TOPCON

HIPER SR

EXTENDED RANGE
SITE RECEIVER

Compact. Rugged. Advanced. Affordable.

- Universal Tracking Channel technology
- Advanced Fence Antenna™ technology
- Compact, lightweight, rugged and cable free design
- Fully integrated LongLink™ and cellular configuration (optional)
- Dual SIM card support

All the functionality needed, nothing more

Providing leading edge technology in a smart, rugged design, the HiPer SR receiver provides superior performance at an affordable price. The compact integrated design includes all-in-view satellite monitoring through Universal Tracking Channel (UTC) technology, industry leading Fence Antenna, sealed long-life power supply, and memory storage.

The HiPer SR comprises two different communication options including Topcon's innovative LongLink communication technology and integrated cellular module (optional).

With the HiPer SR, made in the USA means that you don't have to sacrifice durability and performance to have a versatile 3D job site system. HiPer SR – a compact lightweight receiver that is built to take the most intense environmental conditions and job site punishment.

In addition to ruggedness, the HiPer SR is the most versatile, configurable, compact receiver system available. Use just two units in many configurations, depending on the demands of the project site. Use as a job site base and rover with interference-free LongLink communication up to 300 m or base and rover with MAGNET Relay cellular communication RTK up to 35 km baselines.

A pair of HiPer SR receivers can also be used with internal SIM cards as network rovers with Topcon TopNET*live* GNSS Reference Network, two network rovers with internet capable field controllers, two dual frequency static receivers, or in conjunction with a robotic instrument for Hybrid Positioning. All these configurations from just two receivers that can fit into any laptop carrying bag.

MAGNET® Relay service

In cellular mode, the global MAGNET Relay RTK service allows a HiPer SR receiver to be used as a mobile base hosting and "relaying" corrections for up to 10 rovers.

MAGNET Relay is an RTK forwarding service that allows users to broadcast in-field base stations to their own private Company Account within the MAGNET Enterprise secure service for distributing the base station RTK messages to their own rover receivers.


TOPCON


Vanguard
GNSS chipset
Fence Antenna™
technology
TOPCON
Square
“no roll” design
Internal cellular
modem (optional)
LongLink™
technology
Magnesium
alloy housing
Simple MINTER with
super-bright LEDs
Waterproof communication
and charging port
USB data port
Cellular
antenna port
SERIAL
PWR
USB
ANT

GNSS Tracking	
Number of Channels	226-channel Vanguard Technology™ with Universal Tracking
GPS GLONASS SBAS QZSS	L1, L2, L2C L1, L2 L1 C/A WAAS/MSAS/ EGNOS/GAGAN L1 C/A
Antenna Type	Fence Antenna
Positioning Accuracy	
Static/Fast Static	H: 3.0 mm + 0.4 ppm V: 5.0 mm + 0.6 ppm
Precision Static**	H: 3.0 mm + 0.1 ppm V: 3.5 mm + 0.4 ppm
RTK (L1 + L2)	H: 10 mm + 0.8 ppm V: 15 mm + 1.0 ppm
DGPS	H: 0.4 m, V: 0.6 m
SBAS	H: 1.0 m, V: 1.5 m
Communication	
RTK Broadcast	LongLink™ 300 m+, Up to 3 simultaneous rovers
I/O Communications	Bluetooth®, Serial, USB
Cellular	Integrated HSPA+/CDMA
Dual SIM card available	
Data and Memory	
Data Update/ Output Rate	Up to 10 Hz
Real Time Data Output	TPS, RTCM SC104 v2.x, 3.x and MSM, CMR/CMR+
ASCII Output	NMEA 0183 version 2.x, 3.x and 4.x
Physical	
Dimensions	150 x 150 x 64 mm
Weight	850 g – Basic 925 g – Cellular
Status Display/Panel	MINTER
External Power Connector	Yes
Operation Time	Up to 20 hours
Environmental	
Operating Temperature	
Internal Batteries External Batteries	-20ºC to 65ºC -40ºC to 65ºC
Storage Temperature	-40ºC to 70ºC
Humidity	100%, condensing
Dust/Water Rating	IP67

** 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).

226-channel Vanguard with Universal Tracking

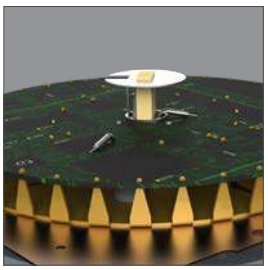
Topcon's exclusive channel tracking technology provides unmatched GNSS signal flexibility and expandability.

