

MobileMapper 6 handheld

User Guide



Legal Notices

Corporate Office

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Westminster, CO 80021
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trimble.com

Global technical support

To request detailed technical assistance for Spectra Geospatial solutions, contact trimble_support@trimble.com.

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Release Notice

This is the January 2024 release (Revision A) of the Spectra Geospatial MobileMapper 6 handheld documentation.

Recycling information

You should dispose of the device and accessories properly according to local laws and regulations. Because the device contains electronic components, it must be disposed of separately from household waste. When the device reaches its end of life, contact your local Spectra Geospatial dealer to learn about disposal and recycling options for your area.

Recycling in Europe



The symbol above means that according to local laws and regulations your product and/or its battery shall be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product and/or its battery at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

For information about recycling Trimble WEEE (Waste Electrical and Electronic Equipment) products that run on electrical power go to .

The ERFC Netherlands will recycle on behalf of Trimble Distributors, conforming to the European Union's WEEE Directive 2002/96/EC, any WEEE supplied to the market by Trimble Inc., their partners and/or subsidiaries.

Taiwan - Battery Recycling Requirements



The product contains a Lithium-ion battery. Taiwanese regulations require that waste batteries are recycled.

廢電池請回收

Regional compliance

Australia and New Zealand



This product conforms with the regulatory requirements of the Australian Communications and Media Authority (ACMA) Telecommunications, Radiocommunications and EMC Labelling Notices, thus satisfying the requirements for RCM marking and sale within Australia and New Zealand.

Europe



This Trimble product has been tested and found to comply with all requirements for CE Marking and sale within the European Economic Area (EEA). The device has Bluetooth and wireless LAN approval and satisfies the requirements for the RED 2014/53/EU. These requirements provide reasonable protection against harmful interference when the equipment is operated appropriately in a residential or commercial environment.

Transmit Power

2412 - 2472 MHz: 17.78 dBm

5150 - 5250 MHz: 16.65 dBm

5260 - 5230 MHz: 16.03 dBm

5500 - 5700 MHz: 18.45 dBm

5745 - 5825MHz: 13.89 dBm

5955 - 6415MHz: 13.94 dBm

- WLAN 5G & 6E:

Operations in the 5.15-5.5.9 GHz band and 5.9 - 7.2 GHz are restricted to indoor usage only.

European declaration of conformity

Manufacturer's Name: Trimble Inc.

Manufacturer's Address: 10368 Westmoor Drive, Westminster, CO 80021, USA

Trimble declares, under our sole responsibility, that the product:

Product Name: MobileMapper 6

This product has been determined to be in compliance with the Essential Requirements of the RED Directive 2014/53/EU LVD 2014/35/EU EMC 2014/53/EU RED Articles 3.1(a) and b), safety and EMC respectively, as well as any relevant Article 3.2 requirements respectively and RoHS Directive 2011/65/EU. An up-to-date Doc is available upon request or can be found at trimble.com.

The products covered by this guide may be operated in all EU member countries (BE, BG, CZ, DK, DE, EE, IE, EL, ES, FR, HR, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE), United Kingdom, Norway, and Switzerland.

Information about included radio modules:

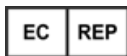
- Bluetooth radio: BT5.2 BLE5, Frequency band 2402-2480MHz, max RF radiated output power +16.73dBm.
- Wi-Fi radio:
 - 802.11bgn, Frequency band 2400-2496 MHz
- IEEE802.11a/b/g/n/ac/ax, Frequency bands 2400-2496 MHz, 5180-5825 MHz and 5955-6415 MHz (depending on country)
 - max RF radiated output power +17.78 dBm.
- 2G/3G/4G/5G NR cell radio:
 - Frequency bands (2G) 850/900/1800/1900 MHz.
 - Frequency bands (3G) 850/900/1900/2100 MHz.
 - Frequency bands (4G) FDD B1 (2100) / B2 (1900) / B3 (1800) / B4 (1700) / B5 (850) / B7 (2600) / B8 (900) / B12/B13/B17/B28 (700) / B20 (800 MHz) / B25 (1900 MHz).
 - Frequency bands (4G) TDD B38 (2600) / B39 (1900) / B40 (2300) / B41 (2500 MHz).
 - Frequency bands (5G NR) N1/N2/N3/N5/N28/N41/N71/N77/N78/N79.
 - Max RF radiated output power +31 dBm.

Importer of Record

Trimble European Regional Fulfillment Center
 Logistics Manager
 Trimble Europe B.V. & Trimble International B.V.
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 5683 CC Best
 The Netherlands

Trimble EC

Trimble Germany
 Am Prime Parc 11
 65479 Raunheim
 Germany



CAUTION - Only approved accessories may be used with this equipment. In general, all cables must be high quality, shielded, correctly terminated and normally restricted to two meters in length. Power supplies approved for this product employ special provisions to avoid radio interference and should not be altered or substituted. Unapproved modifications or operations beyond or in conflict with these instructions for use may void authorization by the authorities to operate the equipment.

Frequency bands and Powers

- a. Frequency band(s) in which the radio equipment operates; Please see above table in "Product Antenna and Gain".
- b. Maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates; Please see below table "Product Antenna and Gain."

Product Antenna and Gain

Radio Cat	Frequency	Antenna Type	Max Gain (dBi)			
			ANT0	ANT1	ANT2	ANT3
WWAN	LTE/WCDMA/GSM	LDS	0.26			
WWAN	5G NR	LDS	0.3			
WLAN 6E	5955-7115 MHz	LDS		-1.14	-1.6	-1.0
WLAN 5G	5180-5825 MHz	LDS			-2.3	0.6
WLAN 2.4G	2412-2472 MHz	LDS			-2.1	0.02
Bluetooth	2402-2480	LDS				0.02

Canada

IC ID:5817A-125500

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Licence exempt

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This Category II radio communication device complies with Industry Canada Standard RSS-310.

Ce dispositif de radiocommunication de catégorie II respecte la norme CNR-310 d'Industrie Canada.

IMPORTANT NOTE: IC Radiation Exposure Statement

For satisfying FCC RF exposure compliance requirements, body-worn operations are restricted to belt-clips, holsters or similar accessories that have no metallic component in the assembly and must provide at least 10 mm separation between the device and the user's body. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter. The County Code Selection feature is disabled for products marketed in the US/Canada.

Pour satisfaire aux exigences de conformité d'exposition RF de la FCC, les opérations portées sur le corps sont limitées aux clips de ceinture, aux étuis ou aux accessoires similaires qui n'ont pas de composant métallique dans l'assemblage et doivent fournir une séparation d'au moins 10 mm entre l'appareil et le corps de l'utilisateur. Cet appareil et son (ses) antenne (s) ne doivent pas être colocalisés ou fonctionner avec une autre antenne ou émetteur. La fonction de sélection du code de comté est désactivée pour les produits commercialisés aux États-Unis / au Canada.

IC SAR warning

Radio Frequency (RF) Exposure Information

The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has been evaluated for and shown compliant with the IC Specific Absorption Rate ("SAR") limits when installed in specific host products operated in portable exposure conditions.

Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil de sans fil est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a été évalué et démontré conforme aux limites SAR (Specific Absorption Rate - Taux d'absorption spécifique) d'IC lorsqu'il est installé dans des produits hôtes particuliers qui fonctionnent dans des conditions d'exposition à des appareils portables.

The device could automatically discontinue transmission in case of absence of information to transmit, or operational failure. Note that this is not intended to prohibit transmission of control or signaling information or the use of repetitive codes where required by the technology.

WLAN indoor usage 6XD/5G

The device for the band 5.15 -5.9 GHz and 5.9 -7.2 GHz is only for indoor usage to reduce potential for harmful interference to co- channel mobile satellite systems; the maximum antenna gain permitted (for devices in the bands 5250- 5350 MHz and 5470-5725 MHz) to comply with the e.i.r.p. limit; and the maximum antenna gain permitted (for devices in the band 5725-5850 MHz) to comply with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate, as stated in section A9.2(3). In addition, high -power radars are allocated as primary users (meaning they have priority) of the band 5250 -5350 MHz and this radar could cause interference and/or damage to LE-LAN devices.

Le dispositif pour la bande 5.15 -5.9 GHz and 5.9 -7.2 GHz est uniquement destiné à une utilisation en intérieur afin de réduire les risques d'interférences nuisibles aux systèmes mobiles par satellite dans le même canal; le gain d'antenne maximal autorisé (pour les appareils dans les bandes 5250-5350 MHz et 5470 -5725 MHz) pour se conformer à la p.i.r.e. limite; et le gain d'antenne maximal autorisé (pour les appareils dans la bande 5725- 5850 MHz) pour se conformer à la p.i.r.e. limites spécifiées pour le fonctionnement point à point et non point à point , selon le cas, comme indiqué dans la section A9.2 (3). De plus, les radars haute puissance sont attribués comme utilisateurs principaux (c'est-à-dire qu'ils ont la priorité) de la bande 5250-5350 MHz et ce radar pourrait causer des interférences et/ ou endommager les dispositifs LE- LAN.

U.S.

FCC ID: S9E-125500

Federal Communication Commission (FCC) Interference Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes and modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission rules.

FOR PORTABLE DEVICE USAGE (<20 cm from body / SAR needed)

Radiation Exposure Statement: This device meets the government's requirements for exposure to radio waves.

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for wireless device employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg.

*Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands.

WLAN indoor usage 6XD/5G

The device for the band 5.15 -5.9 GHz and 5.9 -7.2 GHz is only for indoor usage to reduce potential for harmful interference to co- channel mobile satellite systems; the maximum antenna gain permitted (for devices in the bands 5250- 5350 MHz and 5470-5725 MHz) to comply with the e.i.r.p. limit; and the maximum antenna gain permitted (for devices in the band 5725-5850 MHz) to comply with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate, as stated in section A9.2(3). In addition, high -power radars are allocated as primary users (meaning they have priority) of the band 5250 -5350 MHz and this radar could cause interference and/or damage to LE-LAN devices.

