

# Topcon HiPer V

In a continued commitment to improving the productivity of positioning professionals, Topcon enhances the HiPer family of products by adding Vanguard Technology to the HiPer V.

## Features & Benefits:

- Vanguard Technology
- 226 Universal Channel flexibility
- Rugged Magnesium Alloy Construction
- Integrated RTK & Static Receiver
- Fence Antenna signal tracking

Topcon raises the standard once again by adding Vanguard Technology's 226 channels and fence antenna into a versatile, configurable receiver, HiPer V. The additional channels and precision antenna element make RTK positioning faster and more productive than any other receiver on the market.

### Vanguard Technology

Advanced GNSS chip design and superior support technology such as Quartz Lock Loop and Universal Tracking technology. Vanguard Technology receivers are the most productive receiver on the market..

### Internal GSM, HSPA, or CDMA Modem for Network RTK and Magnet Relay

Designed as a perfect network RTK rover, the HiPer V gives you the option of an internal GSM, HSPA, or CDMA cellular modem. With its completely integrated design, the HiPer V eliminates the hassles of external modems and cables, all in a lightweight, rugged design.

### MAGNET Relay Ready

Use Magent Relay with a HiPer V to create a cell-to-cell base/rover combination. No FCC radio license required and single baselines up to 35km. The HiPerV uses the internal cellular modem to connect to Magnet Relay and is then available to any other Topcon rover running with Magnet Field. It is like creating a mobile network base. Magnet Relay handles all the internet connection and NTRIP broadcast settings automatically and with ease.

### Voice Messages for Receiver Status

Multi-lingual, clear-tone voice messages notify the users of critical receiver information and status such as satellite signal interruption, radio interference, low battery, low memory and more. This feature improves your efficiency by providing information without having to look at the LED display or controller screen.

### Long-Life Li-ion Battery

Topcon's HiPer V comes standard with a modern design long-life Lithium Ion battery that is located safely behind a sealed battery cover.

### Data Storage with SD or SDHC Cards

A large volume of static observation data from long term survey projects, long sessions and displacement monitoring can be stored onto the popular SD cards or SDHC cards with 4GB or larger capacity.



Topcon HiPer V GNSS Receiver Specifications	
TRACKING CAPABILITIES	
Number of Channels	226 Tracking Channels Universal Tracking Technology capable of tracking up to 112 satellites
Tracked Signals	GPS Signals of L1 CA, L1/L2 P-code, L2C. GLONASS Signals of L1/L2 CA, L1/L2 P-code. Satellite-Based Augmentation Systems of WAAS, EGNOS, QZSS, and MSAS

POSITIONING ACCURACY	
Static	L1 only H: 3mm + 0.8ppm V: 4mm + 1ppm L1+L2 Horizontal = 3mm + 0.1ppm (1) Vertical = 3.5mm + 0.4ppm (1)
Real Time Kinematic (RTK)	L1+L2 H: 10mm + 1ppm V: 15mm + 1ppm
Differential GPS (DGPS)	Less than 0.5m (1.6 foot)
USER INTERFACE	
Operation	Single-button operation for power, receiver reset, memory initialization
Display Panel	22 LED status indicators
DATA MANAGEMENT	
Memory	Multi-lingual voice messages for receiver status information
Data Format	RTCM SC104 2.1/2.2/2.3/3.0/3.1, CMR, CMR+, NMEA, TPS
Update/Output Rate	1Hz, 5Hz, 10Hz, 20Hz options
Communications Port	RS-232C (4,800 to 115,200bps)
WIRELESS COMMUNICATION	
Bluetooth® Modem	V2.1 + Enhanced Data Rate (EDR), Class 1, 115,200bps
UHF Radio	Internal, receiver (RX) and transmitter (TX). Supports 410 to 470MHz radio frequency range.
Spread Spectrum Radio	Internal, receiver (RX) and transmitter (TX), 915MHz
GSM, HSPA, CDMA Modem Choice	Internal
ENVIRONMENTAL	
Dust and Water Protection	IP67 (IEC 60529:2001) at closing all connector caps. Protected against temporary immersion up to 1m (3.3ft.) depth.
Shock Rating	2m (6.56ft.) pole drop
Vibration	MIL-STD-202G Method 214A; SAEJ1211, section 4.7
Operating Temperature	HiPer V GNSS Receiver (with battery) = -40 to +149°F (-40 to +65°C) BDC58 Battery = -4 to +149°F (-20 to +65°C) Radio/GSM modems = -4 to +131°F (-20 to +55°C)
Storage Temperature	-49 to +158°F (-45 to +70°C)
Humidity	100%, condensing
PHYSICAL	
Enclosure	Magnesium alloy housing
Size	7.24" Diameter x 3.74" Height (184mm Diameter x 95mm Height)
Weight	HiPer V GNSS Receiver - 2.20 lb. (1.00kg) BDC70 Battery = 6.9 oz. (195g)
POWER SUPPLY	
Standard Battery	BDC70 Detachable and Rechargeable Lithium-ion Battery, 7.2V, 4.3Ah

<b>Operating Time</b>	>7.5 hours in static mode w/Bluetooth® connection
<b>Charger CDC68</b>	Recharging time approximately 4 hours at 77°F (25°C) Input voltage 100 to 240V AC (50/60Hz)
<b>External Power Input Voltage</b>	6.7 to 18V DC
<b>Note 1</b>	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).