Integrated cellular (optional)

When cellular coverage is available, the HiPer SR is versatile enough for short or long range. MAGNET Relay serves up a simple way to perform mobile RTK session through a private environment.

Smart design

An innovative combination of compact and lightweight engineering within a tight environmentally sealed form – guaranteed to survive a 2 m concrete drop.



Fence Antenna™

Compared to competitive options, the proven Fence Antenna technology isolates each signal and reduces noise delivering unparalleled results.

TOPCON

For more information:
topconpositioning.com/hiper-sr

Precision Surveying Co
1st Floor, Satyanarayan Plaza, Harabala Path
Bylane No.1/2, Bora Service, Ulubari, Guwahati-7, Assam
+91 9864093910
+91 9435304264
www.precisionindia.co.in
sales@precisionindia.co.in

HiPer V

TOPCON

Dual-Frequency GNSS Receiver

- Vanguard Technology™
- Universal Tracking Technology
- Rugged, Magnesium Alloy Construction
- Integrated RTK and Static Receiver
- Fence Antenna™ Advanced Performance

HiPer V Dual-Frequency GNSS Receiver

Compact, cable-free solution with Vanguard Technology for all GNSS positioning applications.

Topcon enhances the HiPer family of products by adding Vanguard Technology to the HiPer V. In the early 2000's Topcon revolutionized GNSS receivers by integrating the design to be compact and light weight. Topcon continues the revolution with Vanguard Technology™.

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. Universal Tracking Technology is an advanced firmware process that allows each of the 226 channels to be assigned to any satellite signal.

Internal Radio Configurations

The HiPer V can be configured with the radio and cellular modem that best fits your needs. You can choose from Digital UHF or 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.

Integrated Radio and Modem Choice

- Spread Spectrum Radio
- Digital UHF II Radio
- HSPA Cellular Modem
- CDMA Modem

Rugged Design

- Magnesium metal housing
- Drop-proof
- Durable, rugged
- Waterproof

Integrated GPS and GLONASS

- USA based GPS satellites
- Russian based GLONASS satellites

Housing Features

- External power port
- External serial port
- Tape measure hook
- Shock protected ring

Rugged and Waterproof

The HiPer V is designed rugged enough to perform in 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.

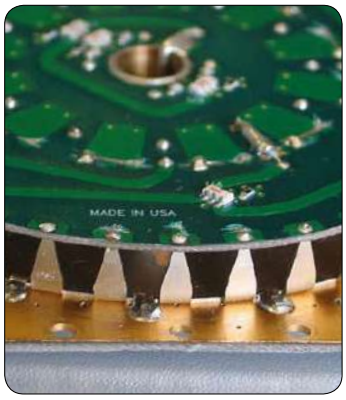
Voice Alerts

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".

PRIMARY FEATURES

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.



KIT COMPONENTS BASE AND ROVER

System Components

- 2 HiPer V Receivers
- 4 Batteries / 2 Dual Chargers
- Radio Antenna
- Carrying Case
- Power Cable
- 10cm Spacer and 3m Tape Measure
- Tribrach and Adapter w/Optical Plummet

