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Trimble Yuma Rugged Tablet Computer: FAQ for Customers

What is the Trimble Yuma rugged tablet?

The Trimble® Yuma™ rugged tablet computer is an all-in-one outdoor computing solution that can transport a user's office to the field, forest, desert, or boardroom.

Users can bring full office capabilities to the field in a mobile package with a powerful 1.6GHz Intel® Atom™ processor, Microsoft® Windows Vista® Business operating system, and wireless connectivity. Standard features include integrated Wi-Fi and Bluetooth® connectivity, GPS, and two geotagging-enabled digital cameras. The Trimble Yuma tablet can be further expanded via two USB 2.0 slots—a 34 mm Expresscard, and an SDIO slot. The large 17.8 cm (7 inch) sunlight-readable WSVGA color touchscreen optimizes viewing for a host of mapping and form-based applications.

The ultra-rugged design of the Trimble Yuma tablet ensures operation in any environment—from extreme cold to hot desert sand, or in a vehicle on the bumpiest of roads. The Trimble Yuma tablet features a 32 GB solid state hard drive, and with no moving parts it meets stringent MIL-STD-810F military standards for drop, shock and vibration.

It operates in temperatures from -30 °C to 60 °C (-22 °F to 140 °F), and its IP67 rating means it is impervious to dust and water.

What are the key features of the Trimble Yuma tablet?

- Large 17.8 cm (7 in) sunlight-readable touchscreen display provides optimum viewing of maps and form-based applications.
- Powerful Intel Atom 1.6GHz processor, designed to run the same large applications as you would on your desktop PC.
- 32 GB solid state hard drive provides ample space for large memory-hungry applications, and, with no moving parts, ensures ruggedness.
- All-in-one device with integrated Wi-Fi and Bluetooth wireless connectivity, and high-yield GPS positioning with 2 to 5 meter accuracy.

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- Two integrated digital cameras, with geotagging functionality to easily attach a GPS position to a photo.
- ExpressCard slot for expandability, including attaching a cellular modem card.
- SDIO slot accommodates high capacity memory cards up to 32 GB, or can be used with SDIO peripheral devices.
- Outdoor rugged design guaranteed to military standards, ensuring that no matter where you work, the Trimble Yuma tablet will meet the challenge.

How is the Trimble Yuma tablet charged and powered?

The Trimble Yuma tablet is powered by two high-capacity (5100 mAh) Li-Ion batteries. These batteries are hot-swappable, allowing you to change batteries while keeping the device in use. These batteries can be charged (in the unit) using either the supplied AC adapter or the optional vehicle power adapter. The optional office dock accessory also provides two charging bays for recharging your batteries.

What can I do to prolong battery life?

The major drains on battery life are the backlight, the GPS receiver, and the Bluetooth and WLAN radios. If you rarely or never use one or more of these features, turn them off to significantly increase battery life.

How does the Trimble Yuma tablet differ from other tablet computers?

Other tablet computers on the market that are listed as rugged are only rated IP54 and are designed to be able to handle the occasional bump or drop. The IP67 rating and military standard specifications for drop, shock, vibration, and temperature extremes of the Trimble Yuma tablet ensure it is able to withstand a constant outdoors working environment.

Unlike many other ‘rugged’ tablet computers, which have large, heavy casings in order to offer added protection, the Trimble Yuma tablet form-factor is extremely compact and lightweight in comparison.

What is the difference between a tablet computer and a Tablet PC?

A Tablet PC has an active pen and passive screen; the Trimble Yuma tablet is a tablet computer, which has an active touchscreen used with a passive stylus.

Is there an extended warranty for the Trimble Yuma tablet?

The Trimble Yuma tablet comes with a standard one year hardware warranty. Additional one and two year warranty extensions are available at time of purchase.

What software applications can I run on a Trimble Yuma tablet?

Any applications designed for desktop computers running the Windows® operating system will work with the Trimble Yuma tablet. Applications designed to work solely on Windows Mobile® powered devices will not be compatible with the Windows Vista operating system, and will not work on a Trimble Yuma tablet.

What are the features and benefits of the Windows Vista Business operating system?

The Windows Vista Business operating system on the Trimble Yuma tablet is a full version of the Windows Vista operating system, not a pared-down tablet version with limited functionality, so users can now take all the functionality of their desktop computer to wherever they work. With a familiar Microsoft user interface, the Windows Vista Business operating system provides a wide range of standard software applications, the same as those of your desktop operating system.

In addition, Windows Vista Business has powerful new security features, to ensure the protection of key information of your business and clients. Information is also more easily located using this edition's new search and organization features.

Can I change the language used by the Trimble Yuma tablet operating system?

