



# Customer FAQs

GEOSPATIAL DIVISION  
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## TRIMBLE T7 TABLET

### What is the Trimble T7 tablet?

Trimble body text—Use for the main text of the document. The Trimble® T7 tablet is a rugged field controller that provides flexibility for survey and GIS applications. The T7 is a next generation GNSS tablet that integrates seamlessly with Trimble field software and Trimble’s suite of GNSS receivers and total stations to provide a complete, fully integrated field solution for surveyors and GIS professionals. The familiar Windows® 10 Professional operating system and up-to-date wireless communication allows users to upload, sync, and share data in real time using Microsoft® Office software applications or third-party developed software. The T7 tablet has a flexible modular system for expansion and an internal professional GNSS receiver for accurate real-time positioning. Featuring a 7-inch sunlight readable screen, hot-swappable batteries, and military certified rugged exterior, the T7 tablet is designed to work in the toughest environments for maximum efficiency and productivity.



The T7 tablet is ultra-rugged, more flexible, and easier to use making it the perfect handheld computer for the field professional.

### What are the key features of the Trimble T7 tablet?

7-inch touch screen, 2 cameras (front and back), up-to-date connectivity, dependable ruggedness, two Trimble EMPOWER module expansion slots, hot swappable batteries, Windows 10 operating system.

### Contents

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- Operating System
- Power

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## Components

### What are the functions of the integrated digital cameras?

The T7 tablet includes a rear (field facing) 8 megapixel and a front (customer facing) 2 megapixel camera with an LED flash.

The camera is accessed through an application that is pre-installed with the operating system. The camera features a variety of shooting modes to make it easier to capture images in different lighting conditions, and it can also record video with audio.

### How many function keys does the Trimble T7 tablet have?

The T7 tablet has 4 physical F-keys (function keys). They are located to the right of the screen on the front of the device.

### What can I do with the function keys on the T7 tablet?

The function keys can be programmed to assign actions or open any application for quick access. To program the desired functionality, use the Function Key Setting application.

### What is in the T7 tablet packout?

The T7 tablet packout includes the following items:

- Tablet with battery
- AC power adapter with power cord (international version adapters)
- Screen protector
- Stylus and tether
- Hand strap

### What are the environmental performance characteristics of the Trimble T7 tablet?

Water: IP65 - Survives rain and water spray from any direction.

Dust: Protected against dust: IEC 60529, IP68.

Drops: Survives multiple drops of 4 ft. (1.22 m) MIL-STD-810G, Method 516.6 Procedure IV.

Operating Temperature: -4°F to 140°F (-20°C to 60°C), MIL-STD-810G.

Storage Temperature: -22°F to 158°F (-40°C to 70°C), MIL-STD-810G.

For details please see the datasheet.

### Which screws are intended to be unscrewed by users?

Only Phillips (cross cut) screws are intended to be unscrewed by users. They are used to attach modules and the covers of SIM / SD card slots. Do not unscrew any other screws; you might damage a water- and/or dust-tight sealing. Other screws should only be unscrewed by Trimble service providers.

## **How do I enable the accelerometer and electronic compass?**

The orientation sensors are active and applications can access and use the sensors. To see the sensor output, free tools are available from the Microsoft Store.

## **What size is the SIM card?**

The Trimble T7 tablet requires a MicroSIM. Trimble recommends using only MicroSIM sized SIM cards from your carrier. Trimble cautions the use of adapters to fit smaller sized SIM cards into a MicroSIM slot.

## **Why do I have to change touch screen modes when switching between finger and stylus?**

The capacitive touchscreen responds differently to the different characteristics of fingers, styli, and gloves. For optimal response Trimble recommends that you select the appropriate mode; use the Touch Control app that is installed on the Trimble T7 tablet.

## **How do I prevent Windows updates from happening at any time?**

Trimble recommends that you keep the Windows operating system updated to follow security best practices. This reduces your vulnerability to cyber-attacks, and helps to improve the Windows operating system. You can configure the Trimble T7 tablet settings to prevent downloads and restarts in field; go to Settings / Update & Security / Windows Update / Advanced options.