HiPer V Dual-Frequency GNSS Receiver

TOPCON

SPECIFICATIONS

Tracking Capabilities		
Number of Channels		226 Channels with Universal Tracking Technology
Tracked Signals	GPS	L1 CA, L1/L2 P-code, L2C
	GLONASS	L1/L2 CA, L1/L2 P-code
	SBAS	WAAS, EGNOS, MSAS, QZSS
Positioning Accuracy		
Static*	L1 Only	H: 3mm + 0.8ppm V: 4mm + 1ppm
	L1+L2	H: 3mm + 0.1ppm V: 3.5mm + 0.4ppm
RTK	L1+L2	H: 10mm + 1ppm V: 15mm + 1ppm
DGPS		<0.5m
Wireless Communication		
Bluetooth®		V2.1 + EDR, Class 2, 115,200bps
Radio		UHF, Spread Spectrum, Cellular (options)
Environmental		
Dust/Water Protection		IP67
Shock		6.56 ft. (2m) pole drop
Operating Temperature		
External Power		-40°F to 149°F (-40°C to 65°C)
Battery		-4°F to 149°F (-20°C to 65°C)
Cellular		-4° to 131°F (-20° to 55°C)
Physical		
Enclosure		Magnesium alloy housing
Size		7.24" D x 3.74" H (184mm D x 95mm H)
Weight		HiPer V receiver 2.20 lb. to 2.82 lb. (1.0kg to 1.28kg)
Battery (BDC70)		7.23 oz. (195g)
Power Supply		
Standard Battery		Detachable, Li-ion rechargeable battery, 7.2V, 4.3Ah
Operating Time at 68°F (20°C)		>7.5 hours in static mode w/*Bluetooth*® connection
External Power Input Voltage		6.7 to 18V DC

* *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).*

For more specification information:
topconpositioning.com/hiper-v

SOFTWARE

MAGNET

A family of software solutions that streamlines the workflow for surveyors, contractors, engineers and mapping professionals.

MAGNET® Field

MAGNET Field provides a bright, graphical user interface with large touch icons and bright readable text. Select your color scheme Black, Gold, Blue, Silver, for your best visibility.

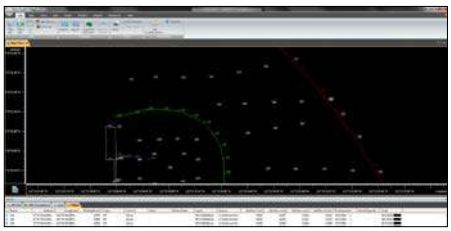
© 2013 Google Map Data

MAGNET® Enterprise

A managers dream of tracking all field and office data in one simple to access web interface. Store and exchange your field data in the Enterprise cloud.

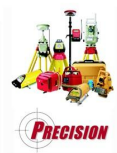
MAGNET® Office

Full CAD functionality with MAGNET Office Site and Topo. Or field data processing with MAGNET Office Tools inside AutoCAD® products, like Civil3D®. The MAGNET Office solution has what you need.



TOPCON
topconpositioning.com
7400 National Drive • Livermore • CA 94550
(925) 245-8300

Your local Authorized Topcon dealer is:



Precision Surveying Co
1st Floor, Satyanarayan Plaza, Harabala Path
Bylane No.1/2, Bora Service, Ulubari, Guwahati-7, Assam
+91 9864093910
+91 9435304264
www.precisionindia.co.in
sales@precisionindia.co.in

TOPCON

HIPER VR

VERSATILE GNSS RECEIVER

Complete, Cutting-Edge Performance

- Universal Tracking Channels™ for all satellites, signals and constellations
- Field-tested, field-ready IP67 design
- Compact form factor ideal for Millimeter GPS and Hybrid Positioning™
- Revolutionary 9-axis IMU and ultra-compact 3-axis eCompass

Better things in smaller packages

The HiPer VR is smaller and lighter, but don't let its small size fool you. It's not only packed with the most advanced GNSS technology, it is also built to withstand the harshest field environments. Built with a rugged housing – not weak plastic – it can take the punishment of the job site.

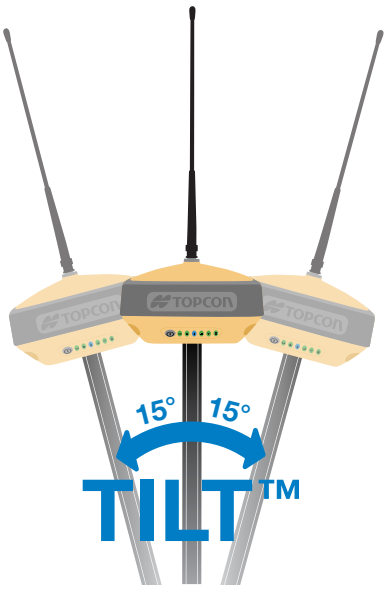
Using the Topcon advanced GNSS chipset with Universal Tracking Channels™ technology, the receiver automatically tracks each and every satellite signal above – now and into the future.

