multipath, during periods of high PDOP and during periods of high ionospheric activity performance may be degraded. Robust checking procedures are highly recommended in areas of extreme multipath or under dense foliage.

<sup>2</sup> Cinderella feature activates GGD reception at GPS midnight every other Tuesday for 24 hours.