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# Customer FAQs for the Yuma 2 Rugged Tablet

## What is the Trimble Yuma 2 rugged tablet computer?

The Trimble Yuma 2 is a fully rugged tablet computer with a 7” screen designed for people who need a complete computer that can function in outdoor conditions like bright sunlight and temperature extremes.

Unlike consumer products or tablets that have been given an exterior shell to make them “rugged,” the Trimble Yuma 2 is built rugged from the inside out, with IP65 protection from dust and water, and with military-grade MIL-STD-810G certification for temperature, altitude, humidity extremes, vibration and shock.

Using the Microsoft® Windows 7 Professional operating system and 4 GB of DDR3 DRAM, the Yuma 2 tablet computer allows mobile users to work with the same documents and data as they do in the office. The Yuma 2 includes a dual-core 1.6 GHz Intel Atom processor to run software applications fast and reliably.

With connectivity via Bluetooth®, Wi-Fi, and an optional dual-mode (GSM and CDMA) 3.75G cellular data module, the Yuma 2 enables manageable and efficient workflows wherever your mobile workforce goes.

The Yuma 2 includes two USB host ports, HDMI output and a matched set of long-life batteries, with a set of even stronger extended life batteries available as an optional accessory. The batteries are hot-swappable so that no one needs to go down on the job.

There are six keys including three user-programmable function buttons and a 5-way directional keypad.

For security, the Yuma 2 provides a built-in, certified Trusted Processing Module (TPM) encryption module to allow security programming for Wi-Fi and direct connect authentication.



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A Kensington security port provides your workers with the ability to physically secure the Yuma 2 using a variety of Kensington computer security products. For more details on TPM module management see: http://technet.microsoft.com/en-us/library/cc749022(v=ws.10).aspx.

## What are the key features of the Trimble Yuma 2?

The following are the most important features of the Yuma 2:

- Direct sunlight readability using a new patent-pending dual technology display system
- Multi-touch capacitive touchscreen compatible with finger, capacitive stylus and/or capacitive gloves with the strength of a Corning® Gorilla® Glass panel
- Fully rugged design to IP65 and MIL-STD-810G standards
- Full-day battery life, and an optional External Battery Set to reach 10+ hours of continual use
- Quick battery recharging cycle from AC charger and available vehicle chargers
- Accelerometer and Electronic Compass
- User-friendly industrial design that is thinner and lighter than other rugged computer products in its class
- Fully integrated radios and sensors (as opposed to external antennas or user-integrated caps and boots)
- Wide range of communications options including Bluetooth 4.0, Wi-Fi b/g/n and 3.75G data on GSM and CDMA cellular networks
- Certified Trusted Processing Module (TPM) encryption module to allow security programming for Wi-Fi and direct connect authentication.

## What configurations are available for the Yuma 2?

The Trimble Yuma 2 tablet is offered in four models with a variety of options, as illustrated in the chart below. To select the model that fits your requirements, choose the size of the solid state drive, the optional 3.75G cellular data (WWAN) module and the exterior color. All models include 2-4 Meter GPS, 5 MP Camera, Bluetooth and Wi-Fi. **Note:** each model is physically different; devices cannot be upgraded from one model to another after purchase.

| Model | SSD Size | 3.75G WWAN | Part Number Yellow / Yellow | Part Number Gray w/ Yellow Pinstripe | Part Number Gray w/ Light Gray Pinstripe |
|---|---|---|---|---|---|
| C | 64 GB | No | T7146L-HBS-00 | T7146L-HBS-00 | T7146L-HBS-00 |
| CL | 128 GB | No | T7148L-HBS-00 | T7148L-HBS-00 | T7148L-HBS-00 |
| CX | 64 GB | Yes | T7146L-H3S-00 | T7146L-H3S-00 | T7146L-H3S-00 |
| CLX | 128 GB | Yes | T7148L-H3S-00 | T7148L-H3S-00 | T7148L-H3S-00 |

Purchasers have a choice of three exterior color combinations.


Yellow/Yellow


Gray with Yellow pinstripe


Gray with Light Gray pinstripe

## Can the Yuma 2 be used for voice calls?

No, the Yuma 2 tablet 3.75G module is a dual-mode penta-band device that is for data and text transmission.

**How do I check to see if my Yuma 2 tablet support cellular connectivity to a GSM or CDMA network?**


If your Yuma 2 tablet has an LED in the upper left hand corner of the front labeled '3G', then it supports 3.75G cellular connectivity.

**What cellular networks does the Yuma 2 support?**

The Yuma 2 tablet supports WWAN 3.75G, Verizon and AT&T.

