



Paradigm™ G3



- **GPS • GLONASS • GALILEO**
Triple-constellation Satellite Tracking
- **L5 and L2C GPS Modernization**
Signals Supported
- **72 Universal Channels**
- **Direct and High Rate Signal Sampling**
- **75% Reduction in Size**



Welcome to the next generation of satellite positioning technology!

GPS • GLONASS • GALILEO



Only the new Topcon G3 technology provides universal tracking of ALL signals from ALL available satellite positioning systems!

Advanced System Design



Not only does G3 technology provide revolutionary tracking capability, it does so by combining the most advanced ASIC design and performance technology available.



Technology Leadership

Since entering the precision GPS market in 2000 Topcon Positioning Systems has quickly assumed the leadership position of providing the most innovative system designs and advanced tracking technology.

G3 Features & Benefits:

- **GPS • GLONASS • GALILEO**
Triple-Constellation Satellite Tracking for the most complete positioning technology available
- **L5 and L2C GPS Modernization**
Signals supported for receiver technology ahead of satellite modernization
- **72 Universal Channels**
All-in-view satellite tracking and signal flexibility
- **Direct and High Rate Signal Sampling**
Unparalleled performance and accuracy
- **75% Reduction in Size**
Supporting smaller, lighter receiver systems
- **Superior Signal-to-Noise Performance**
Unmatched tracking in difficult environments
- **SBAS Signals Supported**
For additional real-time capability
- **Low Power Consumption**
Receiver systems that work all day on a single charge



Paradigm-G3 Chip Technology

Setting new standards for satellite positioning technology, the new Topcon Paradigm-G3 chip technology is the first commercial system to provide Universal Tracking technology.

Topcon is proud to announce the first satellite receiver technology that provides users with Universal Signal Tracking, a system capable of tracking all signals from all three satellite positioning systems; GPS, GLONASS, and Galileo. We call this revolutionary new technology G3, and it represents the most advanced satellite positioning technology available.

At the heart of this existing technology breakthrough is our new Paradigm-G3 chip. Topcon's Paradigm-G3 is the World's first chip to make possible the complete signal tracking of all three precision satellite positioning systems.

The Paradigm-G3 chip receives GPS signals, including L1, L2 and L5 carrier frequencies, C/A and L2C civilian codes, and P-code on both L1 and L2 frequencies. All GLONASS satellite signals are supported including L1 and L2 carrier frequencies, L1 and L2 C/A codes, and the L1 and L2 P-codes. The complete Galileo signal structure is supported as well, including L1, E1, E2, E5 and E6 signals.

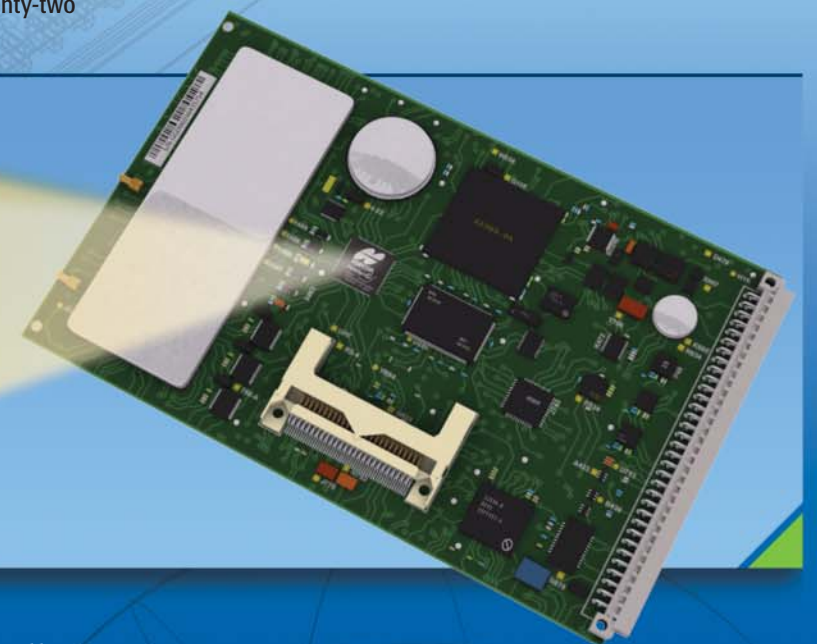
To accommodate this innovative support of multiple signals from multiple satellites, the Paradigm-G3 chip also boasts seventy-two

"Universal Tracking" channels. Channels in the G3 chip can be considered "Universal" as all of them can accommodate any signal from GPS / GLONASS / Galileo satellites. This is a major difference with the approach taken by other manufacturers that limit their ability to support all three satellite positioning systems simultaneously or accommodate for the handling of Galileo E5b and E6 in the same chip design.