# **Screen**

## **Do I need a screen protector?**

Yes. Trimble strongly recommends using a screen protector. The screen protector provided with the Trimble T7 tablet out of the box and available as an accessory protects the screen long term. Although the screen of the Trimble T7 controller is hardened glass, it may show scratches over time. The screen protector also protects the screen from UV radiation.

## **How do I apply the screen protector?**

Make sure the screen is clean before you apply the screen protector; any dust or dirt between the screen and screen protector will be visible and degrade your display experience.

1. Place the device on a clean, flat surface.
2. Clean the touchscreen with a damp cloth, alcohol wipe or similar.
3. Polish and dry the screen to remove any dust with the lint-free cleaning cloth supplied with the screen protector.
4. Remove the protective film from the screen protector.
5. Align the screen protector with the glass portion of the display. The screen protector should line up evenly with the edges of the device.
6. Carefully lay the screen protector on the screen. If you make a mistake and the glass looks off-center, you can gently lift the screen protector up and realign it. Then, once the protector is on the screen, give it a soft press in the center and allow the adhesive surface to grip to the screen naturally.
7. If there are any bubbles remaining, use the cloth provided to gently smooth them toward the edges of the screen protector.

Note: You can place the screen protector in place and fix it on the upper side with adhesive strips to the housing. This will keep the screen protector aligned when sticking in on.

### **How do I lock the screen rotation?**

You can lock the screen rotation in the Windows 10 Action Center. Tap the Action Center icon at the lower right corner of the screen, and then tap Lock Rotation.

### **What is important to know about projective capacitive touchscreens?**

Capacitive touchscreens are very common in today's tablet computers and smartphones. The Trimble T7 tablet has a capacitive touchscreen that is highly responsive to the touch of a finger, as well as a capacitive stylus. You can easily zoom into images or data (if the software used supports dual touch user interface).

The capacitive touchscreen is based upon the user being a conductor to enable the touchscreen properties. If you are using gloves, such as during very cold weather, Trimble recommends using gloves that are designed for capacitive touchscreens, or the stylus.

The capacitive screen does also work in rain. However in heavy rain or when wiping the screen, false contacts may happen. To wipe the screen and avoid false contacts the touch input on the screen can be deactivated with a key on the physical keypad.

### **What are the "Touch Modes"?**

There are touch modes for finger, stylus, and (conductive) glove. Use the Touch Control app which is installed on the T7 tablet to switch between touch modes.

### **Do I have to use Trimble-provided gloves for my touchscreen to work?**

No, but you do need to use gloves designed for use on projective capacitive touchscreens. There are plenty of touchscreen safety gloves available; Trimble does not provide gloves.

## **Accessories**

### **What optional accessories are available for the T7 tablet?**

Pole mount, handstrap, shoulder sling, shoulder sling bag, stylus, screen protector, desktop hub, power supply, vehicle charger, spare batteries, external battery charger, EMPOWER modules. For more information, contact your Trimble distributor.

### **If I lose my stylus, can I use a non-Trimble stylus?**

Yes, there are a wide variety of capacitive touch stylus available in the marketplace that work well with the Trimble T7 tablet as long as they have a rubber tip. However the stylus available as an accessory is tuned for the T7 tablet display and it fits into the stylus holder. Trimble cannot guarantee other styli will work.

### **How do I attach and use the handstrap of the T7 tablet?**

Attach the hand strap to the left or the right side of the device, according to your personal preference. To ensure a good fit:

1. Thread one end of the hand strap ribbon through the top hand strap slot; thread from the center of the device toward the top of the device.
2. Pull the end of the ribbon back towards the center of the hand strap and feed it up, over, and down through the lock buckle on the hand strap and pull it tight.
3. Thread the ribbon at the other end of the hand strap through the bottom hand strap slot; thread from the center of the device toward the bottom of the device.
4. Pull the end of the ribbon back towards the center of the hand strap and feed it up, over, and down through the lock buckle on the hand strap and pull it as tight as is comfortable for your hand.

If required, use a small blunt tool to push the ribbons through the hand strap slots on the device. Do not use a sharp tool.