The Trimble Yuma tablet's Windows Vista Business operating system is only available in English; language packs are not available for download for this edition.

What versions of Trimble software support the Trimble Yuma tablet?

The Trimble Yuma tablet is supported by the following field software applications:

- TerraSync™ software, version 4.01 or later
- Trimble GPSCorrect™ extension for ESRI ArcPad software, version 3.01 or later
- Applications developed with GPS Pathfinder® Tools Software Development Kit (SDK), version 2.34 or later
- Third-party field software that supports NMEA input

The Trimble Yuma tablet does not output GPS carrier data, so it is not possible to use carrier postprocessing techniques. For standard differential postprocessing, GPS Pathfinder Office software version 4.10 or Trimble GPS Analyst™ extension for ESRI ArcGIS Desktop software version 2.10 is required, with the latest updates applied.

What ships standard in the box?

The Trimble Yuma tablet includes the following standard parts and accessories:

- AC charger with international power cords
- Extended battery set
- Stylus pen
- Stylus tether
- Hand strap
- Ultra clear screen protectors (2-pack)
- Extended cap

- Display cleaning cloth

What optional accessories are available with the Trimble Yuma tablet?

The following optional accessories are available for purchase:

Accessory	Part number
Yuma vehicle charger (11-16V)	69569-00
Yuma anti-glare screen protectors (2-pack)	69564-00
Yuma office dock	69568-00
Yuma rugged keyboard	69562-00
Yuma deluxe carry case	69571-00

The following standard accessories can also be purchased separately as spare or replacement parts:

Accessory	Part number
Yuma extended battery set	69561-00
Yuma ultra-clear screen protectors (2-pack)	69563-00
Yuma extended cap	69565-00
Yuma hand strap	69566-00
Yuma stylus tether	69567-00
Yuma international AC power kit	69570-00

What GPS output protocols does the Trimble Yuma tablet support?

The Trimble Yuma tablet GPS outputs data in either SiRF or NMEA protocol. If you connect to the receiver using Trimble GPS field software, NMEA output is switched off. If you need to re-enable NMEA output, you can use the VGPS software.

How do I ensure the best GPS performance with the Trimble Yuma tablet?

When collecting point features or vertices, Trimble recommends that you log GPS data for at least 30 seconds, using a 1-second logging rate. Collecting multiple positions for a static feature helps to improve accuracy by averaging out the errors in individual GPS positions. In heavy canopy, or other difficult environments, logging for 1–2 minutes is recommended.

Pausing briefly (5–10 seconds) before logging a point feature or vertex also helps to get the best performance from the receiver. This allows you to ensure that the internal GPS receiver is horizontal and correctly located over the feature you are mapping, and allows it to settle so that positions are not influenced by the recent movement of the handheld.

Can I use postprocessed differential correction with the Trimble Yuma tablet?

Provided your field software stores raw GPS measurements (e.g. the Trimble TerraSync software, the GPSCorrect extension, or an application created with Trimble’s GPS Pathfinder Tools SDK), you can differentially correct this data back in the office.

In addition to having the appropriate field software, you also require at least one license to the Trimble GPS Pathfinder Office software, or the Trimble GPS Analyst extension for ESRI ArcGIS Desktop software, to actually perform the postprocessing of your GPS data.

If your data is corrected real-time with SBAS corrections, postprocessing your data will not typically improve the GPS position accuracy.

What real-time correction options are available with the Trimble Yuma tablet?

The Trimble Yuma tablet supports WAAS correction services in North America (for Europe EGNOS test results pending). In open GPS environments, the Trimble Yuma tablet typically achieves 2 to 5 meter accuracy using SBAS.

Can I connect the Trimble Yuma tablet to a higher accuracy receiver?

The Trimble Yuma tablet is compatible with all Trimble Mapping & GIS GPS receivers, including the GPS Pathfinder ProXH™, ProXT™, and ProXRT receivers. The Trimble Yuma tablet allows a Bluetooth connection to the GPS Pathfinder Pro series for cable-free use. The Trimble Yuma tablet also allows connection to older Trimble receivers (for example GPS Pathfinder Pro XR and Pro XRS receivers) through serial cable to the RS232 connector on the bottom of the tablet.

Can I use corrections from the Trimble VRS network over the internet with the Trimble Yuma tablet?

The Trimble Yuma tablet can be used to receive corrections from a Trimble VRS™ network if you have an external cellular modem connected to the ExpressCard slot, and then transmit these corrections over Bluetooth to an external GPS receiver, such as the GPS Pathfinder ProXRT. However corrections from the VRS network can not be applied to the internal GPS receiver of the Trimble Yuma tablet.

Can I use an external GPS antenna with the Trimble Yuma tablet?

