

GR-5

Advanced GNSS Receiver



- 216 Universal Tracking Channels
- G3 Tracking Technology (GPS/GLONASS/GALILEO)
- Advanced Fence Antenna™ Technology - Unsurpassed tracking and performance
- Sophisticated, High Accuracy RTK technology with position updates up to 100Hz
- Integrated Dual Communication System with multiple Radio and Cellular combinations
- 32GB SDHC storage support
- Dual hot-swappable batteries

The Topcon GR-5 represents the next generation in GNSS receiver technology



Topcon is proud to be the world leader in advanced satellite positioning technology. As the original pioneer of dual-constellation and G3 triple-constellation integration, Topcon continues to lead all other manufacturers with the most sophisticated receiver technology and design.

Topcon's G3 technology was the first to combine all three of the original positioning systems – GPS, GLONASS, and GALILEO. Although commercial use of Galileo continues to be years away, Topcon continues its commitment to develop technology to utilize ALL

signals from ALL satellites. Not only is Topcon committed to the GPS, GLONASS and GALILEO satellite systems, but also to all precision signals from the developing Chinese COMPASS system, Japan's Quasi-Zenith Satellite System (QZSS), and India's IRNSS system. If there is any operational advantage of combining new systems and signals, you can count on Topcon to continue to lead the industry.

The new GR-5 receiver is the next step in the continuing development of the latest, most advanced receiver technology available. Building from the tremendous success of the world's first G3 RTK receiver, the Topcon GR-3, the new GR-5 provides the latest technological advancements with the same powerful performance our customers have grown to demand.

One look at the new GR-5, and you notice the new, advanced antenna design. This patented¹ Fence Antenna™ technology provides industry-leading tracking sensitivity and multipath rejection in a compact and lightweight package. By combining this antenna with the latest innovations in tracking algorithms, Topcon has given the GR-5 our most highly advanced tracking performance ever! The GR-5's tracking capabilities are not only state-of-the-art, but also deliver unmatched value to our customers by providing accuracy levels superior to other RTK systems in difficult environments. While other systems sacrifice accuracy for tracking performance, the GR-5 gives you the best of both!

The new GR-5 design didn't stop simply with new antenna and tracking technologies, the GR-5 also boasts numerous advancements such as: an increased number of channels, extended battery life, expanded internal memory options, new internal modem design, internet-compatible firmware, and much, much more. It all sums up to... More Performance. More Accuracy. More Productivity.

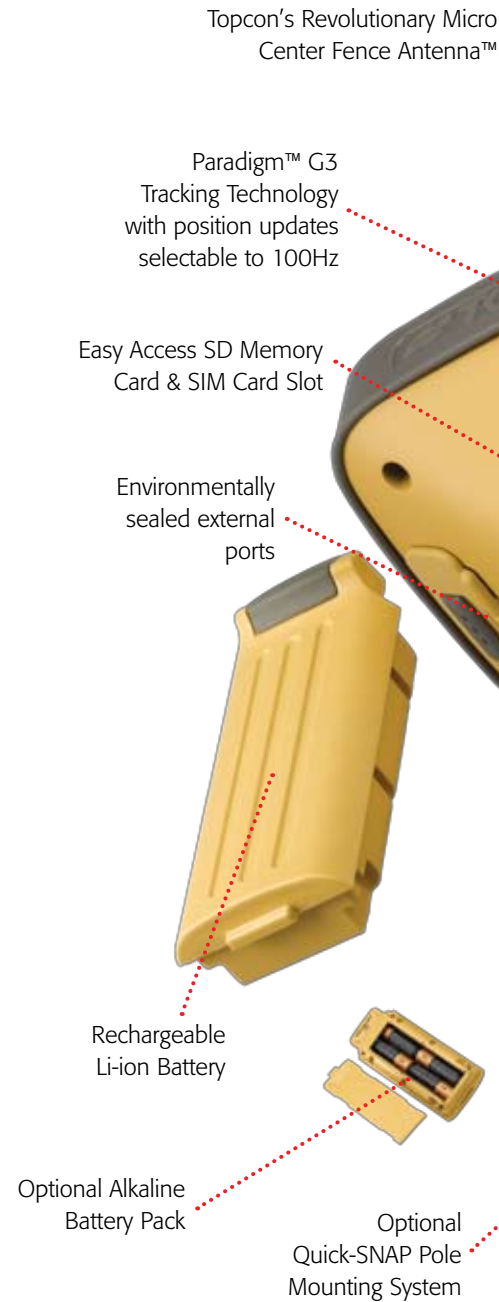
The new GR-5 from Topcon. Welcome to the next generation of satellite positioning technology!