Limited Warranty Terms and Conditions

Product Limited Warranty

Subject to the terms and conditions set forth herein, Trimble Inc. ("Trimble") warrants that for a period of two (2) years from date of purchase this Trimble product (the "Product") will substantially conform to Trimble's publicly available specifications for the Product and that the hardware and any storage media components of

the Product will be substantially free from defects in materials and workmanship.

Product Software

Product software, whether built into hardware circuitry as firmware, provided as a standalone computer software product, embedded in flash memory, or stored on magnetic or other media, is licensed solely for use with or as an integral part of the Product and is not sold. The terms of the end user license agreement, as included below, govern the use of the Product Software, including any differing limited warranty terms, exclusions and limitations, which shall control over the terms and conditions set forth in the limited Product warranty.

Warranty Remedies

If the Trimble Product fails during the warranty period for reasons covered by this limited warranty and you notify Trimble of such failure during the warranty period, Trimble will repair OR replace the nonconforming Product with new, equivalent to new, or reconditioned parts or Product, OR refund the Product purchase price paid by you, at Trimble's option, upon your return of the Product in accordance with Trimble's product return procedures then in effect.

How to Obtain Warranty Service

To obtain warranty service for the Product, it is recommended you contact your Trimble dealer. Alternatively, you may contact Trimble to request warranty service by emailing Repair_Services@Trimble.com. Please be prepared to provide:

- your name, address, and telephone numbers;
- product name, part number and serial number;
- proof of purchase;
- an explanation of the problem.

The customer service representative may need additional information from you depending on the nature of the problem.

Warranty Exclusions and Disclaimer

This Product limited warranty shall only apply in the event and to the extent that (i) the Product is properly and correctly installed, configured, interfaced, maintained, stored, and operated in accordance with Trimble's applicable operator's manual and specifications, and; (ii) the Product is not modified or misused. This Product limited warranty shall not apply to, and Trimble shall not be responsible for, defects or performance problems resulting from (i) the combination or utilization of the Product with hardware or software products, information, data, systems, interfaces, or devices not made, supplied, or specified by Trimble; (ii) the operation of the Product under any specification other than, or in addition to, Trimble's standard specifications for its products; (iii) the unauthorized installation, modification, or use of the Product; (iv) damage caused by: accident, lightning or other electrical discharge, fresh or salt water immersion or spray (outside of Product specifications); or exposure to environmental conditions for which the Product is not intended; (v) normal wear and tear on consumable parts (e.g., batteries); or (vi) cosmetic damage. Trimble does not warrant or guarantee the results obtained through the use of the Product or Software, or that software components will operate error free.

NOTICE REGARDING PRODUCTS EQUIPPED WITH TECHNOLOGY CAPABLE OF TRACKING SATELLITE SIGNALS FROM SATELLITE BASED AUGMENTATION SYSTEMS (SBAS)(WAAS, EGNOS, GAGAN, MSAS AND LUCH), OMNISTAR, BEIDOU, GPS, GALILEO OR GLONASS SATELLITES, OR FROM IALA BEACON SOURCES: TRIMBLE IS NOT RESPONSIBLE FOR THE OPERATION OR FAILURE OF OPERATION OF ANY SATELLITE BASED POSITIONING SYSTEM OR THE AVAILABILITY OF ANY SATELLITE BASED POSITIONING SIGNALS.

THE FOREGOING LIMITED WARRANTY TERMS STATE TRIMBLE'S ENTIRE LIABILITY, AND YOUR EXCLUSIVE REMEDIES, RELATING TO THE TRIMBLE PRODUCT. EXCEPT AS OTHERWISE EXPRESSLY PROVIDED HEREIN, THE PRODUCT, AND ACCOMPANYING DOCUMENTATION AND MATERIALS ARE PROVIDED "AS-IS" AND WITHOUT EXPRESS OR IMPLIED WARRANTY OF ANY KIND, BY EITHER TRIMBLE OR ANYONE WHO HAS BEEN INVOLVED IN ITS CREATION, PRODUCTION, INSTALLATION, OR DISTRIBUTION, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NONINFRINGEMENT. THE STATED EXPRESS WARRANTIES ARE IN LIEU OF ALL OBLIGATIONS OR LIABILITIES ON THE PART OF TRIMBLE ARISING OUT OF, OR IN CONNECTION WITH, ANY PRODUCT. BECAUSE SOME STATES AND JURISDICTIONS DO NOT ALLOW LIMITATIONS ON DURATION OR THE EXCLUSION OF AN IMPLIED WARRANTY, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

Limitation of Liability

TRIMBLE'S ENTIRE LIABILITY UNDER ANY PROVISION HEREIN SHALL BE LIMITED TO THE AMOUNT PAID BY YOU FOR THE PRODUCT. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL TRIMBLE OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGE WHATSOEVER UNDER ANY CIRCUMSTANCE OR LEGAL THEORY RELATING IN ANYWAY TO THE PRODUCTS, SOFTWARE AND ACCOMPANYING DOCUMENTATION AND MATERIALS, (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF DATA, OR ANY OTHER PECUNIARY LOSS), REGARDLESS OF WHETHER TRIMBLE HAS BEEN ADVISED OF THE POSSIBILITY OF ANY SUCH LOSS AND REGARDLESS OF THE COURSE OF DEALING WHICH DEVELOPS OR HAS DEVELOPED BETWEEN YOU AND TRIMBLE. BECAUSE SOME STATES AND JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

NOTE: THE ABOVE TRIMBLE LIMITED WARRANTY PROVISIONS WILL NOT APPLY TO PRODUCTS PURCHASED IN THOSE JURISDICTIONS (E.G., MEMBER STATES OF THE EUROPEAN ECONOMIC AREA) IN WHICH PRODUCT WARRANTIES ARE THE RESPONSIBILITY OF THE LOCAL DEALER FROM WHOM THE PRODUCTS ARE ACQUIRED. IN SUCH A CASE, PLEASE CONTACT YOUR TRIMBLE DEALER FOR APPLICABLE WARRANTY INFORMATION.

Notice to Australian Purchasers - The Australian Consumer Law

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Trimble's warranty, as set out in the user manual accompanying this statement, or as described in the warranty card accompanying the Product you purchased, is in addition to any mandatory rights and remedies that you may have under the Australian Consumer Law.

Official Language

THE OFFICIAL LANGUAGE OF THESE TERMS AND CONDITIONS IS ENGLISH. IN THE EVENT OF A CONFLICT BETWEEN ENGLISH AND OTHER LANGUAGE VERSIONS, THE ENGLISH LANGUAGE SHALL CONTROL

Contents

Legal Notices	2
Contents	8
Safety information	10
Safety notices	10
Radio use	10
Exposure to Radio Frequency (RF) Signals	11
Exposure to radio frequency radiation from Bluetooth and WLAN transmitters	11
Exposure to radio frequency radiation from cellular wireless transmitters	12
Telecommunications & Internet Association (TIA) information	12
AC adaptor safety	12
Battery safety	13
Electrostatic discharge	14
Storage card use	14
Exposure to loud audio	14
Use and care of the handheld	14
Introduction	17
Specifications	17
In the box	18
Replacement and spare or optional accessories	18
Registration	18
Technical assistance	18
Parts of the MobileMapper 6 handheld	19
Getting started	20
Inserting and removing the battery, and an optional SIM card and SD card	20
Powering the handheld	23
Charging the battery	23
LED status	23
Turning the handheld on and off	24
Using Sleep mode	24
Checking the level of battery power	24
Conserving power	24
Making your battery last longer	24
Storing data	25
Memory cards	25
Assigning apps to the programmable buttons	26
Resetting the handheld to factory settings	26
Calibrating the compass	27
Connecting to an office computer	27

Using the Android operating system	28
Using the Home screen(s)	28
Interacting with the handheld	29
Entering information	30
Using the menus	30
Using the on-screen keyboard	30
Editing text	31
Managing notifications	31
Selecting the language	32
Setting the time and date	32
Using the clock to set alarms	32
Display settings	33
Sounds and notifications	33
Locking the device	33
Sending and receiving email	33
Using the Wi-Fi (WLAN) and Bluetooth radios	35
Turning on and turning off the Wi-Fi (WLAN) and Bluetooth radios	36
Connecting to a Wi-Fi (WLAN) access point	36
Adding a Wi-Fi network	36
Forgetting a Wi-Fi network	37
Advanced Wi-Fi settings	37
Connecting to a Bluetooth-enabled device	37
Working with paired Bluetooth-enabled devices	38
Unpairing a Bluetooth device	38
Accessing a corporate network	38
Using the cellular modem	40
Manually connecting to a cellular network from the modem	40
Switching between SIM card networks	41
Configuring cellular network settings	41
Messaging	41
Sending a text or a multimedia message	41
Deleting message threads	42
Replying to messages	42
Changing Messaging settings	42
Using the GNSS receiver	43
Receiving signals from GNSS satellites	43
Supported software	44
Using an external GNSS receiver	44
Using the camera	45
Starting and closing the Camera app	45
Using the camera to take a photo	45
Using the camera in Video mode	46
Working with photos and videos in the Android Photos or Gallery app	46

Safety information

WARNING – Before you use this product, make sure that you have read and understood all safety requirements. Failure to follow these safety instructions could result in fire, electric shock, or other injury, or damage to the device and/or other property.

IMPORTANT: To meet all transportation rules and regulations all batteries are shipped with only 20-30% of their charge capacity. It is always necessary to charge batteries fully first before operating the product.

The SIM card and microSD card slots are below the battery; to access the slots, turn off the handheld and remove the battery.

Your warranty is invalidated if you open or tamper with the outer casing of the device. Unapproved modifications or operations beyond or in conflict with these instructions for use may void authorization by the authorities to operate the equipment.

