

Introducing the Carlson SUPERVISOR + GPS Tablet



Use it everywhere:

- In the field • In the office
- In your car or truck

You'll get:

- A powerful, rugged PC tablet with a large 7" wide, easy-to-read display
- Integrated high-precision GNSS receiver
- Wireless support: BlueTooth, 802.11, GSM and CDMA
- Ability to start with base unit (works with existing receivers) & upgrade
- 0% lease financing available
- Option for a 3-year no-questions-asked replacement warranty

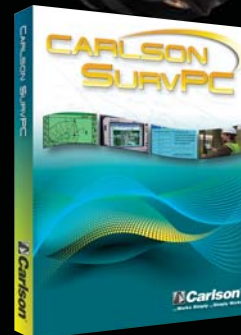
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Choose Your Application:

Carlson SurvPC or
Grade Supervisor
or BOTH!



World's most flexible
& powerful data
collection software



Easy-to-use software
for construction
grade management



Carlson®

...For the Total Project

Super-rugged, ultra-mobile – the next generation of mobile PC performance

Carlson Supervisor+ GPS Tablet Specifications

Size	5.56" (144 mm) x 9.5" (242 mm) x 1.57" (40 mm)
Weight	1.1 kg (2.42 lb)
Environment	
Operating:	-9.4 °F to 140 °F (-23 °C to 60 °C), MIL-STD-810G, Method 501.4 Procedure II, MIL-STD 810G, Method 502.4, Procedure I, II, III
Storage:	-40 °F to 158 °F (-40 °C to 70 °C) MIL-STD-810G, Method 501.4 Procedure II, MIL-STD 810G, Method 502.4, Procedure I, II, III
Drop:	MIL-STD-810G 4ft Drop, Free to Concrete. 26 drops from 4 ft (1.22 m) MIL-STD-810G, Method 516.5, Procedure IV
Vibration:	MIL-STD-810G, Method 514.5 Procedures I & II, General minimum integrity and the more rigorous loose cargo test
Sand & Dust:	IP 65, MIL-STD-810G
Water:	IP 65, MIL-STD-810G
Humidity:	MIL-STD-810G, Method 507.4, 90% RH temp cycle 0 °C/70 °C
Altitude:	15,000 ft (4572 m) at 73 °F (22 °C)
Processor/Memory	Intel Ultra Low Power Atom 2530 1.6 GHz processor (w/US15W Chipset), 2GB DDR2 RAM
Data Storage/Disk	64 GB SSD solid state hard drive
Operating System	Microsoft Windows 7 Ultimate
Screen	7" widescreen 1024x600 resolution TRT LCD, MaxView™ sunlight readable resistive touchscreen display
Keyboard	10 keys: <ul style="list-style-type: none"> • Power key • Menu key (Controls Brightness, Volume, Battery Status, WiFi & BT On/Off, and 3G On/Off) • 4+1 Navigation/Directional keys (Left, Right, Up, Down, Center for Enter) • 3 x User programmable hotkey buttons that control up to 6 functions • On-screen QWERTY soft keyboard
Battery	Hot-swappable Dual Li-Polymer Battery Pack, 2600 mAh each, support minimum 6 hours operation
Connections	<ul style="list-style-type: none"> • 2 x USB 2.0 port (one fully waterproof, even when the latch is open) • 1 x 9-pin serial RS-232 port fully waterproof, even when the latch is open • 1 x LAN • 1 x DC power port • Input: 120-240 VAC, 50-80 Hz, 12 VOC Output • Docking Connector (Contact Pin Type) • 1 x 4 Pin docking • Audio Out • 1 x Microphone • Audio integrated (one speaker) • Fully Gobi™ 2000 PCIe module-ready
Communication	Wireless LAN 802.11b/g/n PAN: Integrated Bluetooth v.2.0 + EDR Compliant WWAN (Optional) Gobi™ 2000 ready, supporting the following RF bands: <ul style="list-style-type: none"> • HSDPS/UMTS 800/850/900/1900/2100 MHz • Quad-band EDGE/GPRS/GSM – 850/900/1800/1900 MHz • Dual-band Ev-DO/COMA – 800/1900 MHz
Navigation	u-blox GPS, WAAS/EGNOS capable
Camera	2 Megapixel Camera + LED light
Options	12V vehicle charger, Pole mount solution, Vehicle cradle that includes: *1 x DC PWR *2 X USB *2 X RS232 *1 x 10/100LAN *VESA holes