All signals, all satellites, all constellations — all in a compact, rugged design, with an integrated IMU and eCompass.

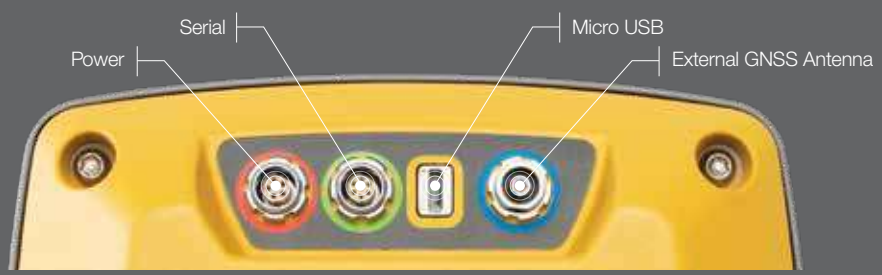
TILT™ – Topcon Integrated Leveling Technology

The HiPer VR incorporates a revolutionary 9-axis inertial measurement unit (IMU) and an ultra-compact 3-axis eCompass. This advanced technology compensates for mis-leveled field measurements out of plumb by as much as 15 degrees.

Awkward shots on steep slopes or hard to reach spots are now a breeze with TILT.




Fence Antenna®
Power Button
Status
Recording
Bluetooth®
Battery
RxTx


Serial
Power
Micro USB
External GNSS Antenna

GNSS Tracking	
Channel Count	226 with Topcon's patented Universal Tracking Channels™ technology.
Signal	
GPS Signals	L1 C/A, L1C† L2C, L2P(Y), L5 †L1C when signal available.
GLONASS	L1 C/A, L1P, L2C/A, L2P, L3C‡ ‡L3C when signal available.
Galileo	E1/E5a/E5b/Alt-BOC
BeiDou/BDS	B1, B2
IRNSS	L5
SBAS	WAAS, EGNOS, MSAS, GAGAN (L1/L5§) §L5 when signal available.
L-band	TopNET Global D & C Corrections services
QZSS	L1 C/A, L1C, L1-SAIF, L2C, L5
Positioning Performance	
Static/ Fast Static	H: 3 mm + 0.4 ppm V: 5 mm + 0.5 ppm*
RTK	H: 5 mm + 0.5 ppm V: 10 mm + 0.8 ppm
RTK, TILT Compensated	H: 1.3 mm/°Tilt; Tilt ≤ 10° V: 1.8 mm/°Tilt; Tilt > 10° Maximum recommended angle for tilt compensation is 15°.**
DGPS	0.25 m HRMS
L-Band, D Corrections Service	H: < 0.1 m (95%) V: < 0.2 m (95%)
Operational Time	RX mode - 10hr TX mode 1W - 6hr *Use of external 12V battery is recommended when using HiPer VR with internal radio in transmit mode.*
Internal Radios	425-470 MHz UHF radio Max Transmit Power: 1W Range: 5-7 km typical; 15 km in optimal conditions.***
Memory	Internal Non-removable 8 GB SDHC
Environmental	Ingress Rating – IP67 Operating Temp – -40ºC to 70ºC Humidity – 100%, condensing Drop and Topple – 1.0 m drop to concrete. 2.0 m pole drop to concrete.
Dimensions	150 x 100 x 150 mm (w x h x d)
Weight	<1.15 kg

Integrated radio and modem options

- 400 MHz UHF TX/RX Radio
- License-free 900 MHz radio, FH915 protocol[1]

L Band Ready Technology

L Band ready to receive advanced GNSS corrections data set globally.[2]

Highly configurable

Designed to grow with you, unique electronic option files empower you to activate available features instantly.

Future proof

The Topcon full wave antenna tracks all GNSS signals currently available and is designed to track the constellations and signals of tomorrow.

* 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). [1] Check with the regulatory body in your region regarding license-free frequency requirements. [2] Contact your Topcon representative regarding availability.

** Subject to successful TILT calibration and operating environment free of magnetic disturbances.

*** Varies with terrain and operating conditions.

TOPCON

For more information:
www.topconpositioning.com/hiper-vr