

# DT391GS Rugged GNSS Tablet

**Rugged Tablet with Integrated High-Accuracy GNSS**



The DT391GS Rugged GNSS Tablet features seamless integration of a 9" LED-backlight capacitive touch screen, an energy efficient Intel® Celeron® processor, and the high-precision positioning module within a compact, lightweight yet durable package. With its high-accuracy GNSS module with foldable antenna, Windows® operating system, and optional camera module, this tablet is compatible with existing GIS software for mapping applications and brings together the advanced workflow for GIS data capture, accurate positioning, and data transmitting. Rated IP65 and MIL-STD-810G, the DT391GS is designed for field applications, providing reliable operation in harsh, mission-critical environments.

## Features

- 9" LED-backlight capacitive touch screen
- Intel® Celeron® dual-core processor; high performance with low power consumption
- Support for Microsoft® Windows® 7 Professional operating system
- Delivers centimeter or sub meter accuracy
- Supports SBAS (WAAS, EGNOS, MSAS), DGNSS and RTK
- Fanless, lightweight and durable design
- IP65-rated for water and dust resistance
- MIL-STD-810G for shock and vibration protection
- 5 megapixel back camera, auto focus, white balance, gain control and exposure control
- Hot swappable battery for all-day operation

## Applications

- Agriculture
- Mapping and GIS
- Surveying and Mining
- Natural Resources
- Utilities and Government
- Engineering and Construction
- Transportation
- Logistics
- Water Management



## Specifications

System	
CPU	Intel® Celeron® processor
RAM	4GB
Storage	64GB to 256GB Flash
Operating System	Microsoft® Windows® 7 Professional
Display	9" LED-backlight screen with capacitive touch; anti-reflection outdoor viewable
Display Resolution	1024 x 600
Trusted Platform Module	TPM 1.2 support
Control Switch and Buttons	1 power button
Indicator	1 power/ battery status LED and 1 WLAN active LED
Microphone	Built-in microphone
Speaker	1 built-in speaker
Camera	5 megapixel back camera, auto focus, white balance, gain control and exposure control
Network Interface	
WLAN	Wi-Fi 802.11ac; 2.4GHz/ 5GHz dual band
Bluetooth	Bluetooth 4.0
I/O Ports	
USB Port	USB 2.0 X 2
Headphone-out	1
DC-in	1
SD Slot	1 Micro-SD card slot
Mechanical and Environmental	
AC/DC Adapter	Input: 100 – 240V AC; Output: 19V DC, 3.42A
Battery Pack	7.4V, 3760mAh (hot-swappable); optional 8800mAh
Enclosure	ABS + PC plastics
Protective Grip	Rubber bumpers on each corner with handstrap for handling protection
Dimensions (H x W x D)	9.69 x 7.32 x 1.5 in/ 246 x 186 x 38.2 mm
Weight	2.56 lbs/ 1.16 kg
Water and Dust Resistance	IP65
Vibration and Shock Resistance	MIL-STD-810G
Regulatory	FCC Class B, CE, RoHS compliant
Temperature	Operation: -10°C ~ 50°C ; Storage: -20°C ~ 60°C
Humidity	0% – 90% non-condensing
Major Option	
Mobile Broadband	3G WWAN module for HSPA+/HSPA/UMTS and EDGE/GPRS/GSM 4G LTE module for DC-HSPA+/ HSPA+/ HSDPA/ HSUPA/ WCDMA/ GSM/ GPRS/ EDGE/ CDMA

\* Specifications subject to change without notice.

## GNSS Options

Hemisphere Single Frequency GNSS Module with Embedded Antenna	
Receiver Type	L1, C/A code, with carrier phase smoothing
Channels	12-channel, parallel tracking (10-channel when tracking SBAS)
SBAS Tracking	2-channel, parallel tracking
Update Rate	20 Hz maximum
Accuracy (Horizontal)	< 0.02 m 95% confidence (RTK)
	< 0.28 m 95% confidence (L-Dif)
	< 0.6 m 95% confidence (DGPS)
	< 2.5 m 95% confidence (autonomous, no SA)

Hemisphere Dual Frequency GNSS Module with Embedded Antenna			
Receiver Type	GNSS L1 & L2 RTK with carrier phase		
Signals Received	GPS, GLONASS and GALILEO		
Channels	270		
GPS Sensitivity	-142 dBm		
SBAS Tracking	3-channel, parallel tracking		
Update Rate	1 Hz standard, 10 Hz optional		
Accuracy (Horizontal)		RMS (67%)	2DRMS (95%)
	RTK	10 mm + 1 ppm	20 mm + 2 ppm
	SBAS (WAAS)	0.3 m	0.6 m
	Autonomous, no SA	1.2 m	2.5 m

Trimble Single frequency GNSS Module with Embedded Antenna				
Signal Tracking	220 Channels: GPS: L1 C/A, GLONASS: L1 C/A, Galileo: E1 BeiDou: B1, QZSS: L1 C/A, L1 SAIIF, SBAS: L1 C/A			
Performance	Time to First Fix (TTFF)	Cold Start: <45 s Warm Start: <30 s Signal reacquisition: <2 s Horizontal: 0.007 m/sec Vertical: 0.020 m/sec Acceleration: 11 g		
	Velocity Accuracy	Velocity: 515 m/sec Altitude: 18,000 m		
	Maximum Operating Limits			
	Mode	Accuracy	Latency	Maximum Rate
Positioning	Single Baseline RTK (<5 km)	0.008 m + 1 ppm Horizontal 0.015 m + 1 ppm Vertical	<30 ms	20 Hz
	DGNSS	0.25 m + 1 ppm Horizontal 0.50 m + 1 ppm Vertical	<20 ms	20 Hz
	SBAS	0.50 m Horizontal 0.85 m Vertical	<20 ms	20 Hz
	RTK initialization time	typically <1 minute		
	RTK initialization reliability	>99.9%		

Trimble Triple frequency GNSS Module with Embedded Antenna				
Signal Tracking	220 Channels: GPS: L1 C/A, L2E, L2C, L5, GLONASS: L1 C/A, L2 C/A, L3 CDMA, BeiDou: B1, B2, Galileo: E1, E5A, E5B, E5AltBOC, QZSS: L1 C/A, L1 SAIIF, L2C, L5, SBAS: L1 C/A, L5			
Performance	Time to First Fix (TTFF)	Cold Start: <45 s Warm Start: <30 s Signal reacquisition: <2 s Horizontal: 0.007 m/sec Vertical: 0.020 m/sec Acceleration: 11 g		
	Velocity Accuracy	Velocity: 515 m/sec Altitude: 18,000 m		
	Maximum Operating Limits			
	Mode	Accuracy	Latency	Maximum Rate
Positioning	Single Baseline RTK (<5 km)	0.008 m + 1 ppm Horizontal 0.015 m + 1 ppm Vertical	<30 ms	20 Hz
	DGNSS	0.25 m + 1 ppm Horizontal 0.50 m + 1 ppm Vertical	<20 ms	20 Hz
	SBAS	0.50 m Horizontal 0.85 m Vertical	<20 ms	20 Hz
	RTK initialization time	typically <10 seconds		
	RTK initialization reliability	>99.9%		