Only approved accessories may be used with the device. In general, all cables must be high quality, shielded, correctly terminated and normally restricted to two meters in length. The power supply approved for this product employs special provisions to avoid radio interference and should not be altered or substituted.

- [Radio use, page 10](#)
- [Telecommunications & Internet Association \(TIA\) information, page 12](#)
- [AC adaptor safety, page 12](#)
- [Battery safety, page 13](#)
- [Electrostatic discharge, page 14](#)
- [Storage card use, page 14](#)
- [Exposure to loud audio, page 14](#)
- [Use and care of the handheld, page 14](#)

Safety notices

Radio use

The MobileMapper 6 handheld contains a Bluetooth[®] radio, a WLAN (Wi-Fi) radio, and a 5G cellular modem radio. In some situations, you may be required to turn off the radios. For example, aviation authority regulations restrict the use of wireless transmission devices on board aircraft.

To prevent the handheld from emitting radio signals, do one of the following:

- To put the handheld in airplane mode, swipe down from the top of the screen to access **Quick Settings**, then tap **Airplane mode**. This mode turns off all wireless connections. Alternatively, on the **Apps** screen, tap **Settings** then under **Network & internet** tap **Airplane mode**.

- To turn off the handheld, press and hold the Power button briefly to display the **Power options** menu, then tap **Power off**.
- To turn off any of the Bluetooth, Wi-Fi, and wireless cellular modem radios:
 - on the **Apps** screen, tap **Settings / Network & internet / Internet** then tap the **Wi-Fi** slider to turn it off.
 - swipe down from the top of the screen to access **Quick Settings**, then tap **Bluetooth** to turn it off.
 - to turn off mobile data, swipe down from the top of the screen to access **Quick Settings**, then tap **Mobile data** to turn it off.

NOTE – You may need to deactivate the Wi-Fi and/or Bluetooth radio in the handheld if the country in which you are working does not approve the use of Wi-Fi and/or Bluetooth wireless technology. If you are unsure about whether the handheld’s radios are approved for use in your country, check with your Spectra Geospatial reseller.

Exposure to Radio Frequency (RF) Signals

Your device contains a radio transmitter and receiver. The radiated output power is far below the international radio frequency exposure limits. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on the safety standards previously set by international standards bodies:

- American National Standards Institute (ANSI) IEEE. C95.1-1992.
- National Council on Radiation Protection and Measurement (NCRP). Report 86. 1986.
- Int’l Commission on Non-Ionizing Radiation Protection (ICNIRP) 1996.
- Ministry of Health (Canada), Safety Code 6. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

SAR: 0.545w/kg

Use of unauthorized or modified antennas may impair call quality and damage the device, causing loss of performance. To assure optimal performance and ensure human exposure to RF energy is within the guidelines set forth in the relevant standards; always use your device only in its normal-use position.

Avoiding contact with the antenna area when the device is IN USE optimizes the antenna performance.

Exposure to radio frequency radiation from Bluetooth and WLAN transmitters

This device is approved as a portable device with respect to Radio Frequency (RF) exposure compliance. The radiated output power of the internal wireless radio transmitters is less than 100 milliwatt, which results in exposure levels far below the FCC radio frequency exposure limits, even when operated in close proximity to the body. The internal wireless radios operate within guidelines found in international radio frequency safety standards and recommendations, which reflect the consensus of the international scientific community. Spectra Geospatial therefore believes the internal wireless radios are safe for use by users. The level of electromagnetic energy emitted is hundreds of times lower than the electromagnetic energy emitted by wireless devices such as mobile phones. However, the use of wireless radios may be restricted in some situations or environments, such as on aircraft. If you are unsure of restrictions, you are encouraged to ask for authorization before turning on the wireless radios.

Exposure to radio frequency radiation from cellular wireless transmitters

Devices equipped with wireless cellular modem radios have been designed and manufactured to meet safety requirements for limiting exposure to radio waves. When used in accordance with the instructions set forth in this manual, the equipment has been independently verified to not exceed the emission limits for safe exposure to radio frequency (RF) energy as specified by the Federal Communications Commission of the U.S. Government in 47 CFR §2.1093. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organization through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

Telecommunications & Internet Association (TIA) information

Hearing Aids: Some digital wireless devices may interfere with some hearing aids. In the event of such interference, you may want to consult your wireless service provider, or call customer service to discuss alternatives.

Pacemakers and Other Medical Devices: The Health Industry Manufacturers Association recommends a minimum separation of six inches be maintained between a handheld wireless device and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research. Persons with pacemakers should use the ear opposite the pacemaker to minimize the potential for interference. Persons with pacemakers should exercise great caution if using a hands-free device such as a headset, as these persons may be at greater risk of the device not maintaining the recommended minimum six inches of separation from the pacemaker. If you have any reason to suspect that interference is taking place, turn the device OFF immediately.

If you use any other personal medical device, consult the manufacturer of your device to determine if they are adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

Turn the device OFF in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

AC adaptor safety

To charge the handheld's battery, use the USB cable, and adaptor kit if applicable, provided with the handheld (see [Powering the handheld, page 23](#)).

WARNING – To use AC adaptors safely:

- Use only the AC adaptor intended for the handheld. Using any other AC adaptor can damage the handheld and may void your warranty. Do not use the AC adaptor with any other product.
- Make certain that the input voltage on the adaptor matches the voltage and frequency in your location.
- Make certain that the adaptor has prongs compatible with your outlets.
- Do not use the AC adaptor in wet outdoor areas; it is designed for indoor use only.
- Unplug the AC adaptor from power when not in use.

Battery safety

The rechargeable Lithium-ion battery is supplied partially charged. Charge the battery completely before using it for the first time (see [Powering the handheld, page 23](#)). If the battery has been stored for longer than six months, charge it before use.

WARNING – Use only the battery intended for the product. Using any other battery can damage the handheld and may void your warranty. If the battery becomes damaged or stops charging fully, replace it with a new battery.

WARNING – Charge and use the rechargeable Lithium-ion battery only in strict accordance with the instructions. Charging or using the battery in unauthorized equipment can cause an explosion or fire, and can result in personal injury and/or equipment damage. To prevent injury or damage:

- Do not charge or use the battery if it appears to be damaged or leaking.
- Charge the Lithium-ion battery only in a product that is specified to charge it. Be sure to follow all instructions that are provided with the battery charger.
- Discontinue charging a battery that gives off extreme heat or a burning odor.
- Use the battery only in equipment that is specified to use it.
- Use the battery only for its intended use and according to the instructions in the product documentation.

WARNING – Avoid contact with the rechargeable Lithium-ion battery if it appears to be leaking. Battery fluid is corrosive, and contact with it can result in personal injury and/or property damage. To prevent injury or damage:

- If the battery leaks, avoid contact with the battery fluid.
- If battery fluid gets into your eyes, immediately rinse your eyes with clean water and seek medical attention. Do not rub your eyes!
- If battery fluid gets onto your skin or clothing, immediately use clean water to wash off the battery fluid.

WARNING – Do not damage the rechargeable Lithium-ion battery. A damaged battery can cause an explosion or fire, and can result in personal injury and/or property damage. To prevent injury or damage:

- Do not use or charge the battery if it appears to be damaged. Signs of damage include, but are not limited to, discoloration, warping, and leaking battery fluid.
- Do not store or leave your device near a heat source such as near a fireplace or other heat-generating appliance, or otherwise expose it to temperatures in excess of 70 °C (158 °F) such as on a vehicle dashboard. When heated to excessive temperatures, battery cells could explode or vent, posing a risk of fire.
- Do not leave the battery immersed in water.
- Do not use or store the battery inside a vehicle during hot weather.
- Do not drop or puncture the battery.
- Do not open the battery or short-circuit its contacts.

CAUTION – Safe temperature ranges are:

- Operating temperature range: -20 °C to +55 °C (-4 °F to +131 °F).
- Storage temperature range:
 - without the battery: -40 °C to +70 °C (-40 °F to +158 °F)
 - with the battery:
 - within 30 days -20 °C to +45 °C (-4 °F to +113 °F)
 - within 90 days 0 °C to +30 °C (+32 °F to +86 °F)
 - within 365 days 15 °C to +25 °C (+59 °F to +77 °F)

Electrostatic discharge

WARNING – Static electricity can harm electronic components inside your handheld. To prevent static damage, discharge static electricity from your body before you touch any of the electronic components inside your device, such as a memory module. You can do so by touching an unpainted metal surface.

The handheld is designed for outdoor conditions; however under conditions of low humidity extremely high voltage discharge events are possible. Users are advised that the risk of causing discharge to sensitive electronics can be minimized by avoiding finger contact to the recessed connectors on the unit.

Storage card use

The handheld provides a storage card slot, providing an alternative storage location to the storage memory in the handheld.

WARNING – Static electricity can harm electronic components inside your handheld. To prevent static damage, discharge static electricity from your body before you touch any of the electronic components inside your device, such as a memory module. You can do so by touching an unpainted metal surface.

Exposure to loud audio



To prevent possible hearing damage, do not listen at high volume levels for long periods.

Use and care of the handheld

The device's rugged design allows you to run your device in harsh outdoor environments. Here are some considerations that will help you protect your device and get the most out of it when working in very wet, hot or cold conditions.

- The handheld is rated IP67/65 but is not completely waterproof. IPx7 is defined as resistant to submersion in water up to 1 meter deep for up to 30 minutes. However, do not unnecessarily immerse the handheld in water.
- The device is designed to resist damage for drops up to 1.22 meters (4 ft). However, the device should not be dropped unnecessarily or subjected to any strong impact. Check the fit of the SIM card, storage card, and battery

after a drop.

