

Product Introduction

GRX2

Jan 2013

SOKKIA

GRX2



GRX2



Physical Features:

- ❖ 226 GNSS Channels
- ❖ Rugged Integrated Design
 - Takes a 2m pole drop
- ❖ IP67 Waterproof Rating
- ❖ Integrated RTK & Static Receivers

Configuration:

- No Modem
- Digital UHF II
- Digital UHF II with HSPA
 - * 3.5G network
 - * Covered GSM

GRX2 Detailed Specifications

Category	Specification
GNSS Technology & Board	Vanguard, Fence Antenna, QLL
Number of Channels	226 (w Universal Tracking)
Satellite signals tracking GPS GLONASS GALILEO SBAS	L1C/A, L2C, L2E(L2P) L1C/A, L1P, L2C/A, L2P - L1C/A
User Interface	1 Power button 22 status LEDs
Communication Ports	1x Bluetooth Class 1 1x 7-pin (ODU) PWR 1x 5-pin (ODU) SER
SBAS	<0.6m (HRMS)
Static	H:3mm+0.5ppm V:5mm+0.5ppm
Code diff.	<0.5m RMS
RTK	H:10mm+1ppm V:15mm+1ppm
Network RTK	H:10mm+0.5ppm V:15mm+0.5ppm
Initialization Time	15 sec (typical)

GRX2 Detailed Specifications

Category	Specification
Positioning Mode	UHF Radio Int. Optional Cellular
RTK Data Formats	RTCM 2.x, 3.x CMR/CMR+
Position Update Rate	Upto 20 Hz
Dimension	18.4cmx9.5cm
Weight	1.1 kg (w/o batt & radio)
Operating Temp.	-40 °C to 65 °C (Ext.) -20 °C to 65 °C (Batt)
Waterproof/Dustproof	IP67
Vibration Shock/topple	MIL-STD 202G, Method 214A, SAE J1455, Section 4.7, 4G RMS 2m pole drop
Supply Voltage	6.7-10 V DC 12V DC (nominal)
Internal Power Supply	7.2V/5.2 Ah Li-ion
Operating Time	>7.5 hours (20 C/static/Bluetooth)
Battery Charging Time	4 hrs.

GRX2 DIG UHF II Detailed Specifications

Category	Specification
Operating Frequency Range	UHF 400-470 MHz
Modulation techniques	GMSK and 4FSK
Protocols	Satel 4FSK, PDL GMSK, PDL 4FSK, Trimtalk GMSK
Occupied Bandwidth (Channel spacing)	25KHz, 20KHz, 12.5KHz
Data Speed of Serial Interface	Max 115200 bps
TX Power	Max 1 Watt
Forward Error Correction	YES
Scrambling	YES
Communication Mode	Half-Duplex
Operation Modes	Transmitter, Receiver, Repeater

GRX2 HSPA* Detailed Specifications

Category	Specification
Description	3.5G Wireless Module Quad Band GSM and UMTS/HSPA
Supported Bands	GSM 850/900/1800/1900 MHz UMTS/HSPA 850/1900/2100 MHz
TX Power	UMTS/HSPA – Class 3 (0.25W) GSM 850/900 MHz – Class 4 (2W) GSM 1800/1900 MHz – Class 1 (1W) EDGE 850/900 MHz – Class E2 (0.5W) EDGE 1800/1900 MHz – Class E2 (0.4W)
Data	UMTS/HSDPA/HSUPA 3GPP, Release 6 GSM/GPRS 3GPP, Release 9 Max Uplink 5.76 Mbps, Max Downlink, 7.2 Mbps EDGE Multi-Slot Class 12 CSD, Max BR 14.4 Kbps GSM, Max BR 14.4 Kbps UMTS
At command Set	GSM 07.05, 07.07
*HSPA chip is integrated in the DIG UHF II board	

The Technology Inside!