The Trimble Yuma tablet does not have an external antenna option. The device is designed to achieve 2 to 5 meter (HRMS) accuracy with the integrated antenna, after differential correction.

What connectivity options does the Trimble Yuma tablet support?

The Trimble Yuma tablet has integrated Bluetooth wireless technology and integrated Wi-Fi support for connecting to a variety of peripheral devices, or to the Internet and corporate networks for sending and receiving data, files, and email. There is a DB9 serial port for connecting to other receivers, and two USB-host ports which support USB devices, such as digital cameras, scanners, printers, modems or mouse, and USB mass storage devices.

The ExpressCard slot supports a range of applications, including memory and wired and wireless communication.

Does the Trimble Yuma tablet have a flight mode for use in an aircraft?

The Trimble Yuma tablet does not have an explicit “flight mode”. The Windows Mobility Center application accessed through the Control Panel can be used to turn off the Wi-Fi radio. The Bluetooth Manager is used to disable the Bluetooth Radio. Alternatively, you can perform a full power down of the device.

What can I use the Trimble Yuma tablet's Wi-Fi capabilities for?

The Trimble Yuma tablet has an integrated wireless Local Area Network (LAN) radio compliant with IEEE 802.11 b/g that you can use to receive data anywhere within the range of a wireless LAN access point. Wireless LAN is often referred to as Wi-Fi.

There are many publicly available Wi-Fi access points (also known as “hotspots”). To locate nearby access points, use Internet sites such as www.jiwire.com.

Using the Wi-Fi radio in a Trimble Yuma tablet does not impact GPS performance. But battery power is consumed faster when there is an active connection to a Wi-Fi access point.

What can I use the Trimble Yuma tablet's Bluetooth capabilities for?

The Trimble Yuma tablet has an integrated Bluetooth radio that you can use to establish cable-free connections to other Bluetooth devices within a range of 10 meters. Using a Bluetooth wireless connection, you can communicate with Bluetooth-enabled devices such as a laser rangefinder, wireless headset or barcode scanner.

Using the Bluetooth radio in a Trimble Yuma tablet does not impact GPS performance. But battery power is consumed faster when there is an active connection to another Bluetooth-enabled device.

How can I connect the Trimble Yuma tablet to a cellular network?

The ExpressCard slot can accommodate a 34 mm wide ExpressCard (ExpressCard/34). Cellular modems with this interface are commonly available for purchase, and are often available at locations that supply laptop or computer peripherals.

What expansion options are available on the Trimble Yuma tablet?

The SDIO and ExpressCard slots both accommodate memory cards.

What are the functions of the Trimble Yuma tablet's integrated digital cameras?

The Trimble Yuma tablet features two integrated digital cameras which can be used for capturing still photos and video. The 1.3 megapixel user facing camera is ideal for video conferencing and calls, while the outward facing 2 megapixel camera can be used to capture photos with greater detail. The Trimble Yuma tablet uses an application called G-Camera to control the cameras and also to attach a GPS position, if required.

Still photographs can be taken with a maximum resolution of 1600x1200 pixels with the 2 megapixel camera, and 1280x1024 pixels with the 1.3 megapixel camera. Still photos are stored in the JPEG format which is widely readable on all types of computer.

Video clips are recorded at a resolution of either 320x240 or 640x480 pixels. They are stored in .WMV format, which can be viewed on the Trimble Yuma tablet and also on most PCs, using an application such as Windows Media Player.

Photos and videos can be previewed on the Trimble Yuma tablet using the Browser mode of the G-camera application.

Do the integrated cameras have a flash ('strobe')?

No, there is no flash capability. In low light situations, you can adjust the brightness and contrast levels or select Night Mode to improve subject visibility.

What can I use the digital camera's geotagging capabilities for?

With geotagging, not only is the picture time- and date stamped, but the current GPS position is also recorded in the picture's EXIF header.

This means that the picture can always be identified in space and time, even if it is subsequently separated from the GIS data you were collecting at the time the picture was taken.

Can I use the camera as a barcode reader?

Some proprietary business applications allow you to use the digital camera as a barcode scanner, but this capability is not currently available as a stand-alone application. For companies wishing to implement this capability in their application, SDK packages exist.

Can I link pictures to GIS features that I am capturing?

Yes. The Trimble TerraSync software can be used to control the taking of still photographs. Any photographs initiated from within the TerraSync software are automatically associated with the current GIS feature, and are moved to the folder in which your TerraSync data is being stored. This file association is preserved during data download and export via the GPS Pathfinder Office software.

However once in your GIS, you need to ensure that the association between photographs and features is preserved if these objects are moved around your organization's database(s).

Where can I get more information?

Go to www.trimble.com for further information or contact your local Trimble Distributor.