### **How do I attach and use the shoulder sling with my Trimble T7 tablet?**

There are several ways to attach the shoulder sling to the Trimble T7 tablet:

- If you have a hand strap attached to the device, clip the shoulder sling onto the hand strap buckles.
- If you do not have a hand strap attached to the device, attach the shoulder sling standalone connector straps to the hand strap slots on the device, and clip the shoulder sling to the connector straps.
- You can attach the shoulder sling to the hand strap slots/shoulder sling connector straps on either side of the device, according to your preference.
- You can attach a shoulder sling to the top or bottom hand strap slots, or use two shoulder slings and attach them crosswise to the device to create a harness.

### **The desktop hub does not support additional monitors. What can I do?**

The desktop hub requires drivers; the Trimble T7 tablet downloads the drivers when it is connected to the hub (this may take a few minutes). Once the drivers are downloaded, the Trimble T7 tablet will use the drivers every time the hub is connected and external monitors will be supported.

### **What are the Empower modules?**

The Trimble EMPOWER modules provide functions like sub-meter GNSS, RFID scanning, or barcode reading. They are user-exchangeable.

## **Software**

### **Is there a flashlight app?**

There are plenty of free flashlight (and other) apps in the Microsoft Store:

Search for <https://www.microsoft.com/en-us/store/search/apps?q=flashlight>

### **How do I install Trimble Access™?**

You need to download and install the Trimble Installation manager to the T7. Connect the Trimble T7 tablet to the Internet, open the browser and download the Trimble Installation manager from:

<http://www.trimble.com/installationmanager/>

When you start the Trimble Installation manager, Trimble Access downloads; you must have a Trimble Access license.

## How can I change the date format in Trimble Access?

To change the date format, use the Trimble Access software:

1. On the status bar, tap Date/Time. The operating system Date and Time settings dialog opens.
2. Scroll down to Related Settings and tap Additional Date, Time & Regional Settings.
3. Under Region, tap Change Date, Time or Number Formats.
4. Tap Additional Settings.
5. On the Date tab, type into the short date field the format that you want. Tap Apply and then tap OK.

## Can I set the camera to use the rear camera when starting the camera app instead of the user-facing camera?

Windows 10 opens the user-facing camera the first time you open the camera app. To change to the rear camera, in the camera app, tap the icon in the top left corner of the screen. The camera app remembers the last setting and will launch the selected camera the next time you open the camera app.

## How do I activate Windows 10 Pro on the Trimble T7 tablet?

Windows 10 will guide you through the configuration process. This process takes a few minutes. You should set up a Windows account and user. After the initial setup, you can change user settings and most of the other settings in the Settings menu.

## How does the operating system language provisioning feature work?

When you turn on the T7 for the first time, you are prompted to select the desired language. The process is the same as on any Windows 10 Pro computer.

## Connectivity

### Can the T7 tablet be used for voice calls?

No. However you can use third-party VoIP applications and services such as Skype with the T7 tablet.

### What cellular networks does the T7 tablet computer support?

Worldwide LTE in regions where it is available, and compatible with 4G and 3G networks. AT&T and Verizon supported. WiFi 802.11 a/b/g/ac/n, BT 4.2.

### How can I transfer data with my T7 tablet?

Data can be transferred from the T7 using the following methods:

- Via cloud-based file sync services (for example, Trimble Connect, Dropbox, Microsoft OneCloud, Google Drive sync, or with other cloud-based apps) over Wi-Fi or 4G.
- Via ethernet connection using the desktop hub
- Via Wi-Fi connection using a wireless LAN connection to an access point
- Via a USB stick

NOTE: Microsoft® ActiveSync and Windows Mobile Device Center are not supported because the Trimble T7 tablet uses a Windows 10 desktop operating system, not a mobile operating system.

The Windows operating system enables the use of any cloud-based software already in common use. It is also possible to sign in through Trimble Access to an integrated survey workflow which connects Trimble Business Center office software and other office-based data with Trimble Access using Trimble Sync Manager™ and the Trimble Connect cloud platform.

### **How can I use the T7 tablet Wi-Fi capability?**

The Trimble T7 tablet has integrated Wi-Fi that can be used to receive data anywhere within the range of a Wi-Fi access point. A Wi-Fi connection can be used to connect to the Internet (at broadband speeds) through an access point.

NOTE: When there is an active connection to a Wi-Fi access point, power consumption increases and the battery will discharge more rapidly.

### **How can I use the Bluetooth capability?**

The T7 tablet has an integrated Bluetooth® radio to establish cable-free connections to other Bluetooth devices that are within 10 meters.