- Protect the handheld from extreme temperatures. For example, do not leave the handheld on the dashboard of a vehicle.
- Temperature range: The operational temperature range is from -20 °C to +55 °C (-4 °F to +131 °F). Although the device is designed to be rugged, do not leave it in direct sunlight in excessive heat or in a vehicle in the sunlight for extended periods as the internal temperature may exceed the operating or storage temperature limits, especially while charging the battery.

Batteries perform best at room temperature. The battery has a stable capacity as temperatures rise; however, the colder the temperature, the greater the reduction in available battery capacity. Under very cold conditions (-20°C / -4 °F and below), the battery capacity is noticeably reduced. To improve the battery performance in very cold conditions, consider increasing the load on the battery, such as by adjusting the backlight to full brightness. Increasing the battery load causes the battery to generate heat, thus warming the battery and improving the performance.

- Protect the display from impact, pressure, or abrasive substances that can scratch it or crack it. Use your finger (or a capacitive stylus*), and avoid using excessive pressure and sharp or abrasive objects. To protect the touchscreen from pressure and abrasive objects, apply a screen protector; one is shipped with the device or installed on the screen already, and you can purchase additional screen protectors if required. The use of ballpoint pens, nails or other sharp objects to operate the touchscreen will scratch and/or damage the device.

NOTE – The display will work with a capacitive stylus; however Spectra Geospatial does not provide a stylus accessory for this device.

- Do not use abrasive cleaners directly on the display. Doing so may void your warranty.
- Keep the outer surface free of dirt and dust. To clean the handheld, use a soft, dampened cloth with either water or a diluted mild detergent. If a mild detergent is used, ensure all soap residue is removed. Do not use any chemical cleaners and do not put the device in the dishwasher.

Do not attempt to dismantle the device for repair. There are no user-serviceable parts inside. For service, contact your local dealer.

Battery safety: Lithium-ion batteries are classified by the U. S. Federal Government as non-hazardous waste and are safe for disposal in the normal municipal waste stream except where prohibited by local or regional regulations. These batteries contain recyclable materials and are accepted for recycling.

NOTE – In the event of battery failure, return the device to Spectra Geospatial or an Authorized Service Provider. Spectra Geospatial disposes of used batteries in accordance with local regulations.

- Do not disassemble or open, crush, bend or deform, puncture, or shred the battery assembly. There are no user-serviceable parts in the battery assembly.
- Do not use the battery if plastic case is cracked, compromised or punctured.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids.
- Do not expose to fire, explosion, or other hazard. Do not expose to temperatures above +70 °C (+158 °F).
- Only use a charging system that has been qualified for use with the device.
- In the event of a battery leak, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, flush the affected area with water and seek medical advice.

Power supply safety: Use only AC adapters intended for the device. Other external power sources may damage your product and void the warranty. Certification of this Class III product is only valid with the power supply that shipped with the device.

- Ensure the input voltage on the power supply matches the voltage in your location. Ensure the power supply has prongs compatible with your outlets.
- The power supply is designed for indoor use only. Avoid using the power supply in wet areas.
- Unplug the power supply from power when not connected to the device.
- Do not create a short circuit in the power output connector.

Introduction

This User Guide describes how to configure and use the Spectra Geospatial MobileMapper® 6 Handheld powered by the Android™ 12 operating system. The information in this guide supplements the information in the Quick Start Guide.

Even if you have used other Spectra Geospatial handheld or field computers before, Spectra Geospatial recommends that you spend some time reading this guide to learn about the special features of the product.

IMPORTANT: To meet all transportation rules and regulations all batteries are shipped with only 20-30% of their charge capacity. It is always necessary to charge batteries fully first before operating the product.

WARNING – Before you use this product, make sure that you have read and understood all safety requirements. Failure to follow these safety instructions could result in fire, electric shock, or other injury, or damage to the device and/or other property. For more information refer to the [Safety information, page 10](#) section of this guide.

- [Specifications, page 17](#)
- [In the box, page 18](#)
- [Replacement and spare or optional accessories, page 18](#)
- [Registration, page 18](#)
- [Technical assistance, page 18](#)
- [Parts of the MobileMapper 6 handheld, page 19](#)

Specifications

The MobileMapper 6 handheld is rated IP67/65 (see [Use and care of the handheld, page 14](#) for more information). It has:

- Wi-Fi (Wireless LAN) technology
- Bluetooth® wireless technology
- a high-sensitivity GNSS receiver, supporting GPS, GPS + Galileo, GPS + GLONASS + Galileo, GPS + Beidou +Galileo, and QZSS with < 2 meter positioning accuracy in real time (using SBAS)
- a 5G cellular modem, and 2 nanoSIM card slots, for cellular communication
- a microSD/SDHC storage slot
- a replaceable Li-ion battery
- 6 GB RAM and 64 GB internal memory

In the box

A standard pack-out has the following items:

- A MobileMapper 6 handheld, with bumpers and glass screen protector installed
- Battery
- USB charging cable
- A QR code card, linking to the Hardware Help Portal, with links to the Quick Start Guide and online user guide

Replacement and spare or optional accessories

The following optional accessories are available to purchase:

- Replacement bumpers
- Replacement battery
- Replacement glass screen protector
- AC power adaptor
- Controller mounting bracket
- Pole bracket

Registration

To receive information regarding updates and new products, contact your local dealer or go to the Spectra Geospatial website at <https://www.spectrageospatial.com> and click Register My Spectra Product.

Technical assistance

For more product information, including support notes detailing support issues, the latest files available for download, and regulatory documentation, go to hardwarehelp.trimble.com and click on the link for your product. Alternatively, go to the support page for your product on the Spectra Geospatial website www.spectrageospatial.com.

If you still cannot find the information that you need, contact your Spectra Geospatial reseller.

Parts of the MobileMapper 6 handheld



1 Bumper screw holes

2 Front camera

3 Volume keys

4 Function Left key*

5 Power key

6 Function 1 key*

7 Function Right key*

*See [Assigning apps to the programmable buttons](#), page 26

8 Rear camera

9 Speaker

10 Pole bracket mount holes

11 Microphone

12 NFC

13 Microphone

14 USB Type-C port

Getting started

To get started using your device, follow the instructions in this section to charge the battery and insert SIM and SD cards.

- [Inserting and removing the battery, and an optional SIM card and SD card, page 20](#)
- [Powering the handheld, page 23](#)
- [Storing data, page 25](#)
- [Assigning apps to the programmable buttons, page 26](#)
- [Resetting the handheld to factory settings, page 26](#)
- [Calibrating the compass, page 27](#)
- [Connecting to an office computer, page 27](#)

Inserting and removing the battery, and an optional SIM card and SD card

CAUTION – The SIM card and its contents can be easily damaged by scratches or bending. Use caution when inserting or removing the card.

CAUTION – The presence of any dust or moisture in the SIM card slot may adversely affect the device and void your warranty. To prevent dust or moisture entering the SIM card slot, when inserting or removing a SIM card, place the handheld on a dust-free indoor surface.

WARNING – Static electricity can harm electronic components inside your handheld. To prevent static damage, discharge static electricity from your body before you touch any of the electronic components inside your device, such as a memory module. You can do so by touching an unpainted metal surface.

WARNING – There is a risk of fire and burns if the battery is handled improperly. DO NOT disassemble, crush, puncture, or short-circuit external contacts, or dispose of the battery pack in fire or water. DO NOT attempt to open or service the battery. Dispose of used batteries according to local recycling guidelines in your area.

CAUTION - To ensure the device is working properly, keep all connectors away from contaminants such as dust, grease, mud, and water. Negligence may cause the device to lose communication, short-circuit, or overheat. If the connector is damaged, ensure the connector is fully repaired before using the device to avoid short-circuiting.

To remove the battery:

1. Press in and hold the two plastic clips at the end of the battery.



2. Push the battery forward and lift to remove it.



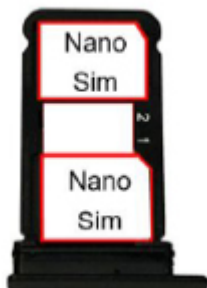
To insert a SIM card and an SD card:

1. Pull out the nanoSIM / microSD card holder.

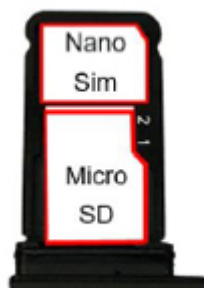


The card holder can hold two nanoSIM cards, or one nanoSIM card and one microSD card at a time. Insert your cards as needed, as follows:

Two nanoSIM cards:



One nanoSIM card, one microSD card:



2. Align the card holder with the slot, and push it fully in. Make sure the cards stay flat while pushing the card holder back into the slot.

To install the battery:

1. Align the battery with the battery compartment, as shown below:



2. Press in and hold the two plastic clips at the end of the battery, then push the battery forward and down into the battery compartment.



3. Press the battery down to secure it in place.



Powering the handheld

The MobileMapper 6 handheld contains a rechargeable Lithium-ion battery.

IMPORTANT: To meet all transportation rules and regulations all batteries are shipped with only 20-30% of their charge capacity. It is always necessary to charge batteries fully first before operating the product.

Charge the battery completely before using the handheld for the first time.

NOTE – Cold temperatures, or using Bluetooth wireless technology, Wi-Fi, or the cellular modem consume additional battery power and so shortens battery life between charges.

Charging the battery

CAUTION – Safe temperature ranges are:

- Operating temperature range: -20 °C to +55 °C (-4 °F to +131 °F).
- Storage temperature range:
 - without the battery: -40 °C to +70 °C (-40 °F to +158 °F)
 - with the battery:
 - within 30 days -20 °C to +45 °C (-4 °F to +113 °F)
 - within 90 days 0 °C to +30 °C (+32 °F to +86 °F)
 - within 365 days 15 °C to +25 °C (+59 °F to +77 °F)

The device's USB cable has a specific connector which fits with the device's USB type C connector. Most standard USB cables will not connect properly to the device. Make sure you use the one provided with the device.

