





The GR-5 with Vanguard Technology™

- 226-Channel Vanguard Technology™ with Universal Tracking Channels
- Advanced Fence Antenna™ technology
- High accuracy RTK with updates up to 50 Hz
- Fully integrated radio and cellular configuration
- 32 GB SDHC storage support
- Dual hot-swappable batteries

The GR-5 with Vanguard Technology™ is the most advanced RTK GNSS system

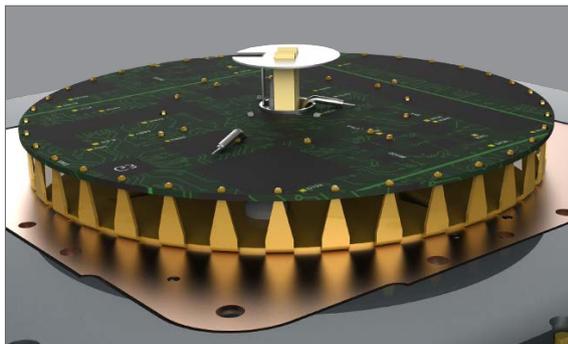
The GR-5 features the multi-constellation 226-channel Vanguard GNSS chip with Universal Tracking Channel Technology. This patented technology uses flexible and dynamic tracking methods to automatically select and track any available satellite signal enabling Topcon's users to receive the maximum number of signals and measurements at any given time.

The GR-5 is not only capable of receiving signals from the fully operational GPS and GLONASS constellations, but also has the ability to support all planned signals from developing systems such as Galileo, Beidou (BDS) and QZSS. With current and developing satellite constellations, Universal Tracking Channel Technology optimizes GNSS signal tracking to guarantee maximum satellite geometry and availability.

Topcon's patented Fence Antenna design brings to the GR-5 superior signal reception and advanced multipath rejection in difficult environments. This technology provides a more robust and cleaner signal tracking which means unparalleled results.

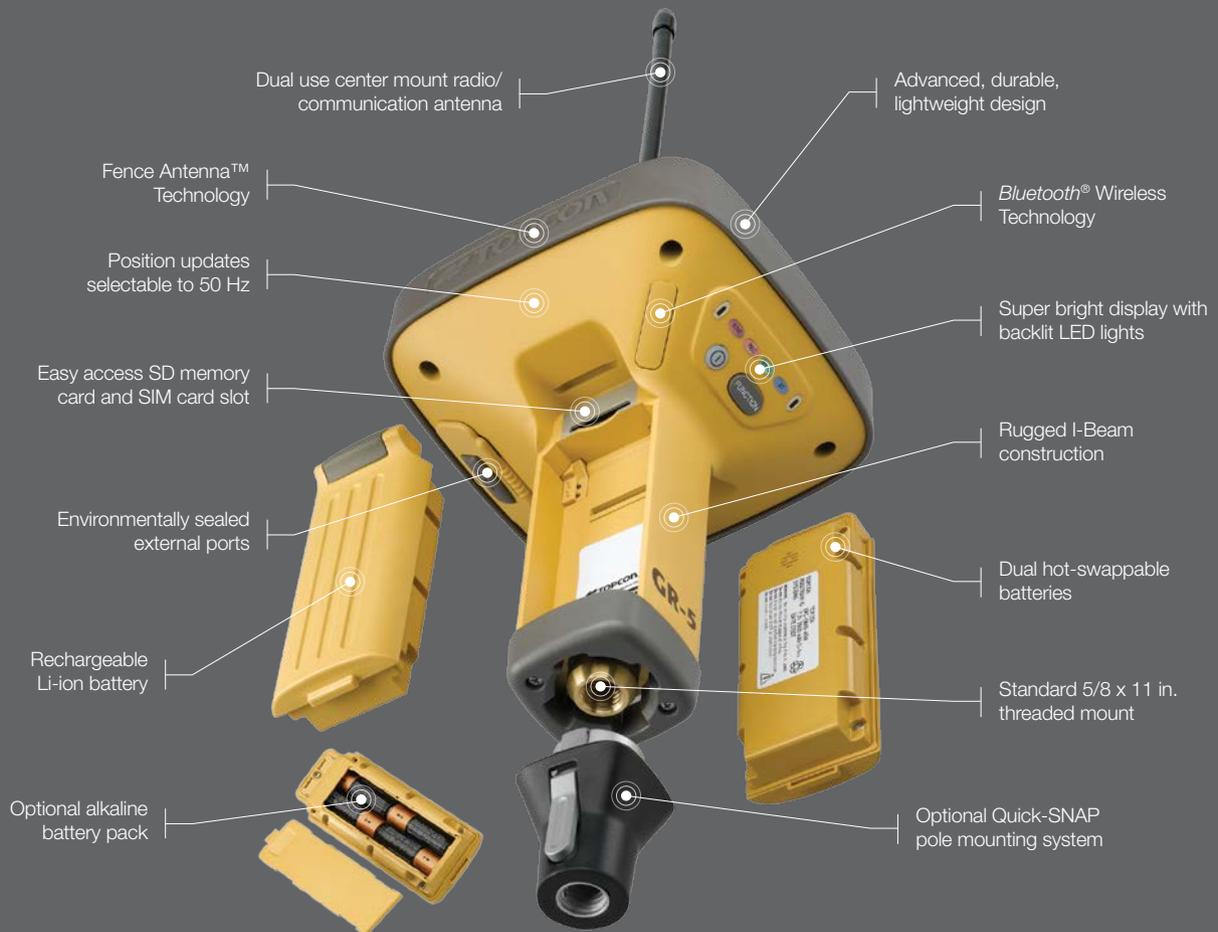
With Vanguard Technology, Universal Tracking Channel and the Fence Antenna, the GR-5 is designed to deliver ultimate field performance even in challenging environments while maintaining unmatched accuracy, speed of initialization and fix reliability for RTK solutions.