New Technology
GRX2

Fence Antenna™ Technology

- ❖ Topcon's exclusive Fence Antenna™ Technology provides superior satellite tracking in difficult conditions as well as exceptional suppression of multipath and other signals that could interfere with GPS.
- ❖ When compared to any other RTK receiver available today, Topcon receivers with the cutting edge Fence Antenna™ Technology provides more robust, cleaner signal tracking which means unparalleled results.



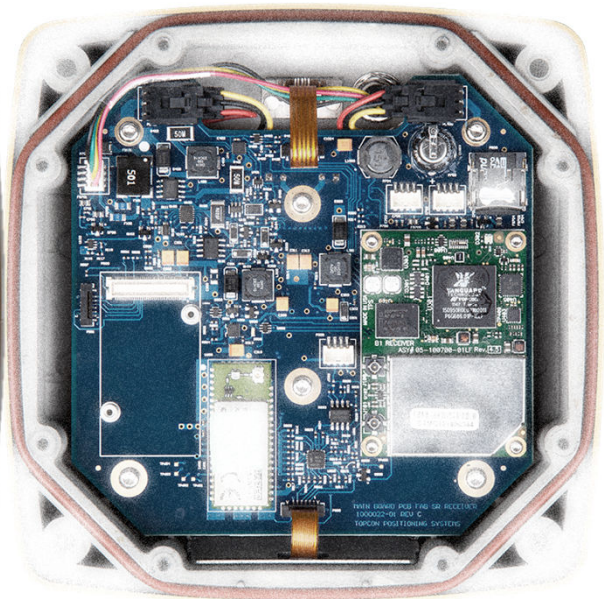
Vanguard™ Technology

Topcon Vanguard™ Chipset

Vanguard™ incorporates the most advanced, leading-edge GNSS signal tracking and processing architecture available. With 226 Universal Tracking™ channels, the Vanguard™ tracks signals from all available GNSS satellite systems – GPS, Glonass, Galileo, and Compass.

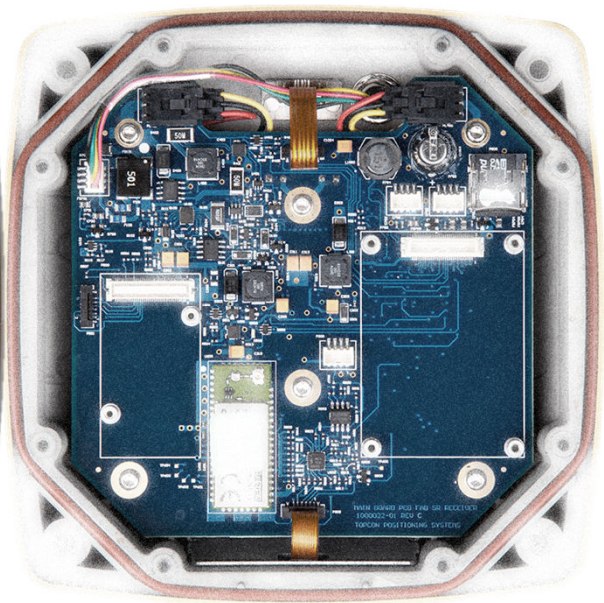
Universal Tracking™ Technology

Other GNSS receiver designs must dedicate a certain number of channels to specific satellite systems and individual signals, requiring more and more channels as more GNSS systems come online. Universal Tracking™ channels are not tied to one system and signal, but instead any channel can track any signal. This capability requires a lower number of overall channels to provide the same full constellation tracking capability.



Quartz Lock Loop™ Technology

- ❖ Performance of GNSS is a high vibration environment like on a four wheeler or other machinery is a technical challenge.
- ❖ Topcon GNSS scientists have patented a revolutionary solution, called Quartz Lock Loop™ technology, to provide the highest precision and accuracy possible, even in the harshest conditions.
- ❖ When compared in side by side tests, Topcon's receiver performance was far superior to the competition.



END of the presentation