Using a Bluetooth connection, you can communicate with other Bluetooth-enabled devices such as mobile phones, desktop computers and more. You can also communicate with Bluetooth-enabled peripheral devices instead of using USB connections.

NOTE: When there is an active connection to another Bluetooth device, power consumption increases and the battery will discharge more rapidly. Individual usage patterns will vary by device and the frequency of the Bluetooth communications

### **How do I change the SD and SIM card?**

The SIM card and SD card slots are located underneath the EMPOWER module bay on the back of the device. If you have an EMPOWER module installed, you will need to remove it. If you do not have a module attached to the device, the module bay cover should be attached; you will need to remove it.

1. For either the EMPOWER module or the module bay cover, use a Phillips screwdriver to loosen the 4 Phillips screws and remove the module or cover.
2. Looking from the top down, there is a SD/SIM bay door located on the right edge of the module bay. Flip the SD/SIM bay door open, and insert the SD and the SIM card into their respective slots.
3. Close the SD/SIM bay door.
4. Replace the module bay covers, or if using modules, re-attach them, tightening the screws.
5. Caution: The T7 has a Micro SIM card housing. If you have a Nano SIM card, it would require a Nano to Micro SIM card adapter sleeve to fit into the Micro SIM card slot. A problem can occur when the adapter sleeve (with SIM inside) is inserted into the T7 SIM slot incorrectly where the SIM falls out of the adapter sleeve while still inserted in the SIM card slot. When the adapter sleeve is empty and a user attempts to remove it from the T7, it catches on delicate SIM terminal contacts. Trimble highly recommends using a micro SIM card and not a Nano SIM card with Adapter.

### **What type of cable connections does the T7 tablet support?**

The standard configuration Trimble T7 tablet ships with USB 3.0, serial DB-9, power, and audio plug on the user-replaceable I/O boot.

### **Can I replace the I/O block?**

Yes. The I/O boot is user-replaceable in case of damage.

### **Can I use a normal USB cable to connect my Trimble T7 controller to my desktop PC / laptop?**

No. USB cables as used for mobile devices such as the TSC3 are not supported because the Trimble T7 tablet uses a Windows 10 desktop operating system, not a mobile operating system.

### **Is there a potential problem with USB 3.0 and GNSS?**

Yes. USB 3.0 in general can potentially jam GNSS bands. Trimble recommends you do not use USB 3.0 sticks on the T7 to transfer data when logging base data.

## **GNSS**

### **Does the T7 tablet have internal GNSS?**

Yes. The T7 tablet has an integrated GNSS receiver.

### **What level of GPS accuracy can I expect with my T7 tablet?**

The T7 tablet uses a uBlox NEO-M8T chipset that is capable of 2 to 4 meter real-time accuracy using its integrated antenna and SBAS corrections.

Note: that the accuracy depends on environmental conditions.

### **What are SBAS corrections and how does the T7 tablet use SBAS?**

All T7 tablets have an integrated GPS receiver that supports SBAS (Satellite Based Augmentation Systems) satellites under normal conditions.

### **Can I use an external GNSS antenna with my T7 tablet?**

Yes, an external GNSS antenna can be used with an MMCX connector as well as advanced GNSS setups with the Empower GNSS module or survey grade receivers.

### **Can I use an external GNSS receiver with my T7 tablet?**

Yes. You can use most of the Trimble GNSS receivers (legacy receivers may not work). Please research the specifications and connection options prior to making model and configuration assumptions for an external GNSS receiver or contact your Trimble dealer. If you want to connect via Bluetooth make sure the receiver is capable of using a Bluetooth PIN. Older receivers may not require a PIN and cannot connect due to modern security expectations from the Windows 10 Pro operating system.

### **How to get the location into Chrome?**

Go to **Settings / Privacy / Location** and turn on or off the applications that you want to grant access to location data. These location data are received from your Wi-Fi or WWAN network, or from the Trimble T7 tablet's internal GNSS receiver.



## Operating System

### What operating systems does T7 tablet support?

The T7 tablet supports Microsoft Windows 10 Pro. This is an open and fully capable desktop operating system enabling you to run any Windows software, such as Microsoft Office, Dropbox, Skype.

