



The Topcon B110 GNSS receiver board is an ultra-compact positioning engine capable of providing scalable positioning from sub-meter DGPS positioning to sub-centimeter RTK positioning.

Low power consumption and comprehensive communication interfaces and peripheral support make the B110 extremely flexible and easy to integrate into any precise positioning application.

- Industry's lightest compact multi-system, dual frequency receiver
- Low power consumption
- 226 universal channels for reliable, "all in view", dual-frequency L1/L2/L2C code/carrier GPS/GLONASS as well as SBAS and QZSS tracking
- High performance RTK engine with industry leading position update rate of 100 Hz
- Diverse set of interfaces available through a single connector for effective data exchange
- SD/MMC card interface support

Tracking	
Channels	226 Universal Tracking Channels
Signals Tracked	GPS: L1, L2, L2C; GLONASS: L1, L2, L2C; SBAS - QZSS: L1, L2C
WAAS/EGNOS/MSAS	Yes
Accuracy	
Standalone	H: 1.2 m; V: 1.8 m
DGPS	H: 0.3 m; V: 0.5 m
SBAS	H: 0.8 m; V: 1.2 m
Static	H: 3 mm + 0.5 ppm x baseline; V: 4 mm + 1.0 ppm x baseline
RTK	H: 10 mm + 1.0 ppm x baseline; V: 15 mm + 1.0 ppm x baseline
RTK Initialization Time	< 10 seconds
RTK Initialization Reliability	> 99%
Velocity	0.02 m/seconds
Time	30 nsec
Acquisition Time	
Hot / Warm / Cold Start	< 10 sec / < 35 sec / < 60 sec
Reacquisition	< 1 sec
Communication Interfaces	
RS232	2x ports up to 460.8 kbps
LVTTTL UART	4x ports up to 460.8 kbps
USB 2.0 (client)	1x port up to 480 mbps (High Speed)
CAN	1x port (without transceivers), LVTTTL, NMEA2000 compliant
I ² C interface	Communicates with external I ² C enabled devices
PPS	1x port with 5 ns resolution, <30 ns precision, LVTTTL, configurable polarity and period
EVENT	5 ns resolution, LVTTTL, programmable active edge
Data and Memory	
SD/MMC card support	Physical interface, 20 Hz writing rate, up to 2 GB capacity
Data Update/Output Rate	1 Hz – 100 Hz Selectable
Real Time Data Output	TPS, RTCM SC104 2.x and 3.x, CMR, CMR+
ASCII Output	NMEA 0183 version 2.x and 3.0
Geoid / Magnetic Variation	Yes
Grid coordinates output	Yes
Environmental	
Temperature	Operating: -40°C to 85°C; Storage: -40°C to 85°C
Vibration	4g Sine Vibe (SAEJ1211); 7.7g Random Vibe (MIL-STD 810F)
Humidity	95%, non-condensing
Shock	30g (IEC 68-2-27)
Acceleration	20g
Power	
Voltage / Power Consumption	3.4 VDC to 4.5 VDC / 1.0 W typical
LNA Power	3.3 V (internal), 5.0 V (external) at 0 – 100 mA
Physical	
Dimensions / Weight	40 x 55 x 10 mm / < 20 g
Main Connector	60 pin Molex
Antenna Inputs	2 (to connect internal or external antenna) ESD protected
Antenna Connectors	Hirose H.FL



For more information:
topconpositioning.com/b110

Specifications subject to change without notice.
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