Combine the GR-5 with a Topcon Field Controller

- Topcon's FC Series Field Controllers
- Full color touch screen
- Graphical Windows® interface
- Operates the full suite of Topcon field controller software packages
- Wireless operation via Bluetooth® connection



The GR-5 is the next generation RTK system incorporates G3 tracking technology systems as well as new design features



TopSURV Field

The easy-to-navigate interface of TopSURV provides all users its full functionality in the shortest learning curve. TopSURV supports all surveying, topographic data collection, and stakeout.

GPS system from Topcon. This exciting technology to track all three satellite positioning features not found in any other system.



Topcon's New, Patented Fence Antenna™ Technology



Technology Leadership

Once again, Topcon has set a new industry standard with our state-of-the-art Fence Antenna™ Technology. This revolutionary new antenna design, first presented in a technology paper at the ION GNSS International Conference in 2009, provides signal tracking capabilities not found in any other RTK receiver.

Enhanced Sensitivity

The most significant advancement comes with the Fence Antenna's™ performance tracking low elevation satellites. This patented Fence Antenna™ technology provides unsurpassed sensitivity while simultaneously improving accuracy.

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.

Side-by-Side Tests

In side-by-side tests with other RTK GNSS receivers the new Topcon GR-5 with patented Fence Antenna™ Technology outperformed the competition in tracking behavior and overall RTK performance, and continues to lead the industry RTK radio range. See for yourself! Contact your local Topcon distributor for a personal demo, and experience the power of the new GR-5 today!



The new GR-5 from Topcon. Packed for performance!

Field Controller Software

Intuitive, easy-to-use, intuitive user interface. TopSURV software offers advanced functionality with the user interface. TopSURV software offers advanced functionality with the user interface. TopSURV software offers advanced functionality with the user interface.



Dual Receiver Packages Include:

- Two GR-5 Receivers
- Four Batteries
- Charging Cradles
- PC Data Cables
- Hard Carry Case
- Radio Antennas
- Manuals & Utility software
- Fixed Height Tripod



GR-5 SPECIFICATIONS

TRACKING

Number of Channels	216 Universal Channels
Signals Tracked	G3 Technology – GPS, GLONASS and GALILEO*
WAAS/EGNOS/MSAS	Yes
Antenna Type	Integrated Micro-Center Fence Antenna™ with Ground Plane

ACCURACY

RTK	H: 10 mm + 1 ppm V: 15 mm + 1 ppm
Static/Fast Static	H: 3mm + 0.5ppm V: 5mm + 0.5ppm

COMMUNICATIONS

Optional Radio Type	Integrated UHF TX/RX, or 915MHz Spread Spectrum
Base Radio Output	0.01 - 1.0W, user selectable
Cellular Communications	Integrated GSM/GPRS or CDMA
Wireless Communications	Integrated <i>Bluetooth</i> ® 2.0 compliant

DATA & MEMORY

Memory	Internal, Removable SD/SDHC Memory Card
Data Update/Output Rate	1Hz – 100Hz Selectable
Real Time Data Output	TPS, RTCM SC104, CMR, CMR+
ASCII Output	NMEA 0183 version 2.x and 3.0

ENVIRONMENTAL

Enclosure	Magnesium I-Beam Housing
Operating Temperature	-40 to +70°C**
Dust/Water Protection	IP66
Shock Rating	2 meter pole drop to concrete IEC 60068-2-29, IEC 60068-2-27
Vibration Rating	SAE J1211, Section 4.7 MIL-STD 202G, Method 214A

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

**GLOVE A/B test satellites are available for signal evaluation and test purposes.

** -30 to +60°C with integrated batteries

The Leader in Positioning Technology...

Whether you're looking for precision GPS+ control for surveying and engineering applications or layout and grade management on a construction job site, your local Topcon dealer offers the widest range of products to get the job done quickly and accurately.

Topcon also offers the industry's easiest-to-use GPS+ machine control systems. Capable of working as an indicate-only system or fully automatic grade control,



Topcon offers systems to automate your motorgrader, paver, profiler, dozer, excavator, or ag/land leveling machines.

There's only one company that offers you all of the positioning tools to keep you

competitive in today's market. They're only available from your local dealer, and they're only from Topcon. Topcon Positioning Systems is the worldwide leading developer and manufacturer of precision positioning equipment and offers the widest selection of innovative precision GPS systems, laser, optical surveying, and machine control products.

From open-field construction projects to isolated surveying sites and from rolling farmland to inner city utility projects, Topcon Positioning Systems provides innovative technology that provides a decidedly competitive edge to end-users.

The recognized innovative trend-setter in its industry, Topcon has focused on developing an array of integrated positioning and automation technologies to meet the constantly changing demands facing construction, surveying, agriculture, utilities and law enforcement industries worldwide.

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