1. Connect the USB type C end of the USB power cable to the USB type C power socket on the handheld.
2. Connect the USB end of the power cable to the AC adaptor.
3. Connect the adaptor to main power. An international adaptor kit is provided with the handheld.

Fully charging the standard battery from empty takes approximately four hours when connected to main power.

It is recommended to charge from main power for the most efficient charging.

Avoid keeping the battery at full charge at high temperatures.

NOTE – The life of the battery can be significantly shortened if power is constantly supplied to the handheld. To avoid this issue, connect the handheld to an external power source only when the battery requires charging. Once fully charged, disconnect the external power source and allow the battery to discharge through normal use.

LED status

- Red LED: Battery is charging
- Green LED: Battery is fully charged
- Blue LED: New message / notification

If there is no battery in the device, the LED will not be lit even when the device is connected to a main power source

Turning the handheld on and off

To turn on the handheld, press and hold the **Power** button until the Spectra Geospatial "Powered by Android" screen displays.

To completely shut down the handheld, press and hold the **Power** button until the **Power options** menu appears, and then tap **Power off**. All running apps are shut down, and the handheld is completely turned off.

Using Sleep mode

A short press on the power button places the MobileMapper 6 handheld into Sleep mode.

Note that in Sleep mode, even if most of the functions are off (for example, the display), the GNSS module continues to run and drain the battery.

To wake the device from Sleep mode, briefly press the power button.

Checking the level of battery power

To check the level of battery power remaining at any time while the handheld is on, tap **Settings/ Battery**.

The **Battery** screen shows the battery status and battery level.

Tap the battery to view history details.

Conserving power

The Lithium-ion battery life is dependent upon the application and operating environment.

It is recommended that you do the following to reduce power consumption:

- Set the handheld to automatically turn off the backlight after a period of time. For more information, see [Display settings, page 33](#).
- Reduce the brightness setting for the backlight or set the backlight to **Adaptive** to automatically adapt to the light environment. For more information, see [Display settings, page 33](#).
- Turn off the integrated Bluetooth and Wi-Fi radios, and the handheld's cellular modem, whenever you are not using them. For more information, see [Turning on and turning off the Wi-Fi \(WLAN\) and Bluetooth radios, page 36](#).

Making your battery last longer


The Android 12 operating system includes a number of features to help you get the maximum run time out of your battery. Here are some practical suggestions that you can do to maximize the operating time of the battery:

- **Use Battery Saver mode** to help the device's battery last longer when it is running low. This mode turns off or restricts background activity, some visual effects and other high-power features to extend battery life. To turn on **Battery Saver** mode, swipe down from the **Status** bar and tap the **Battery Saver** icon, then tap **TURN ON**. When **Battery Saver** mode is on, the battery icon in the **Status** bar is red.

NOTE - Battery saver turns off automatically when your device is charging.

NOTE - - Battery saver does not stop position data coming through from location services.

- **Keep Battery optimization on.** To have apps use your device's battery only when they need to, keep **Battery optimization** on for all apps. **Battery optimization** is on by default.

To specify battery optimization for any apps, go to **Settings / Battery**, then tap  / **Battery usage**. Tap on any app in the list to view options. Under **MANAGE BATTERY USAGE**, you can view or select **Background restriction** and **Battery optimization**.

- **Background restriction.** To save battery charge, tap **Background restriction** and then select **RESTRICT**. This stops the app from using battery charge in the background. Note that this may cause apps to work improperly and cause delayed notifications.
- **Battery optimization.** Most apps will have the **Optimizing battery use** setting enabled by default. Tap this option to view apps that are not optimized. Select **All apps** from the dropdown next to **NOT OPTIMIZED** to view all apps. Select an app from the list to turn **Battery optimization** on or off. Turning off is not recommended, as it may drain the battery more quickly as the app will no longer be restricted from using background battery.
- **Stretch a low battery's power.** To help a dying battery last until you can charge it, first turn on **Battery saver** mode. Often, battery saver is all you'll need for a low battery's power to last until you can get to a charger. Stretch your remaining battery power with temporary changes to your settings/usage.

TIP – Turn the features back on when you have charged the battery.

For more information on making your battery last longer, refer to the help topic [Get the most life from your battery](#) on the google.com support site.

Storing data

The handheld has several types of memory available:

- Program memory (6 GB) is used for running apps. You cannot use it to save data.
- Internal storage is used for storing apps and private app data, as well as the Android operating system. Full capacity of this storage memory is 64 GB. Actual space available is less, due to operating system installation.
- Removable SD card refers to microSD cards inserted into the handheld's removable SD card slot. A microSD card up to 256 GB can be used.

When the handheld is connected to a computer (see [Connecting to an office computer, page 27](#)), you can copy files to and from internal storage or an SD card if you have inserted one.

To check the memory capacity on the handheld, on the **Home** screen, tap **Settings/ Storage**.

It is recommended that you regularly copy important data to an office computer. For more information, see [Connecting to an office computer, page 27](#).

Memory cards

As an alternative to storage memory, you can save data to a memory card. Use a microSD memory card to securely store data, or transfer data to and from another device that supports microSD memory cards.

The device supports up to 256 GB SDHC microSD storage cards.

WARNING – The presence of any dust or moisture in the memory card slot may adversely affect the device and void your warranty. To prevent dust or moisture entering the memory card slot, when inserting or removing a memory card, place the handheld on a dust-free indoor surface.

WARNING – Static electricity can harm electronic components inside your handheld. To prevent static damage, discharge static electricity from your body before you touch any of the electronic components inside your device, such as a memory module. You can do so by touching an unpainted metal surface.

See [Inserting and removing the battery, and an optional SIM card and SD card, page 20](#) for instructions on inserting an SD card.

Assigning apps to the programmable buttons

To assign apps to the programmable buttons on the MobileMapper 6 handheld:

1. From the Apps screen, open the KeyRemap app.
2. Select the programmable button you want to assign an application to, then select the application/action you want to assign to it.

Resetting the handheld to factory settings

You can factory-reset the MobileMapper 6 handheld if you forget the password that you use to lock the device, or to delete all of your personal data from the handheld's internal storage, system and app settings, and any downloaded apps.

CAUTION – A factory reset erases all the applications installed and data produced since the first startup.

To protect the device in case of theft, your Google account is not erased.

NOTES –

- There is no hardware button to reset the device.
- Performing a factory data reset does not delete any system software updates.
- Performing a factory data reset does not delete any Google accounts you have set up on the device.

1. On the **Apps** screen, tap **Settings**, then tap **System**.
2. Tap **Reset options**. There are options here to reset network settings, app preferences, or perform a factory reset.
3. To perform a factory reset, tap **Erase all data (factory reset)** then follow the on-screen instructions. You will be prompted to **Erase all data** twice, then a screen will indicate that the device has started to reset data. The device will reboot and display the boot-up screen, then a screen indicates it is erasing data. The device then reboots and displays the boot-up screen again. The splash screen displays, followed by the Startup wizard so that you can reconfigure your device.

Calibrating the compass

To calibrate the integrated digital compass, open the Compass app, then hold the MobileMapper 6 handheld flat at arm's length and move it horizontally through a "figure of eight", turning it over as you move through the loops.

CAUTION – Using the MobileMapper 6 handheld on the magnetic pole bracket mount system may cause interference with the device's internal compass. If your workflow requires the device's internal compass, Spectra Geospatial recommends using the device bracket with tapered quick pin release in lieu of the magnetic mount system.

Connecting to an office computer

Connect the handheld to an office computer to transfer information, settings, and files from one device to the other, or to install software onto the handheld.

Connect the handheld to a computer using the USB cable provided with the device. This is a specific cable which fits with the device's USB Type C connector. The use of any other USB cable will not guarantee a good connection or will not provide a USB connection at all.

To protect your data, it is recommended that you regularly copy important data to an office computer. When you connect the handheld to a computer, make sure you follow the computer's instructions for connecting and disconnecting USB devices, to avoid damaging or corrupting files.

1. Connect the handheld to the computer using the USB cable that you received with the handheld.
2. Swipe down from the top of the screen to open the Notifications bar.
3. Select **Android system / Charging this device via USB**.
4. Tap the down arrow to open this notification.
5. Tap **Tap for more options**.
6. From the **USB Preferences** menu select **File Transfer**.
7. Open File Explorer on the computer and select your device.
8. Copy or move files as required between the handheld and the computer.

Using the Android operating system



The MobileMapper 6 handheld is powered by the Android operating system. When you start the handheld, the **Home** screen appears. From here you can access all the features on the handheld.

- [Using the Home screen\(s\), page 28](#)
- [Interacting with the handheld, page 29](#)
- [Entering information, page 30](#)
- [Using the menus, page 30](#)
- [Using the on-screen keyboard, page 30](#)
- [Managing notifications, page 31](#)
- [Selecting the language, page 32](#)
- [Setting the time and date, page 32](#)
- [Using the clock to set alarms, page 32](#)
- [Display settings, page 33](#)
- [Sounds and notifications, page 33](#)
- [Locking the device, page 33](#)
- [Sending and receiving email, page 33](#)

Using the Home screen(s)

You can customize the app icons, widgets, shortcuts, and other features that appear on your **Home** screens for fast access to your most-used items.

- To add an app icon or widget to a **Home** screen, navigate to it (for example, in the **Apps** screen) then tap-hold it, and drag it to the required **Home** screen.
- To open any item on the **Home** screen, tap it.