It should be noted that even while Galileo frequencies are known, their full signal structures have not yet been defined. A significant technological advantage for Topcon is that our "Universal" channel design provides the flexibility needed to allow the tracking of those signals as soon as they become known.

The new G3 chip technology provides significant tracking improvement in high dynamic conditions by using frequency-phase control of PLL. First realized in Topcon's TPScore board designs, this advanced algorithm has now been incorporated in the new G3 chip technology.

Combine this technology with super-low power consumption and a dynamicsystem design, and the result is a precise, productive powerhouse!



G3: GPS, GLONASS, Galileo. Triple constellation support.
Universal Tracking Technology: all satellites, all signals, available now, and into the future.
Only from Topcon. Welcome to the World of G3!



HiPer Lite+
Cable-Free Integrated
RTK GPS+ Receiver



GMS-2
GIS Mapping
GPS Receiver



HiPer XT
Wireless RTK
GPS+ Receiver



GB-1000
Dual-Constellation
GPS+ Receiver



FC-100
Compact Windows® CE
Field Controller

Topcon's World Class Training and Service

Get the most out of your new instrument...



To assist you in getting the most out of your new instrument, Topcon and your local Topcon dealer offer exclusive product training. At the dealer's facility or your jobsite, Topcon certified training professionals have years of hands-on knowledge. And they are available to train your operators on all of the time-saving features and applications that Topcon offers.

...and to keep your instrument running at peak performance!



To assure that your Topcon instrument maintains peak performance, your local Topcon dealer offers factory-trained and certified service technicians. And just in case service assistance isn't available in your area, our factory offers a repair and return service policy that is second to none.



www.topcon.com

800 • 443 • 4567 925 • 245 • 8300

Specifications subject to change without notice

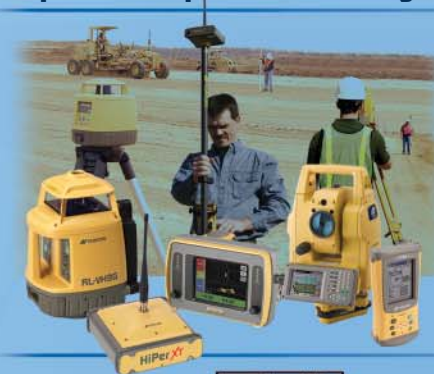
©2005 Topcon Corporation All rights reserved.

P/N: 7010-XXXX Rev. Prelim Printed in U.S.A. 09/05

SPECIFICATIONS

Number of Channels	72 Universal Channels
Signals Tracked	GPS signals GLONASS signals GALILEO signals
	L1, L2, & L5 carrier, CA, L1 P, L2 P, L2C L1 & L2 carrier, L1 CA, L2 CA, L1 P, L2 P E2-L1-E1, E5, E6
Real time DGPS accuracy	H: 10mm+1ppm V: 15mm+1ppm
Post processed Static DGPS	H: 3mm+0.5ppm V: 5mm+0.5ppm
SBAS (WAAS/EGNOS)	Yes
Chip Rate	20Hz
Process	0.13um
Number of PPS/Event	3
Resolution of PPS/Event	5ns
Frequency	From 50 to 250 MHz
Dimensions	12mm x 12mm
Power Consumption	Max < 0.5W, low consumption

Topcon: Complete Positioning Product Solutions



Topcon provides the World's most complete line of positioning products. Whether it's surveying, design, layout, earthmoving, land leveling, mining, alignment, monitoring or any other high-precision positioning application, Topcon offers Lasers, GPS+, Equipment Automation, Optical products, and Software built for the task. Visit us on the web at www.Topcon.com to find the Topcon product that's right for you.