In addition to advanced technologies, the mechanical design of the GR-5 makes it incredibly reliable, ergonomic, and durable. Guaranteed rugged, the GR-5 is the best GNSS receiver available in the market.



Advanced multipath suppression

Not only does the new Topcon Fence Antenna outperform other RTK receivers with enhanced sensitivity, but also provides multipath rejection characteristics that gives the GR-5 a level of tracking performance in difficult environments beyond any other RTK GNSS receiver.



GNSS	
GPS	L1, L1C*, L2, L2C, L5*
GLONASS	L1, L2
Galileo*	E1, E5a, E5b, AltBOC
BeiDou*	B1, B2
SBAS	L1 C/A WAAS/MSAS/ EGNOS
QZSS	L1 C/A, L1C*, L2C
Number of Channels	226-Channel Vanguard Technology™ with Universal Tracking Channels
Antenna Type	Integrated Fence Antenna™ ¹ with Ground Plane
Accuracy (RMS)* *	
RTK	H: 5 mm + 0.5 ppm V: 10 mm + 0.8 ppm
Static †	H: 3.0 mm + 0.1 ppm V: 3.5 mm + 0.4 ppm
Communication	
Optional Radio Type	Integrated UHF/FH915
Base Radio Output	1.0 W, user selectable
Optional Cellular	Integrated HSPA/CDMA
I/O Communications	Class 2 Bluetooth® USB and Serial
Data and Memory	
Memory	Removable SD/SDHC
Data Update/ Output Rate	1 Hz – 50 Hz Selectable
Real Time Data Output	TPS, RTCM 2.x, 3.x, CMR, CMR+
ASCII Output	NMEA 0183 version 2.x and 3.0
Environmental	
Enclosure	Dust and water ingress protected magnesium I-Beam housing
Operating Temperature	-40°C to 70°C††
Shock Rating	2 m pole drop to concrete IEC 60068-2-29, IEC 60068-2-27
Vibration Rating	Compliance with MIL-STD 810F - 514.5 - Cat.24



Rugged design

The GR-5 is guaranteed rugged by design. The frame of the GR-5 and the robust internal components are guaranteed to resist a 2 m pole drop.

Cellular and radio

The GR-5 has both cellular and radio communication which allows the GR-5 to be used in radio based RTK and Network RTK solutions.

Long range UHF radio

Only Topcon receivers can top-mount the radio antenna. This extends the range of RTK radio performance.

Operating time

Get the most of your work day and maximize your time in the field with at least a full day of operation from the hot-swappable batteries.

¹ Patent pending. Multiple patents are associated with Fence Antenna™ technology.

* A Positioning solution with these signals will be integrated and made available when the constellation matures and is ready for commercial use.

** Subject to multipath anomalies and atypical satellite geometry, GNSS survey best practices must always be applied.

† 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).

†† -30 to +60°C with integrated batteries.



For more information:
topconpositioning.com/gr5

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