DT Research

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DT391GS Rugged GNSS Tablet

Rugged Tablet with Integrated High-Accuracy GNSS



The DT391GS rugged mobile tablet features seamless integration of a 9" LEDbacklight capacitive touch screen, an energy efficient Intel® 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-inch 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 with LED flash, auto focus, white balance, gain control and exposure control
- Integrated 3-axis accelerometer, gyroscope sensor, and e-compass
- 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

GNSS Options

System		Hemisphere Single Frequency GNSS Module with Embedded Antenna						
СРИ	Intel® Celeron® Dual Core, 1.58GHz (up to 2.17GHz)	Receiver Type		L1, C/A code, with carrier phase smoothing				
DANA	100	Channels		12-channel, parallel tracking (10-channel when tracking SBAS)				
RAIVI	468	SBAS Tracking		2-channel, parallel tracking				
Storage	64GB to 256GB SSD	Update Rate		20 Hz maximum				
Operating System	Microsoft® Windows® 7 Professional			< 0.02 m 95% confidence (RTK) < 0.28 m 95% confidence (L-Dif)				
Display	9" LED-backlight capacitive touch screen	Accuracy (Horizontal		< 0.6 m 95% confidence (DGPS)				
Display Resolution	1024 x 600			< 2.5 m 95% confidence (autonomous, no SA)				
Trusted Platform Module	TPM 1.2 support	Hemisphere Dual Frequency GNSS Module with Embedded Antenna						
Control Switch and Buttons	1 power button	Signals Received		GNSS LI & L2 KIN with carrier phase GPS, GLONASS and GALILEO				
Indicator	1 power/ battery status LED and 1 WLAN active LED	Channels		270				
Speaker	1 built-in speaker, 1W	GPS Sensitivity	Sensitivity		-142 dBm			
-		SBAS Tracking		3-channel, paral	arallel tracking			
Sensor	Built-in gyroscope sensor, e-compass sensor, and 3-axis accelerometer	Update Rate		1 Hz standard, 1	10 Hz optional RMS (67%) 2DPMS (05%)			
Camera	5 megapixel back camera with LED flash, auto focus, white balance, gain control and exposure control			RTK	10 mm + 1 ppm	20 mm + 2 p	opm	
Network Inte	rface	Accuracy (Horiz	ontal)	SBAS (WAAS)	0.3 m	0.6 m		
WLAN	Wi-Fi 802.11ac; 2.4GHz/ 5GHz dual band			SA	1.2 m	2.5 m		
Bluetooth	Bluetooth 4.0	Trimble Single f	requen	cy GNSS Mod	ule with Embedd	ed Antenn	a	
I/O Ports		Signal Tracking CPS: L1 C/A GLONASS: L1 C/A Galileo: E1						
USB Port	2 (USB 2.0)		BelDou:	BI QZSS: LI	B1 QZSS: L1 C/A, L1 SAIF SBAS: L1 C/A Cold Start: <45 s			
Headphone-out	1		Time to	First Fix (TTFF)	Warm Start: <30 s			
DC-in	1	Dorformanco			Horizontal: 0.007 m/sec			
SD Slot	1 Micro-SD card slot	Performance	Velocity Accuracy		Vertical: 0.020 m/sec			
Mechanical and Environmental			Maximum Operating		Velocity: 515 m/sec			
			Mode		Altitude: 18,000 m Accuracy Latency Maximum Rate			
AC/DC Adapter	Input: 100 – 240V AC; Output: 19V DC, 3.42A		Single Baseline RTK (<5 km)		0.008 m + 1 ppm Horizontal 0.015 m + 1 ppm	<30 ms	20 Hz	
Battery Pack	7.4V, 3760mAh (hot-swappable); optional 8800mAh		DONSS		Vertical 0.25 m + 1 ppm Horizontal	<20 ms	20 Hz	
Enclosure	ABS + PC plastics	Positioning			0.50 m + 1 ppm Vertical 0.50 m Horizontal	<201115	20 HZ	
Protective Grip	Rubber bumpers on each corner with handstrap for handling protection		SBAS RTK init	ialization time	0.85 m Vertical	<20 ms	20 Hz	
Dimensions	0 c0 v 7 22 v 1 F in (246 v 28 2 mm)		RTK init reliabili	ialization ty	>99.9%			
(H x W x D)	9.09 X 7.32 X 1.3 III (240 X 305 X 30.2 IIIII)	Trimble Triple frequency GNSS Module with Embedded Antenna						
Weight	2.56 lbs (1.16 kg)	220 Channels: GPS: L1 C/A, L2E, L2C, L5 BeiDou: B1, B2						
Water and Dust Resistance	IP65		GLONAS QZSS: L	SŚ: LÍ1 C/Á, L2 Ć/A, L C/A, L1 SAIF, L2Ć	L3 CDMA Galile , L5 SBAS: Cold Start: <45 s	o: E1, E5A, E5 L1 C/A, L5	B, E5AltBOC	
Vibration and Shock Resistance	MIL-STD-810G		Time to First Fix (TTFF)		Warm Start: <30 s Signal reacquisition: <2 s Horizontal: 0.007 m/sec			
Regulatory	FCC Class B, CE, RoHS compliant	Performance	Velocity Accuracy		Vertical: 0.020 m/sec Acceleration: 11 g			
Temperature	Operation : -10° C ~ 50° C ; Storage : -20° C ~ 60° C		Limits	im Operating	Altitude: 18,000 m			
	-		Iviode	11 mm-1	0.008 m + 1 ppm	Latency		
Humidity	0% – 90% non-condensing		Single B (<5 km)	aseline RTK	Horizontal 0.015 m + 1 ppm Vertical	<30 ms	20 Hz	
Major Option	IS 3G WWAN module for HSPA+/HSPA/UMTS and EDGE/GPRS/GSM	Positioning	DGNSS		0.25 m + 1 ppm Horizontal 0.50 m + 1 ppm Vertical	<20 ms	20 Hz	
Broadband	4G LTE module for DC-HSPA+/ HSPA+/ HSDPA/ HSUPA/ WCDMA/ GSM/ GPRS/ EDGE/ CDMA		SBAS		0.50 m Horizontal 0.85 m Vertical	<20 ms	20 Hz	
* Specifications subject to ch	ange without notice.		RTK init RTK init reliabili	ialization time ialization ty	typically <10 seconds >99.9%			

