

Rugged GNSS Tablets

Slim, Lightweight with Integrated High-Accuracy GNSS



The DT Research Rugged GNSS Tablets feature the integration of 7" and 10.1" capacitive touch screens, energy efficient Intel® processors, and the positioning receiver within compact, lightweight yet durable packages. With the Windows® operating system and network connection, these tablets are compatible with existing GIS software for mapping applications and bring together the advanced workflow for GIS data capture, accurate positioning, and data transmitting. With the RTK GNSS receiver connected to an external antenna, these powerful tablets enable highest precision positioning. Rated IP65, MIL-STD-810G and MIL-STD-461F the DT Research Rugged GNSS Tablets provide real-time survey grade control points for field applications.

Features

- 7" or 10.1" display with capacitive touch; high-bright (800 nits), sunlight-readable and anti-reflective
- Intel® Pentium® or 8th Generation Core™ i processor
- Microsoft® Windows® 10 IoT Enterprise operating system
- Built-in survey-grade RTK GNSS module with optional foldable antenna; supports high-accurate measuring field work (measure with RTK GNSS positioning directly, or connect to an external antenna for higher precision)
- High-capacity hot swappable battery for all-day operation
- Built-in smart card/CAC reader (DT301T-TR)
- IP65-rated for water and dust resistance
- MIL-STD-810G for shock and vibration protection
- MIL-STD-461F for EMI and EMC tolerance (DT301T-TR and DT301X-TR)
- Optional long-range Bluetooth, ideal for connecting to Total Station controllers (DT372AP-TR and DT301X-TR)
- Optional cameras, 4G LTE
- Optional 3D back camera, back camera light (DT301X-TR)



Applications

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

Specifications

	DT372AP-TR	DT301T-TR	DT301X-TR
System			
CPU	Intel® Pentium® Quad Core, 1.1GHz (up to 2.5GHz)	Intel® 8 th Generation Core™ i5 or i7 quad-core processor	Intel® Core™ i5-8250U, Quad-Core, 1.6GHz (up to 3.4GHz) Intel® Core™ i7-8550U, Quad-Core, 1.8GHz (up to 4.0GHz)
RAM	8GB	8GB or 16GB	8GB or 16GB
Storage	128GB to 2TB flash	128GB to 2TB flash	128GB to 2TB flash
Operating System	Microsoft® Windows® 10 IoT Enterprise		
Display	7" LED-backlight, high-brightness (800 nits) screen with capacitive touch, outdoor viewable	10.1" LED-backlight, high-brightness (800 nits) screen with capacitive touch, outdoor viewable	
Display Resolution	1280 x 800	1920 x 1200	1920 x 1200
NIST Compliant	N/A	Yes	Yes
Fan/ Fanless	Fanless	Fanless	Fanless
Control Switch and Buttons	1 power button, 5 programmable buttons, 1 5-way tactile button	1 power button, 3 programmable buttons	
Indicator	1 power/ battery status LED	1 power/ battery status LED	1 power/ battery status LED
Microphone	N/A	Built-in microphone with DSP for real-time video	
Speaker	Built-in speaker	Built-in speaker	Built-in speaker
Network Interface			
WLAN	Wi-Fi 802.11ac, 2.4GHz/ 5GHz dual band		
Bluetooth	Bluetooth 4.0 LE	Bluetooth 4.0 LE	Bluetooth 4.0 LE
I/O Ports			
USB Port	1 (USB 3.0)	1 (USB 3.0)	2 (USB 3.0 and USB Type-C)
Ethernet	N/A	N/A	Ethernet 10/ 100/ 1000MB Base-T LAN
Headset Jack	1	1	1
DC-in	1	1	1
Smart Card Reader	N/A	Full slot, reads ISO 7816 T=0, T=1; 1.8/3/5V smart card	N/A
SD Slot	1 micro SD card slot	N/A	N/A
Mechanical and Environmental			
AC/DC Adapter	Input: 100-240V AC; Output: 19V DC, 3.42A		
Battery Pack	Hot swappable battery, 11.4V, 5400mAh Hot swappable battery, 11.4V, 8000mAh (optional)		
Enclosure	ABS + PC plastics and magnesium-aluminum alloy		
Dimensions (HxWxD)	9.2 x 5.8 x 1.07 in/ 234 x 147.3 x 27.13 mm	7.8 x 11 x 0.86 in/ 198 x 280 x 21.9 mm	
Weight	2.43 lbs/ 1.1 kg	3.1 lbs/ 1.4 kg	3.1 lbs/ 1.4 kg
Vibration and Shock Resistance	MIL-STD-810G	MIL-STD-810G	MIL-STD-810G
EMI and EMC Tolerance	N/A	MIL-STD-461F	MIL-STD-461F
Water and Dust Resistance	IP65	IP65	IP65
Regulatory	FCC Class B, CE, RoHS compliant		
Temperature	Operation: -0°C to 50°C (32°F to 122°F)	Operation*: -20°C to 60°C (-4°F to 140°F); tested under MIL-STD-810G method 501.6, Procedure II, and method 502.6, Procedure II	
	Storage: -20°C to 60°C (-4°F to 140°F)	Storage: -55°C to 70°C (-67°F to 158°F)	
Humidity	0% – 90% non-condensing		
Major Options			
Barcode Scanner	N/A	2D barcode scanner; reads 1D also	
Camera	5 megapixel back camera	2 megapixel front camera, and 8 megapixel back camera with auto focus, white balance, gain control and exposure control	2 megapixel front camera, and 8 megapixel back camera with auto focus, white balance, gain control and exposure control; or, Intel® RealSense™ Depth back camera, supports distance capture for the 3D scanning, environment sensing and background segmentation applications
Camera Light	N/A	N/A	External camera LED light with mounting bracket
Long Range Bluetooth	Class 1 Bluetooth (1000 ft)	N/A	Class 1 Bluetooth (1000 ft)
Mobile Broadband	4G LTE	4G LTE	4G LTE

* Specifications subject to change without notice.

GNSS Module

Dual Frequency GNSS Module (DT372AP-TR and DT301T-TR)			
Receiver Type	GNSS L1 & L2 RTK with carrier phase		
Signals Received	GPS, GLONASS, BeiDou and Galileo		
Channels	372		
GPS Sensitivity	-142 dBm		
SBAS Tracking	3-channel, parallel tracking		
Update Rate	1 Hz standard, 10 Hz and 20 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

Multi Frequency GNSS Module (DT301X-TR)				
Receiver Type	GNSS multi-frequency RTK with carrier phase			
Signals Received	GPS, GLONASS, BeiDou, Galileo, QZSS			
Channels	372			
GPS Sensitivity	-142 dBm			
SBAS Tracking	3-channel, parallel tracking			
Update Rate	1 Hz standard, 10 Hz and 20 Hz optional			
Accuracy		RMS (67%)	Horizontal	Vertical
	RTK	8 mm + 1 ppm	15 mm + 2 ppm	
	SBAS (WAAS)	0.3 m	0.6 m	
	Autonomous, no SA	1.2 m	2.4 m	

Accessories

The Rugged GNSS Tablets have customized accessories to meet numerous deployment needs.

• External Antennas and Cable



• Battery Charging Kits



• High Capacity Battery Pack



• Detachable Keyboard (for DT301T-TR and DT301X-TR)



• Pole/ Vehicle Mount Cradles



• Digital Pen



• Carrying Case (for DT301T-TR and DT301X-TR)



Product Configurator



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