All-Purpose GNSS Receiver

- Vanguard Technology™
- Universal Tracking Technology
- Rugged, magnesium alloy construction
- Integrated form delivering full RTK, Static, Network functionality
- Fence Antenna™ evolution for optimal signal isolation and tracking

Compact, cable-free solution with Vanguard Technology for all GNSS positioning applications
Topcon raises the standard once again by adding Vanguard Technology with 226 channels, Universal Tracking Technology, and the Fence Antenna into the versatile and configurable HiPer V receiver. Universal Tracking Technology is an advanced firmware process that allows each of the 226 channels to be assigned to any satellite signal – providing an all-in-view satellite monitoring ability like never before.

Internal radio configurations
The HiPer V integrated receiver can be configured with the radio and cellular modem that best fits your needs. You can choose from either a far-reaching Digital UHF option or a secure and steady Spread Spectrum radio. Further, you can choose from HSPA, CDMA, or no cellular module. If you start your HiPer V investment with static only receivers, they can later be upgraded to include radio and cellular modules at one of many Topcon service facilities around the globe.

Rugged and waterproof
The HiPer V is designed rugged enough to perform on a real jobsite. It is also waterproof IP67, which means it can be submersed into water. The ports, speaker and battery door are all completely sealed from dust and water.

Voice alerts
Voice status messages keep you informed without having to look at the screen of the field controller, or the status lights above your head. Stay safe in traffic situations by looking at oncoming traffic rather than looking for the word “Fixed”.

Fence Antenna™ technology
This superior GNSS antenna element is light-weight, rugged, and sensitive enough to track signals in environments where other receivers fail. Obtain lock sooner, and track longer with Fence Antenna technology.
Bluetooth® connectivity
Serial connectivity
Remaining memory
Number of satellites being tracked
Radio connectivity
Serial connectivity
Internal Bluetooth® module
Remaining battery
Power button
Vanguard GNSS chipset
Fence Antenna™
Bluetooth® connectivity
Radio connectivity
### GNSS Tracking

<table>
<thead>
<tr>
<th>Tracking Options</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Channels</td>
<td>226 Channels with Universal Tracking Technology</td>
</tr>
<tr>
<td>GPS</td>
<td>L1, L2, L2C</td>
</tr>
<tr>
<td>GLONASS</td>
<td>L1, L2</td>
</tr>
<tr>
<td>SBAS</td>
<td>L1 C/A WAAS/MSAS/EGNOS/GAGAN</td>
</tr>
<tr>
<td>QZSS</td>
<td>L1 C/A</td>
</tr>
</tbody>
</table>

### Positioning Accuracy

<table>
<thead>
<tr>
<th>Type</th>
<th>H: 3.0 mm + 0.4 ppm</th>
<th>V: 5.0 mm + 0.5 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static/Fast Static</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precision Static**</td>
<td>H: 3.0 mm + 0.1 ppm</td>
<td>V: 3.5 mm + 0.4 ppm</td>
</tr>
<tr>
<td>RTK (L1 + L2)</td>
<td>H: 5.0 mm + 0.5 ppm</td>
<td>V: 10.0 mm + 0.8 ppm</td>
</tr>
<tr>
<td>DGPS</td>
<td>&lt; 0.5 m</td>
<td></td>
</tr>
</tbody>
</table>

### Communication

- Bluetooth® V 2.1 + EDR, Class 2, 115,200 bps
- UHF, Spread Spectrum, Cellular (options)
- Integrated HSPA+/CDMA

### Data and Memory

- Real Time Data Output: TPS, RTCM SC104 v2.x
- Data Output: 3.x and MSM, CMR/CMR+
- NMEA 0183 Output: Version 2.x, 3.x and 4.x

### Physical

- Dimensions (d x h): 184 x 95 mm
- Weight: 1 kg

### Power

- Power Source: External Power (6.7 to 8 VDC)
- Removable battery (7.2V, 4300 mAh)
- Operating Time: > 7.5 hours

### Environmental

- Operating Temp.: -40ºC to 65ºC
- Dust/Water Rating: IP67
- Drop and Topple: 2 meter pole-drop

** Under nominal observing conditions and strict processing methods, including use of dual frequency (GPS) precise ephemerides, calm ionospheric conditions, approved antenna calibration, unobstructed visibility above 10 degrees and an observation duration of at least 3 hours (dependent on baseline length).

### Integrated radio and modern options

- Spread Spectrum radio
- Digital UHF II radio
- HSPA cellular modem
- CDMA modem

### Project site ruggedness

- Magnesium metal housing
- 2 meter drop design
- Field tested, field ready
- Waterproof

### Constellation tracking performance

- Full GPS, GLONASS, and SBAS constellation and signal tracking
- Delivering positional confidence in harsh environments
- Improved repeatability 24/7

### Housing features

- Multifunction communication
- Sealed power port for full day use
- Sealed external serial port
- Certified slant height measure mark