





The GR-5 with Vanguard Technology™

- 226-Channel Vanguard Technology™ with Universal Tracking Channels
- Fence Antenna™ technology for signal optimization
- Multiple communication options for job site versatility
- 32 GB SDHC storage support
- Dual hot-swappable batteries

Full sky, all-in-view satellite tracking

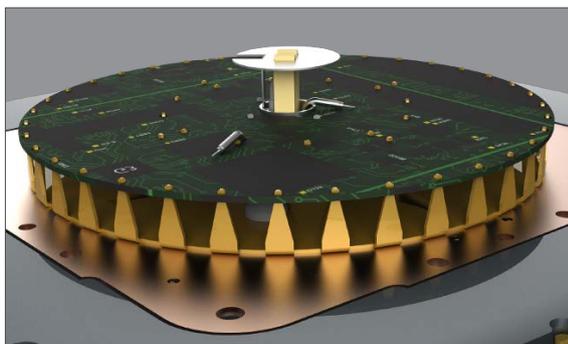
The GR-5 features the multi-constellation 226-channel Vanguard GNSS chip with Universal Tracking Channel Technology. This patented technology uses flexible and dynamic tracking methods to automatically select and track any available satellite signal enabling Topcon's users to receive the maximum number 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 superior signal reception and advanced multipath rejection in difficult environments. This technology provides a more robust and cleaner signal tracking which means unparalleled results.

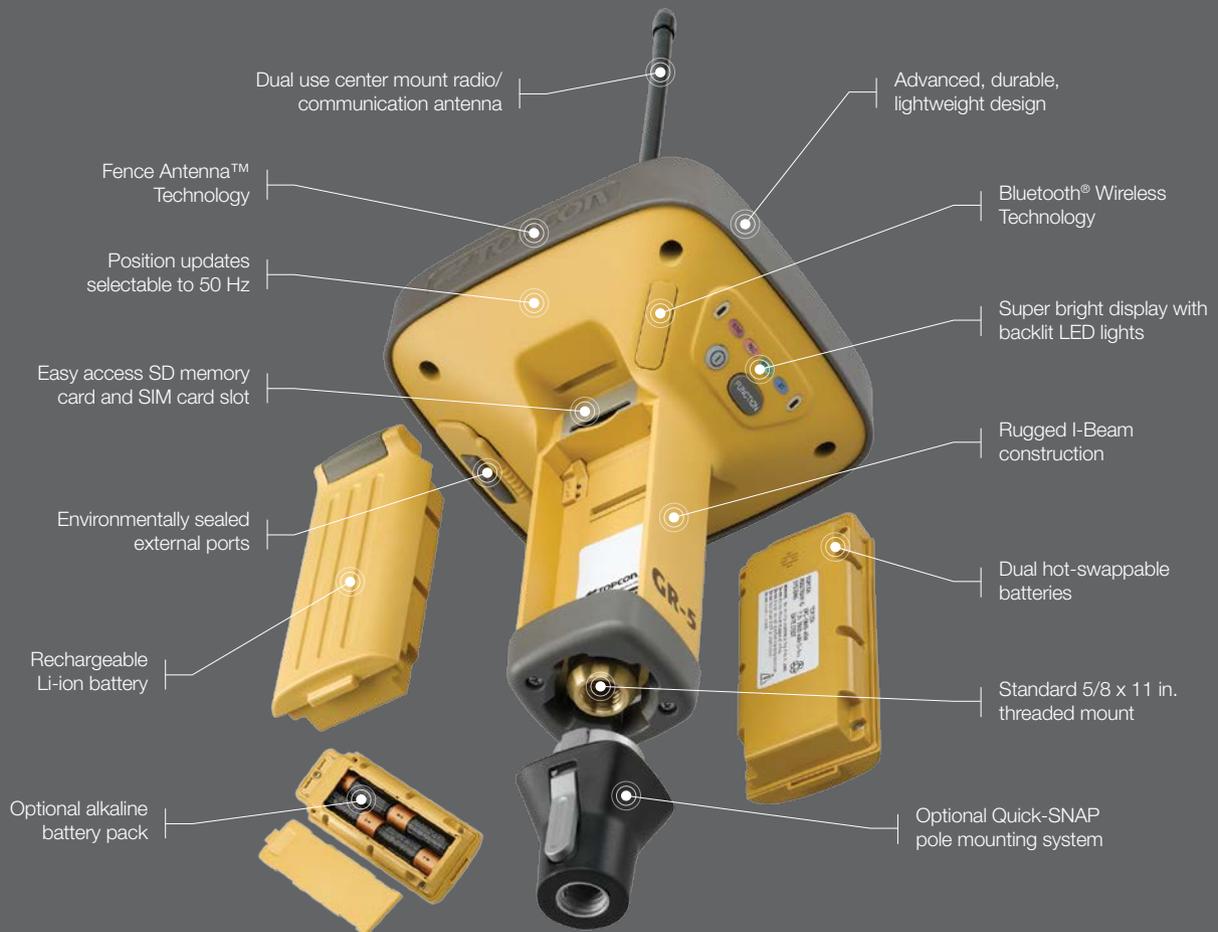
With Vanguard Technology, Universal Tracking Channel and the Fence Antenna, the GR-5 is designed to deliver ultimate field performance even in challenging environments while maintaining unmatched accuracy, speed of initialization and fix reliability for RTK solutions.

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.



Premium GNSS technology in rugged form

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 GNSS receiver.



GNSS Tracking	
Number of Channels	226-Channel Vanguard Technology™ with Universal Tracking Channels
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
Antenna Type	Integrated Fence Antenna™ † with Ground Plane
Positioning Accuracy	
Static/Fast Static	H: 3.0 mm + 0.4 ppm V: 5.0 mm + 0.5 ppm
Precision Static***	H: 3.0 mm + 0.1 ppm V: 3.5 mm + 0.4 ppm
RTK (L1 + L2)	H: 5 mm + 0.5 ppm V: 10 mm + 0.8 ppm
Communication	
Optional Radio Type	Integrated UHF/FH915
Base Radio Output	1.0 W, user selectable
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 SC104 v2.x, 3.x and MSM, CMR/CMR+
ASCII Output	NMEA 0183 version 2.x, 3.x and 4.x
Environmental	
Enclosure	Dust and water ingress protected magnesium I-Beam housing
Operating Temp	-30°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

*** 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).



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.

Communication options

Featuring various cellular and radio communication modules that are ready to perform in every GNSS application.

Unique design, measured results

Top mounted radio antenna design which is proven to extend radio range and expand each project site's horizon, making you more productive all day.

Production time

Hot swappable battery option enables full day operation even in the most challenging of environments.

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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