GPS Specifications – Powered by NovAtel®

Performance¹		
Channel Configuration	120 Channels ²	
Signal Tracking	GPS: L1, L2, L2C	
	GLONASS: L1, L2	
	Galileo: E1	
	GIOVE-A/GIOVE-B (test)	
Compass³	SBAS	
Horizontal Position Accuracy (RMS)		
Single Point L1		1.5 m
Single Point L1/L2		1.2 m
SBAS ⁴		0.6 m
DGPS		0.4 m
RT-20 ⁵		0.2 m
RT-2™		1 cm+1 ppm
Initialization time		< 10 s
Initialization reliability		> 99.9%
Measurement Precision (RMS)		
Fully independent code and carrier measurements:		
	GPS	GLO
L1 C/A Code	4 cm	8 cm
L1 Carrier Phase	0.5 mm	1 mm
L2 P(Y) Code ⁶	8 cm	8 cm
L2 Carrier Phase ⁶	1 mm	1 mm
L2C code ⁷	8 cm	8 cm
L2C carrier phase ⁷	0.5 mm	0.5 mm
Data Rate⁸		
Measurements		up to 50 Hz
Position		up to 50 Hz
Time to First Fix		
Cold Start ⁹		< 50 s
Hot Start ¹⁰		< 35 s
Signal reacquisition		
L1		< 0.5 s (typical)
L2		< 1.0 s (typical)
Time Accuracy¹¹		20 ns RMS
Velocity Accuracy		0.03 m/s RMS
Velocity Limit¹²		515 m/s
Physical and Electrical		
Dimensions		46 x 71 x 11 mm
Weight		24 g
Power		
Input Voltage		+3.3 VDC [+/- 5%]
Power Consumption ¹³		1 W
Antenna LNA Power Output		
Output Voltage		5.0 VDC
Maximum Current		100 mA
Connectors		
Main 20-pin dual row male header		
Antenna Input MCX female		
Communication Ports		
3 LV-TTL up to 921,600 bps		
2 CAN Bus14 1 Mbps		
1 USB 12 Mbps		
Environmental		
Temperature		
Operating		-40°C to +85°C
Storage		-55°C to +95°C
Humidity		95% non-condensing
Vibration		
Random Vibe		MIL-STD 810G (7.7 g RMS)
Sine Vibe		IEC60068-2-6 (5g)
Bump		ISO9022-31-06
Shock		MIL-STD-810G (40 g)
Features		
• Field-upgradeable software		
• PAC multipath mitigating technology		
• Differential GPS positioning		
• Differential correction support for RTCM 2.1, 2.3, 3.0, 3.1, CMR, CMR+ and RTCA		
• Navigation output support for NMEA-0183 and detailed NovAtel ASCII and binary logs		
• Auxiliary strobe signals, including a configurable PPS output for time synchronization and mark inputs		
• Outputs to drive external LEDs		
• GL1DE smoothing algorithm		
Optional Accessories		
• GPS-700 series antennas		
• ANT series antennas		
• RF Cables – 5 and 10 m lengths		
• Development Kit		
Firmware Options		
• RT-2		• RT2-LITE
• RT-20		• RAIM
• ALIGN		

¹ Typical values. Performance specifications subject to GPS system characteristics, US DOD operational degradation, ionospheric and tropospheric conditions, satellite geometry, baseline length, multipath effects and the presence of intentional or unintentional interference sources.

² Tracks up to 60 L1/L2 satellites.

³ The Compass signal is not finalized and changes in the signal structure may still occur. Designed for Compass Phase 3 compatibility.

⁴ GPS only.

⁵ Expected accuracy after static convergence.

⁶ L2 P for GLONASS.

⁷ L2 C/A for GLONASS.

⁸ 50 Hz while tracking up to 20 satellites.

⁹ Typical value. No almanac or ephemerides and no approximate position or time.

¹⁰ Typical value. Almanac and recent ephemerides saved and approximate position and time entered.

¹¹ Time accuracy does not include biases due to RF or antenna delay.

¹² Export licensing restricts operation to a maximum of 515 metres per second.

¹³ Power consumption values for GPS L1/L2

¹⁴ User application software required.