- To move between **Home** screens, swipe left or right. A bar at the bottom of the screen shows which **Home** screen you are on.
- To open the **Apps** screen and view all your apps, swipe up from the bottom of the screen.
- To see notifications, swipe down from the top of the screen with one finger. See [Managing notifications, page 31](#).
- To open **Quick Settings** (frequently used settings), swipe down from the top of the screen twice with one finger or once with two fingers.
- To quickly open all **Settings**, swipe down from the top of any screen then tap .
- To return to the **Home** screen at any time, from within any app, tap .
- You can set the screen timeout so that if you don't use the handheld for a while, the screen automatically turns off to conserve battery power. Tap **Settings**, then tap **Display / Screen timeout**, then select the required timeout.
- To wake up the handheld when the screen has turned off, press the **Power** button. If you have set security on the handheld, you will need to unlock it (see [Locking the device, page 33](#)).


For full details on using the Android operating system, refer to the Android Help at <http://support.google.com/android/?hl=en> and search for the version of the operating system that is on your MobileMapper 6 handheld.



Interacting with the handheld

To interact with the handheld using the touchscreen, use your finger to tap, swipe, or drag items on the touchscreen, to scroll up or down, and to enter information.

- **Tap.** Tap the screen once to open items and select options. Use the keyboard input panel to enter typed text by tapping keys on the on-screen keyboard.
- **Tap-hold.** Tap-hold your finger on an item to see a list of actions available for that item. On the pop-up menu that appears, tap the action you want to perform.
- **Drag.** Hold your finger on an item for a moment and then, without lifting your finger, move your finger on the screen until you reach the target position. Drag in a list to select multiple items. Drag items on the **Home** screens to reposition them.
- **Swipe or slide.** Quickly move your finger across the surface of the screen, without pausing when you first touch it, to scroll a page or a list up or down.
- **Double tap.** Tap quickly twice on a webpage, map, or other screen to zoom. Double-tapping after pinching to zoom in some apps, such as Browser, reflows a column of text to fit the width of the screen.
- **Pinch.** In some apps (such as Browser and Photos), place two fingers on the screen at once and pinch them together to zoom out or spread them apart to zoom in.
- **Rotate the screen.** On most screens, the orientation of the screen rotates with the device as you turn it from upright to its side and back again. You can turn this feature on and off, see [Display settings, page 33](#).

The handheld has the following buttons:

Button	Press	Press-hold
 Android Home	Opens the Home screen. If you are viewing a left or right extended Home screen, it opens the central Home screen.	

Button	Press	Press-hold
 Android Apps	Shows a screen with all open applications.	
 Android Back	Opens the previous screen you were working in. If the onscreen keyboard is open, the keyboard closes.	
Power	Turns off the screen.	Opens a menu with options for reboot/restart, and for powering off the device.
Volume Up / Down (left side of device)	Controls the volume of music, spoken directions, and other audio.	Quickly increases the volume to maximum or minimum.
Customized (3 buttons; 1 on the left side, and 2 on the right side of the device)	See Assigning apps to the programmable buttons, page 26 .	


Entering information

Depending on the program or app you are using, you can enter information in several ways:

- **Synchronizing.** Connect the handheld to an office computer to exchange information between the handheld and the office computer. For more information, see [Connecting to an office computer, page 27](#).
- **Writing.** Use your finger or a stylus like a pen to write directly on the screen.
- **Typing.** Use the keyboard input panel to enter typed text by tapping keys on the on-screen keyboard.
- **Recording.** Create a recording.

Using the menus

The Android mobile technology platform has two kinds of menus:



- **Options menus** contain tools that apply to the activities of the current screen or app, not to any specific item on the screen. To open options menus, press the Menu icon . Not all screens have options menus. Some screens have more options menu items than can fit in the main menu; tap More to open a menu of additional items. Options menus contain items that apply to the current screen or to the app as a whole.
- **Context menus** contain tools that apply to a specific item on the screen. To open a context menu, tap-hold an item on the screen. Not all items have context menus. If you tap-hold an item that has no context menu, nothing happens.

Using the on-screen keyboard

In some apps, the keyboard appears automatically. In others, it appears when you tap in a text entry field.



- If you tap in a text field which already contains text, the cursor is inserted at the point where you tapped and the insertion point tab appears. To move the insertion point, drag the insertion point by its tab.
- Select a word, or several words at a time, to copy, cut, and paste text. See [Editing text](#) below.
- Tap the required keys on the screen to enter text. What you type appears in the text field and in the strip above the keyboard.

When the keyboard has a suggestion for what you might be typing, the word you are typing is underlined in the text field and the suggestions appear in the strip above the keyboard. You can tap-hold on the strip to display additional suggestions; to select a suggested word, tap it.

- Tap the Delete key  to delete characters to the left of the cursor.
- To enter numbers, tap the **?123** key. To return to letters, tap **ABC**.
- To enter symbols and other characters that are not on the main keyboard, tap-hold a key and then slide your finger up to the list of options that appears. To select an option, lift your finger when you reach it. For example, tap-hold a vowel or the C, N, or S key to open a small window where you can drag onto the accented vowel or other alternate letter you want to use.
- Tap-hold the period key (.) or tap-hold a symbol key to select other common symbols.
- Tap-hold the comma key (,) to open Input option settings such as Languages and Android Keyboard Settings (AOSP).
- To close the keyboard, tap .

Editing text

To edit text in text fields:

- Tap the text field containing the text you want to edit. The cursor is inserted where you tapped, and has a tab you can use to drag it if you need to move it.
- To select a word or string of text, double-tap or tap-hold it.
 - Tabs appear to the left and right of the highlighted text. Drag either tab left or right to increase or decrease the selected text. To deselect the text, tap any unselected text in the same or in another text field, or tap .
 - A menu appears above the text which gives you options to cut or copy your selection, or, if you have previously cut or copied text, paste.
- You can also:
 - tap a word to bring up a list of words stored in the dictionary; tap the required word in the list to replace your selected word.
 - enter text by typing over the selected text, tap **Delete** to delete the selected text, or add it to the dictionary.
- Tap  to close the keyboard.

Managing notifications

Notification icons appear when you have new messages, calendar events, and alarms, as well as ongoing events. Depending on your settings you may also hear a notification sound, or the device may vibrate. For information on these

settings, see [Sounds and notifications, page 33](#).


When you receive a notification, its icon appears in the Status bar, along with a summary that appears briefly.

To open the **Notifications** panel to view a list of all your notifications, swipe down from the top of the screen.

To open a notification in its app, touch the notification icon. Some notifications also enable you to take specific actions by touching icons within the notification. For example, Calendar notifications allow you to Snooze (remind you later) or send email to other guests.


Some notifications can be expanded to show more information, such as email previews or calendar events. The one at the top is always expanded when possible. To expand or collapse a notification, swipe two fingers vertically or pinch-zoom.

To clear all notifications, open the **Notifications** panel and then tap **Clear all** at the bottom of the panel. All event-based notifications are cleared; ongoing notifications remain in the list.


To close the **Notifications** panel, swipe up on the panel, or tap . The panel also closes when you touch a notification to respond to it.

Selecting the language

You can select from the following languages: Afrikaans, German, English (UK/US), Spanish, French, Italian, Portuguese (Portugal or Brazil), Greek, Russian, Korean, or Chinese (simplified or traditional).

1. Tap **Settings / System / Languages & input**.
2. Select the language you want.
3. Tap  to exit the screen.

Setting the time and date


1. Tap **Settings / System / Date & time**.
2. Do one of the following:
 - Tap **Set time automatically** to use network time and date settings. Tap **Set time zone automatically** to use the network time zone.
 - Manually set the time and date. Make sure the **automatic** options are not selected, then tap the other options on the screen to set the date, time zone, time, time format, and date format.
3. Tap  to exit the screen.

Using the clock to set alarms

In addition to displaying the date and time, the Clock app can be used as an alarm clock.

1. To open the Clock app, in the **Apps** screen, tap **Clock**.
2. Tap **Alarm**.
3. Select any existing alarm to turn it on, or tap the alarm to change the alarm details.

To add a new alarm, tap **+** at the bottom of the screen.

To access more clock or alarm features, for example volume and snooze length, tap  at the top of the screen and select **Settings**.

NOTE – The Clock app also has a stopwatch and countdown timer.

Display settings

To open the Display settings:

1. Tap **Settings/ Display**.
2. To set the screen brightness, do one of the following:
 - tap **Brightness level** then drag the slider left or right as required.
 - select **Adaptive brightness** to enable the display brightness to adapt automatically to your surroundings.

NOTE – The backlight makes the screen easier to read in low light, but uses extra power.

3. To set the screen to timeout when the handheld is idle, tap Screen timeout and then select the required screen idle timeout duration.
4. To set the size of text on the screen, tap **Font size** then select the required option.
5. To turn on or off automatic screen rotation when the handheld is turned, tap **Auto-rotate screen** to toggle it on/off.

Sounds and notifications

Use the **Notifications** settings to set preferences for alerts, notifications, and alarms. Tap **Settings**, then tap **Notifications**. Tap **App settings** to turn on or off notifications for each app.

Use the **Sound** settings to set preferences for the speaker volume and system sounds. Tap **Settings**, then tap **Sound** to set media, alarm, and ring volumes, to turn Vibrate on or off, and to set ringtones.

Tap  to exit the screen.

Locking the device

You can set the screen on the handheld to lock to prevent others from using it.

1. Tap **Settings** then tap Security.
2. Select the required option, and follow the instructions that appear on the screens.

The next time you turn on the handheld or wake up the screen, you must slide the padlock, enter your PIN or password, or draw your unlock pattern to unlock it.


Sending and receiving email

You can set up access to an existing email account from the MobileMapper 6 handheld to send and receive emails.

1. Make sure you are connected to a network. See [Using the Wi-Fi \(WLAN\) and Bluetooth radios, page 35](#) or [Using the cellular modem, page 40](#).
2. In the **Apps** screen, tap **Gmail**.
3. If you do not already have an email account set up, enter an email address and a password, and follow the instructions on screen to set up the account.

You can choose to synchronize your email on the handheld with an office computer.

When the account is set up and you are connected, tap **Gmail** in the **Apps** screen to access your emails.

