

Backlit international alphanumeric keypad

5-inch touchscreen

All day battery

IP65 and MIL-STD-810H rated

Android 10 GMS

Built-in Bluetooth, Wi-Fi, GNSS, worldwide WWAN, Verizon and AT&T certified (US carriers)

One EMPOWER Module bay

13 MP Rear Facing Camera

Ranger 5, Right for You, Right for your Job

The Spectra Geospatial Ranger 5 is the fifth-generation with a heritage that traces back to the first modern field computer for land surveyors. From the beginning, the Ranger has been designed to help you get every job done consistently, efficiently-and right.

This hard working, Android-based survey field data collector is built to handle a full range of tasks thanks to many unparalleled features:

- Backlit international alphanumeric QWERTY keypad enables fast and efficient data entry, even in tough conditions
- Ergonomic design, lighter weight and easy to grip means less onsite fatigue
- Brightly lit, anti-glare screen is easy to use and helps you get more done even in high glare and low light conditions
- All day battery, backed up by a removable battery option helps you power through the day
- Rugged and reliable, IP65 and MIL-STD-810H rated, means it comes into its own in tough environments withstanding shock, dust and water
- Featuring an Android 10 GMS (Google Mobile Services) certified operating system and Qualcomm processor, the Ranger 5 is fast and efficient with a familiar OS
- Built-in Bluetooth, Wi-Fi, GNSS, worldwide WWAN, and a rear facing camera, make it easy to capture videos and images, send and receive data and access the Internet.
- One EMPOWER Module bay provides expansion with the EM120 (Long Range Radio), EM100 (GNSS), and EM11X family (RFID/Barcode readers)

Whether your day calls for precision field data collection or stakeout and layout, you can depend on the Ranger 5 to get the job done.







PHYSICAL SPECIFICATIONS

- 287.1 mm x 175.6 mm x 43.9 mm (11.3" x 6.9" x 1.7")
- Weight
- 934 g (2.06 lb) excluding optional removable battery, EMPOWER module, pole bracket and other accessories
- - PC-EXL9330 case with TPU-Texin990 overmold

ENVIRONMENTAL SPECIFICATIONS

Meet or exceed

- Operating temperature
- MIL-STD-810H, Method 501.7 & 502.7, Procedure II -30 °C to 60 °C (-22 °F to 140 °F)
- Storage temperature
- MIL-STD-810H, Method 501.7 & 502.7, Procedure I -40 °C to 70 °C (-40 °F to 158 °F)
- Startup temperature $-20\,^{\circ}\text{C}$ to +60 $^{\circ}\text{C}$ (-4 $^{\circ}\text{F}$ to 140 $^{\circ}\text{F}$)
- AC adapter / charging temperature
- 0 °C to +40 °C (32 °F to 104 °F)
- Dust
- IP6x: 8 hours with blowing talcum powder (IEC 60529)
- IPx5: Water Jet 6.3 mm diameter @ 3 minute, 12.5 liter/ minute (IEC 60529)
- Transit Drop MIL-STD-810H, Method 516.8, Procedure IV
- 26 drops (each face, edge & corner) at room temperature from 1.22 m (4 ft) onto concrete

- 6 faces at low and high temps (-30 °C and 60 °C (-22 °F and 140 °F))

 Ball Drop similar to IEC 60950-1, 50 mm steel ball dropped 0.5 m on touch panel only
- Humidity
 MIL-STD-810H, Method 507.6 Procedure II 90% RH temp cycle +30 °C / +60 °C (+86 °F / +140 °F)
- Vibration
- MIL-STD-810H, Method 514.8 Procedures I & II General Minimum Integrity and Loose Cargo Test
- Altitude (low pressure)
- Altitude (tw. piessier) MIL-STD-810H, Method 500.6, Procedures I (storage), II (operating) & III (rapid decompression) Operational at 9,144 m (30,000 ft) at 5°C / 41°F Storage at 12,192 m (40,000 ft) at -30°C / -22°F Rapid Decompression 2,438m (8,000 ft) to 12,192 m (40,000 ft) in <15 seconds at 25°C / 77°F
- Temperature Shock
 MIL-STD-810H, Method 503.7, Procedure I-C Survives cycles between -30 oC and 60 oC (-22 oF and 140 °F)
- Solar Exposure
- MIL-STD-810H, Method 505.7, Procedures I & II Survives prolonged solar exposure
- Salt Spray
- ASTM B117 5% salt solution, 96 hrs SECURITY

 Application security, hardware token, Qualcomm® processor security, hardware backed encryption, storage encryption, TLS 1,3, platform hardening, quarterly Android security patches.

CONFIGURATIONS

- EMPOWER module support 1x module bay supports EM100 GNSS radio module, EM120 2.4 GHz receiver module, EM11x barcode/RFID modules, and more

CERTIFICATIONS

- Country certifications
- Australia, Brazil, Canada, China, EU, India, Japan, Mexico, New Zealand, Russia, South Africa, South Korea, Taiwan, Thailand, UAE United Arab Emirates, UK and USA.
- Environmental
- Conflict Minerals, China RoHS 2.0, EU RoHS 2.0, EU REACH

COMPATIBLE FIELD SOFTWARE

- Origin Lite

ELECTRICAL SPECIFICATIONS

- Processor
- Qualcomm SDA660
- Memory
 4 GB LPDDR4X RAM
- Storage
 64 GB Flash eMMC
- Operating System
 Android 10
- Batteries
- Internal Li-Ion 4530mAh/7.2 V nominal capacity Optional user replaceable Li-lon battery pack
- · Battery life
 - RTS usage 16 hours or GNSS RTK usage 18 hours (depending on display settings, connectivity, data processing, ambient temperature, etc.)
- Fully charged battery can support sleep state for 7.2 days and off for more than 175 days
- Charging time Full-charge 3.5 hours, 0–50 % charge in 1.5 hours
- Power input
 5 V/9 V 3A charging, USB-PD compliant with Type C
- Notification LED
- Battery status, Shift, Fn, Ctrl, AGr, Caps Lock, Search, and Cursor Lock LED indicator
- Display
 - Industrial (1280x720) 300 DPI transflective type TFT Display, 365 cd/m2 sunlight readable LED backlight, projective capacitive multi-touch touchscreen with stylus, finger, and glove modes
- Keyboard
- International backlit alpha-numeric and OWERTY with Fn keys (12 physical + multiple Fn, Shift & AGr key combinations)
- 1 W mono speaker and dual microphones with noise cancelling technology
- External speaker/ microphone
 USB-C or Bluetooth headsets supported
- - USB-C for charging and USB 2.0 data transfer USB-PD 2.0 supports charger inputs up to 9 V/3 A
- WWAN
 - Worldwide LTE 4G in regions where it is available, and
 - compatible with 3G networks - AT&T and Verizon certified. MicroSIM card.
- Wi-Fi
- 2.4 GHz 802.11 b/g/n/ac & 5.0 GHz 802.11 a/n/ac
- Bluetooth®
 Bluetooth 5 classic & BLE 5, Class 1
- Camera
 - Rear camera: 13 MP auto-focus with LED flash
- GNSS
 - IntegratedSierraWirelessEM7565; L1C/A,GPS/ GLONASS/ BeiDou/Galileo/07SS
- - Ambient light sensor, e-Compass, accelerometer,

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Please visit spectrageospatial.com for the latest product information and to locate your nearest distributor. Specifications and descriptions are subject to change without notice.