### Can I install my own Microsoft Windows 10 operating system and are the required drivers available?

Yes. It is possible to install an enterprise version of Windows 10 on the Trimble T7 controller as with any other PC. Drivers will be available on the Trimble T7 controller support website.

### How can I reset my Trimble T7 controller to a factory default state?

There is no reset to factory default state option as for mobile devices. You can reset the Trimble T7 controller through the Windows 10 operating system.

### How do I stop Windows operating system updates? I don't want them while I'm in the middle of an important job.

With Windows 10 Pro you can control how and when updates are downloaded. However, make sure your system is updated as soon as possible to prevent security breaches. Refer to the Cyber Security White Paper for details.

Go to **Settings / Update & Security / Windows Updates** and change the update settings to your convenience. For example, you can change Active Hours to prevent the device from requesting restarts in the field and you can limit downloads to non-metered connections such as Wi-Fi networks.

## Power

### What does the status LED indicate?

The charging status is shown with an LED on the front of the display.

- Red: charging error
- Orange: charging (changes to solid green when charged)
- Green: fully charged
- Green - Flashing: sleep state

### Will using WWAN impact my battery life?

Yes. However, battery life is a complex calculation, based on a variety of factors that include: software applications in use, wireless features in use (Bluetooth, Wi-Fi, GPS), exposure to extreme heat or cold, age of the batteries, and battery storage and charging routines. Using the WWAN feature requires power and that comes from the battery when the device is not plugged into an electrical outlet.

### How do I change a battery?

Do the following:

1. Turn the battery latch 180° anticlockwise until the flat edge aligns with the battery opening (you can use a coin or the top of the stylus to do this).
2. Insert the battery, then turn the battery latch 180° clockwise to lock the battery in place

To remove batteries / hot swap:

**CAUTION** - Trimble strongly recommends that before you hot swap a battery:

- In the Trimble Access software, you complete your task;
- In all other applications, you save your data.

Note - if you remove both batteries at the same time the device will instantly turn off due to power loss. Make sure you keep one battery in the device by following the instructions. If you have the device turned off you can remove both batteries at the same time.

1. Use the battery indicator LEDs to identify the battery with more remaining power. Start with the battery with the least remaining power.
2. Turn the battery latch by 180° anticlockwise until the flat edge aligns with a battery opening, then remove the battery.
3. Replace this battery with a fully charged battery
4. Turn the battery latch 180° clockwise to lock the battery in place

### **Why are the batteries arriving "dead"?**

The batteries are not dead but in sleep mode. This prevents the batteries from degrading when shipping or being on a shelf. The batteries will "wake up" once charged in a T7 tablet or the charging dock (available as accessory).

### **Can I charge the batteries in my Trimble T7 tablet?**

Yes. Batteries can be charged in the Trimble T7 tablet, or using the external battery charger available as an accessory.

Can I use a power bank to charge the Trimble T7 tablet?

No. A power bank provides 5V through the USB port. Power banks are suitable for smartphones or small tablets; but the Trimble T7 tablet consumes more power. It uses 19V and can only be charged through the power supply port.

### **What happens if I remove both batteries at the same time?**

The Trimble T7 tablet will instantly turn off due to power loss. Make sure you always keep one reasonably charged battery in the device when changing the batteries.

### **In which order is power consumed from the batteries?**

One battery is discharged first, then the second battery is discharged. This gives you better control over the battery status and hot swap.

### **How do I maximise battery life?**

Ways to reduce power consumption and extend the battery life are:

- Battery Saver (Windows 10 Action Center)
- Minimize the Power & sleep timeout settings
- Reduce the display backlight
- Lock screen rotation
- Turn off unneeded radios (Wi-Fi, WWAN, Bluetooth)
- Change sync settings (Settings / Accounts > Sync your settings). Deselect the items you don't need.

### **Is it normal for the battery to get warm?**

Yes, it is normal for any battery to get warm during discharge or charging. Note that batteries should not be charged at temperatures below 0°C (32°F) nor temperatures above 45°C (113°F) to avoid impacting battery longevity and performance. Do not charge batteries inside a hot vehicle (for example, parked in the sun) as temperatures can quickly exceed the specified range.

### **Where can I get more information?**

Go to <https://geospatial.trimble.com/t7> or contact your local authorized [Trimble Distributor](#).