To change email settings, open the email app, tap  , then tap **Settings**. From here you can also add further accounts.

Using the Wi-Fi (WLAN) and Bluetooth radios

The MobileMapper 6 handheld includes an integrated Bluetooth radio and Wi-Fi (WLAN) radio, and provides a number of options for connecting to networks and other devices.

To use the Wi-Fi (WLAN) or Bluetooth radio, you need to turn it on (see [Turning on and turning off the Wi-Fi \(WLAN\) and Bluetooth radios, page 36](#)).

You can use the handheld's integrated Wi-Fi (WLAN) radio to connect to the internet or a corporate network using a connection to a Wi-Fi access point ("hotspot").

You can use Bluetooth wireless technology to connect directly to other Bluetooth-enabled devices that are within range (typically within 5-10 meters of the handheld).

NOTE – For details on using the integrated cellular modem for sending and receiving data, and SMS, see [Using the cellular modem, page 40](#).

- [Turning on and turning off the Wi-Fi \(WLAN\) and Bluetooth radios, page 36](#)
- [Connecting to a Wi-Fi \(WLAN\) access point, page 36](#)
- [Connecting to a Bluetooth-enabled device, page 37](#)
- [Working with paired Bluetooth-enabled devices, page 38](#)
- [Accessing a corporate network, page 38](#)

Turning on and turning off the Wi-Fi (WLAN) and Bluetooth radios

To quickly turn the Wi-Fi and/or Bluetooth radios on or off:

1. Swipe down from the top of the screen with two fingers (or twice with one finger) to open **Quick Settings** (frequently used settings).
2. Tap **Wi-Fi** to turn on the Wi-Fi radio and connect to a Wi-Fi network.
If the device is already connected to a network, the network name shows; tap it to switch to a different network or to turn off the Wi-Fi radio.
3. Tap **Bluetooth** to turn it on or off.

You can also access the Wi-Fi and Bluetooth settings in the **Settings** menu. See [Connecting to a Wi-Fi \(WLAN\) access point, page 36](#) and [Connecting to a Bluetooth-enabled device, page 37](#) for more information.

To save power and optimize battery life, turn off wireless radios when they are not in use.

Connecting to a Wi-Fi (WLAN) access point

To use Wi-Fi (WLAN) on the MobileMapper 6 handheld, you must access a wireless access point, or “hotspot.” Some hotspots are open and you can easily connect to them. Others are hidden or implement other security features, so you must configure the handheld so it can connect to them.

The Status bar displays icons that indicate Wi-Fi status.

When you connect to a Wi-Fi network, the handheld obtains a network address and other information it needs from the network. If required, you can configure the handheld with advanced settings; see [Advanced Wi-Fi settings](#) below.

To turn on the Wi-Fi radio and connect to a Wi-Fi network:

1. Tap **Settings / Network & internet**.
2. Make sure Wi-Fi is turned on. If it is not, tap the slider to turn it on.

The handheld lists the networks available. Secured networks are indicated with a Lock icon.

To view details about the speed, security, address, and related settings of the network you are connected to, tap the network name.

By default, when the Wi-Fi radio is on, notifications appear in the Status bar when the handheld detects an open Wi-Fi network. To receive notifications when open networks are in range, in the Wi-Fi screen, tap Wi-Fi preferences at the bottom of the screen, and then turn on **Open network notification**.

Adding a Wi-Fi network

You can add a Wi-Fi network so the handheld remembers it, along with any security details. You can then connect to it automatically when it is in range. You must also add a Wi-Fi network to connect to it if the network does not broadcast its name (SSID), or to add a Wi-Fi network when you are out of its range.

To join a secured network, you must obtain the security details from the network’s administrator.

1. Tap **Settings / Network & internet**.
2. Tap **Internet**.
3. Make sure Wi-Fi is turned on. If it is not, tap the slider to turn it on.
4. At the bottom of the screen tap **Add network**.
5. Enter the network SSID.
6. Select the type of security for the network. Enter the password and other security details for the network.
7. Tap **Save**.

The handheld connects to the wireless network automatically when you are within range.

Forgetting a Wi-Fi network

You can make the handheld forget about the details of a Wi-Fi network that you saved—for example, if you do not want the handheld to connect to it automatically or if it is a network that you no longer use.

1. Tap **Settings / Network & internet**.
2. Tap **Internet**.
3. Tap **Saved networks**.
4. Tap the network you want to forget, then tap **FORGET**.

Advanced Wi-Fi settings

To access advanced Wi-Fi settings, tap **Internet**, then tap the network that you want to see advanced settings for. Advanced settings include:

- Network notification, to let you know when an open network is available.
- The Wi-Fi sleep policy, to specify when the Wi-Fi radio disconnects. If this is set to Never, the Wi-Fi radio uses more battery power.
- The MAC (Media Access Control) address of the handheld when connecting to Wi-Fi networks.
- The IP address assigned to the handheld by the Wi-Fi network you are connected to.

Connecting to a Bluetooth-enabled device

The MobileMapper 6 handheld has an integrated Bluetooth radio that you can use to establish a wireless connection to other Bluetooth devices that are within range. The MobileMapper 6 handheld can only connect to paired Bluetooth devices.

Using a Bluetooth connection, you can communicate with devices such as cellular phones, office computers, other handhelds, and Bluetooth-enabled laser rangefinders and barcode scanners. You can also communicate with peripheral devices that use Bluetooth adaptors instead of serial or USB connections.

To connect to a Bluetooth device, you must turn on the handheld's Bluetooth radio, and set up a paired Bluetooth connection between the two devices. See [Working with paired Bluetooth-enabled devices](#), below.

Turn off the Bluetooth radio when it is not in use, to extend the charge of the handheld battery. You may also be required to turn Bluetooth off in some locations. See [Turning on and turning off the Wi-Fi \(WLAN\) and Bluetooth radios](#), page 36.

To turn on the Bluetooth radio:

Swipe down from the top of the screen to show **Quick Settings** options, then tap **Bluetooth**.

Status bar icons indicate Bluetooth status.

Working with paired Bluetooth-enabled devices

Pairing the handheld with another Bluetooth-enabled device creates a permanent security bond between the devices, which helps to exchange information securely between the devices. The paired relationship is established when two devices create and exchange a link key. Once the relationship is established, the handheld and the other Bluetooth device only need to have their Bluetooth radios turned on to exchange information; they do not need to be visible to other devices.

You must pair the handheld with a device before you can connect to it. Once you pair the handheld with a device, they stay paired unless you unpair them.

To pair with and connect to a Bluetooth device:


1. Tap **Settings / Connected devices**.
2. Tap Pair new device. The handheld lists the Bluetooth devices it can detect. (If the device you want to connect to is not listed, make sure it is discoverable; refer to the documentation for the device).
3. To set up a paired connection to a device, tap it in the list of Bluetooth devices. If you are prompted to, enter a password (you will need to obtain this from the other device) or confirm that the security code is the same on both devices; tap **Pair**.

If the pairing is successful, the handheld connects to the device. The device shows as connected in the list.

TIP – To connect to a device you have previously connected to, in the list of Bluetooth devices under

Previously connected devices, tap  for the device you want then tap **+CONNECT**.

Unpairing a Bluetooth device

You can unpair a Bluetooth device to delete all pairing information about it. Tap  next to the device in the list of Bluetooth devices, then tap **FORGET**.

Accessing a corporate network

Use a Virtual Private Network (VPN) connection to access a corporate network or Intranet. VPNs enable you to connect to the resources inside a secured local network, from outside that network.

Before you begin, obtain the following information from your network administrator:

- username and password
- domain name
- host name or IP address of the VPN server

To add a VPN:

1. Tap **Settings / Network & internet**.
2. Tap **VPN**. (You may be prompted to enter an 'unlock' PIN or pattern before you can proceed.)
3. In the screen that opens, tap **+** at the top of the screen to add a VPN, then follow the instructions from your network administrator to configure each component of the VPN settings.
4. Tap **Save**.

The VPN is added to the list on the VPN settings screen.

To connect to a VPN:

1. Tap **Settings / Network & internet**.
2. Tap **VPN**. The VPNs configured in the handheld are listed on the VPN settings screen. Tap the VPN that you want to connect to.
3. Enter any requested security details and then tap **Connect**.

When you are connected to a VPN, an ongoing notification appears in the Status bar. If you are disconnected, you receive a notification that you can use to return to the VPN settings screen so that you can reconnect to it. See [Managing notifications, page 31](#).

To disconnect from a VPN, open the Notifications panel and tap the ongoing notification for the VPN connection.

To edit a VPN:

1. Tap **Settings / Network & internet**.
2. Tap **VPN**. The VPNs configured in the handheld are listed on the VPN settings screen. Tap the VPN that you want to edit.
3. Tap **Edit profile**, then make the required changes and tap **Save**.

To delete a VPN:

1. Tap **Settings / Network & internet**.
2. Tap **VPN**. The VPNs configured in the handheld are listed on the VPN settings screen. Tap the VPN that you want to delete.
3. Tap **Delete profile**.

Using the cellular modem

The MobileMapper 6 handheld features a 5G cellular modem that you can use to connect to the internet and send / receive data and messages. It also has two nanoSIM slots that can be used for connection between two separate mobile carriers.

Before using the cellular modem for data connection, you must purchase a cellular plan and SIM card from a cellular service provider.

CAUTION – Use of the cellular modem data capability will incur charges which may be fixed (per month) or may be based on the data bandwidth you use. Charges when roaming outside your home network (for example, abroad) are significantly higher than those incurred when on your home network. Check with your carrier for full details of usage charges, both on their own network and when roaming.

- [Manually connecting to a cellular network from the modem, page 40](#)
- [Messaging, page 41](#)

Manually connecting to a cellular network from the modem

Use the integrated cellular modem to connect to a cellular network and access the internet or a company network. Use this type of connection to access a background map server, or for internet and email access.

Before you begin the steps below, you must:



- make sure that a SIM card is inserted in the handheld. See [Inserting and removing the battery, and an optional SIM card and SD card, page 20](#).
- confirm that the modem can access the internet directly. If necessary, contact your service provider and confirm whether you must enter a user name, password, and domain details when connecting.
- make sure that you have the correct APN (Access Point Name) from your cellular provider.

The handheld attempts to automatically set the appropriate Access Point Name (APN) for your data connection based on your cellular provider's identity. This process can take several minutes.

Switching between SIM card networks

The MobileMapper 6 handheld has two nanoSIM slots that can be used for connection between two separate mobile carriers. To switch between networks, go to **Settings / Network & internet / Mobile network / SIM cards** and select the preferred SIM card for the Default 5G / 3G Subscription and Cellular data.




Configuring cellular network settings

1. Tap **Settings / Network & internet**.
2. Tap **Mobile network**.
3. If you need to create a new APN:
 - a. Tap **Access Point Names**.
 - b. Tap an existing APN to edit it, or tap  to create a new APN. Enter the APN settings that you obtained from your wireless service provider.
 - c. Tap  / **Save**.
 - d. To use the new or edited APN, select it in the APN screen.
4. To enable data transfer when roaming, select **Data roaming**.

Messaging


Use Messaging to send and receive text messages (SMS) and multimedia message (MMS).

Sending a text or a multimedia message

1. Make sure that a SIM card is installed. See [Inserting and removing the battery, and an optional SIM card and SD card, page 20](#).
2. Tap the Messaging icon  on the **Home** screen or in the **Apps** screen. The **Messaging** window opens, where you can create a new message or open an ongoing message thread.
3. Tap the **New message** icon  at the bottom of the screen to start a new text or multimedia message (or tap an existing message thread to open it).
4. For a new message, do one of the following:
 - enter a phone number in the **To** field. As you enter the number, matching contacts appear. You can tap a contact to select it or continue to enter the number.
 - start to type the name of a contact in the **To** field. As you type, matching contacts appear. Tap a contact to select it.
5. Tap the composition text box, and enter your message using the on-screen keyboard.
6. For a multimedia message, press the paperclip icon to attach a file.
7. Tap the Send icon  to send the message.

Deleting message threads

To delete a specific message thread, tap-hold the message thread, then tap the rubbish bin icon at the bottom of the screen.

To delete all message threads, tap  and then tap **Delete**.

Replying to messages

If you are working in a message window, messages that you receive are displayed in it. Otherwise, you receive a new message notification and a new message icon appears in the Status bar. See [Managing notifications, page 31](#).

When you tap the new message notification, the **Message** window opens, where you can reply to the message.

If the message contains a media file, tap **Play** to view, watch, or listen to it. Tap-hold the media file to open a menu with an option for saving messages to your internal SD card.

Tap-hold a message to open a menu with a number of options for working with the message and its sender's information.

Changing Messaging settings

Tap the Messaging icon  in the **Apps** screen, then tap  / **Settings**.

You can specify the following settings:

- Default SMS app, to define the application to be used by default for messaging
- Sounds or vibrate for outgoing / incoming messages
- Notifications Yes / No

In Advanced Settings, you can specify the following:

- For Text (SMS) messages and Multimedia (MMS) messages:
 - Delivery report, to request a delivery report for each message you send.
 - A Message template
- For Multimedia (MMS) messages:
 - Auto-retrieve. When not selected, only the heading of multimedia messages is downloaded, which you can then tap to open a menu to download the whole message. This is useful for controlling how much data you download, for example, when connected to a slow data network.
 - Roaming auto-retrieve. When not selected, only the header of multimedia messages is downloaded when connected to other carrier's data networks. This is useful for avoiding unexpected charges, if your contract has limits on data roaming.

Using the GNSS receiver

The MobileMapper 6 handheld contain an integrated uBlox Neo-M8T GNSS receiver, which is set to ensure the best possible performance in the field for data collection and full compatibility with Spectra Geospatial field and office software.

The receiver supports GPS, GPS+Galileo, GPS+GLONASS+Galileo, or GPS+Beidou+Galileo, with < 2 meter positioning accuracy in real time (using SBAS) in open sky.

- [Receiving signals from GNSS satellites, page 43](#)
- [Supported software, page 44](#)
- [Using an external GNSS receiver, page 44](#)

Receiving signals from GNSS satellites

To receive signals from GNSS satellites, the handheld must have a clear view of the sky. GNSS positions may not always be available, particularly in or near buildings, in vehicles, or under tree canopy.

For optimal GNSS reception, hold the handheld at 15° from horizontal allowing it visibility of the sky. When collecting point data with a MobileMapper 6 handheld, it is recommended that you remain stationary at the point for at least 10 seconds before beginning to log GNSS positions. This allows the GNSS receiver's internal algorithms to stabilize, and ensures the best possible point feature accuracy.

The GNSS receiver supports all three available SBAS correction services (WAAS in North America, EGNOS in Europe, and MSAS in Japan).

Using GNSS enables the handheld to determine your location with < 2 meter accuracy in open sky (with SBAS), and enables geo-tagging of photos you take using the handheld's integrated camera (see [Using the camera, page 45](#) for more information on enabling geotagging and taking photos).

To use the GNSS receiver:

1. Tap **Settings / Security & Location**.
2. Tap **Location** and tap the Off / On slider to On.
3. Tap **Mode** then select the mode you want the device to use to determine your location:
 - High accuracy. Uses GNSS satellites, Wi-Fi, and cellular networks to determine your location.
 - Battery saving. Uses Wi-Fi and cellular networks to determine your location.

- Device only. Uses GNSS only to determine your location.
4. Tap the back arrow, then tap **NMEA Mode** to turn it on or off.
 5. Tap SBAS mode to turn it on or off.
 6. Tap **GNSS mode** then select the mode you want the device to use (GPS only; GPS + BDS; GPS + GLONASS; GPS + BDS + Galileo, GPS + GLONASS + Galileo, GPS + Galileo).

Supported software

Spectra Geospatial provides both GIS and Survey applications to run specifically on the MobileMapper 6 handheld:

- MobileMapper Field for Android for GIS
- Survey Mobile for survey
- Penmap for Android

The MobileMapper 6 handheld can be used with any Android application. A wide range of application software is compatible with the Android 12 operating system and spatial data available through the Google Location Services API, including many GNSS navigation and data collection applications. To access spatial data from the internal GNSS receiver of the MobileMapper 6 handheld, an application must support one or more of:

- Android Location Services API
- NMEA-0183 ASCII protocol

Using an external GNSS receiver

Using the MobileMapper 6 handheld and the Survey Mobile application, you can control SP60 and SP80 survey receivers. The Survey Mobile application supports all basic survey workflows and gives access to the main configuration parameters of the survey receivers. With a modern look and feel this application is very easy to use and provides all that a surveyor may require.

Refer to the documentation for the supported receiver that you are using for more information.



Using the camera

The MobileMapper 6 handheld has a 5 megapixel front-facing integrated digital camera, and a 16 megapixel rear camera with geotagging, which you can use to capture photos or video.

- [Starting and closing the Camera app, page 45](#)
- [Using the camera to take a photo, page 45](#)
- [Using the camera in Video mode, page 46](#)
- [Working with photos and videos in the Android Photos or Gallery app, page 46](#)




Starting and closing the Camera app

To start the Camera app, on the **Home** screen or in the **Apps** screen, tap **Camera**.

To close the Camera app, tap  or .

Using the camera to take a photo

To take a photo:






1. Start the camera, and make sure Photo mode is selected  is displayed center-bottom of the screen).
2. Select the front or rear camera as required by tapping  (to the right of the Camera icon).
3. Use the viewfinder to frame the photo you want to capture, and adjust any other settings if required (see [Using the camera, page 45](#)). The preview image changes as you change the settings.
4. To capture the photo, tap the screen to focus; when the photo is in focus, the focus indicators on the screen turn green. Tap  to capture the photo.

TIP - You can also use the on-screen slider, or pinch the screen in or out, to zoom in or out (front and rear cameras).

The photo is displayed as a thumbnail at the bottom of the screen, which you can tap to open in the Android **Photos** app. Photos are stored as .jpg files.

To view photos in the **Photos** app, tap a thumbnail in the Camera app to open the **Photos** app, or in the **Apps** screen, tap **Photos**. See [Working with photos and videos in the Android Photos or Gallery app, page 46](#) for more information.

Using the camera in Video mode

1. Start the camera, and select **Video**.
2. Tap  to use the front or rear camera to capture video, as required.
3. Use the viewfinder to frame the start of the video you want to capture, and adjust any other settings if required. The preview image changes as you change the settings.
4. To start recording, tap . The video starts recording and a timer displays at the top of the screen to indicate the length of the video.
5. To pause recording, tap . Tap  to continue recording.
6. To stop recording, tap .

TIP – Before you start recording, or during a recording, you can pinch the screen in or out to zoom in or out (front and rear cameras).

The video you recorded is saved in the Android **Photos** app. Videos are stored as .mp4 files. See [Working with photos and videos in the Android Photos or Gallery app, page 46](#) for more information.

Working with photos and videos in the Android Photos or Gallery app

To view, edit, share, or delete files in the Android **Photos** app, tap a thumbnail in the Camera app just after you have captured the file to open it in the **Photos** app, or in the **Apps** screen tap **Gallery**. In the Gallery open the required Album. Tap a photo, then:

- Tap the share icon (at the bottom of the screen) to send it via Messaging, Bluetooth, or Email.
- Tap the menu icon (at the top of the screen) to access Details, Set Picture as, and Print options.
- Tap **Edit** (bottom of the screen) to edit the file.
- Tap the trash can icon at the bottom of the screen to delete the file.

To close the **Gallery** app,  or .