**Can the dual mode CDMA and GSM function be used simultaneously?**

No. The tablet can only support one or the other connectivity options, not both protocols at the same time.

**Can my Yuma 2 that was purchased prior to Verizon availability be now used with CDMA?**

Yes. Refer to support documents for instructions on how to activate Verizon on a WWAN-enabled Yuma 2 currently using AT&T.

**Can you switch between networks?**

Yes, it is possible to stop using one network protocol, and switch to the other. This requires activation of the network you want to switch to.

To switch from AT&T to Verizon, follow these steps:

1. Verify that the 3G radio is on (LED indicator will be solid green). To turn the radio on, use the hotkeys to the right of the display (Fn + Fn + F3).
2. Open the Sierra Wireless AirCard® Watcher application by using the shortcut on the Desktop or by navigating to **Start** > **All Programs** > **Sierra Wireless** > **AirCard Watcher**.
3. Tap the settings icon (  ) on the AirCard® Watcher main screen. This will open the **User Options** screen.
4. Select **Firmware** on the left panel. Then select **Network Operator** on the right panel, and select **Verizon** from the dropdown menu on the right. Select **Automatic** and then **No** from the dropdown menu. Tap **Apply** or **OK**.
5. Click **Connect** and confirm that the device connects to the Verizon network.
6. Make sure to **Disconnect** from the Verizon network before attempting to switch to the AT&T network.

To switch from Verizon to AT&T, follow these steps:

1. After placing the device in shutdown mode, insert an AT&T SIM card.
2. Power the device, and verify that the 3G radio is on (LED indicator will be solid green). To turn the radio on, use the hotkeys to the right of the display (Fn + Fn + F3).
3. Open the Sierra Wireless AirCard® Watcher application by using the shortcut on the Desktop or by navigating to **Start** > **All Programs** > **Sierra Wireless** > **AirCard Watcher**.
4. Tap the Settings icon (  ) on the AirCard® Watcher main screen. This will open the **User Options** screen.
5. Select **Firmware** on the left panel. Then select **Network Operator** on the right panel, and select **AT&T** from the dropdown menu on the right. Select **Automatic** and then **No** from the dropdown menu. Tap **Apply** or **OK**.
6. An "Updating firmware…" message will be displayed on the main AirCard Watcher screen.
7. Again, Tap the Settings icon (  ) on the main screen to open **User Options**. Select **Profiles**. Select **AT&T Mobile**. Change the Access Point Name (APN) to "wap.cingular" and select **OK**.

8. Click **Connect** and confirm that the device connects to the AT&T network.
9. Make sure to **Disconnect** from the AT&T network before attempting to switch to the Verizon network.

**How do I find the MEID number required for Verizon activation?**

The MEID can be found by following these steps:

1. Open the Sierra Wireless AirCard® Watcher application by using the shortcut on the Desktop or by navigating to **Start** > **All Programs** > **Sierra Wireless** > **AirCard Watcher**.
2. Tap the Settings icon (  ) on the AirCard® Watcher main screen. This will open the **User Options** screen.
3. Select **Firmware** on the left panel. Then select **Network Operator** on the right panel, and select **Verizon** from the dropdown menu on the right. Select **Automatic** and then **No** from the dropdown menu. Tap **Apply** or **OK**.
4. An "Updating firmware…" message will be displayed on the AirCard® Watcher main screen followed by an **Activation** screen.
5. On the **Activation** screen, select the **Manual Activation** radio button and then **OK**.
6. The first data entry cell will be pre-populated with the ESN/MEID. **The MEID begins after the "/." It contains 14 characters and begins with "A100000**." Select **Cancel** and close the AirCard® Watcher application.

**If my tablet does not support WWAN, can it be upgraded to do so?**

No. Tablets come from the factory configured to support 3G or not. There is no option to upgrade a non-3G tablet.

**What Verizon data plans will work with the Yuma 2 tablet?**

3G Mobile Broadband Plan (standard or custom)
M2M Plans (standard or custom)

**What data pricing will <u>not</u> work with the Yuma 2 tablet?**

- Any voice plan
- Share Everything (standard and business data share)

- MHS Plans
- Smart phone data plans
- Any prepaid data or voice plan

**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 3.75G feature requires power and that comes from the batteries when the unit is not plugged into an electrical outlet.

Typically, your battery run times will be impacted less than 10% to as much as 20%, depending on transmit and receive times, and standby time.

## What are the differences between the Trimble Yuma 2 and the original Yuma?

The chart below lists key attributes and the performance differences between Yuma and Yuma 2.

| Attribute | Yuma | Yuma 2 |
|---|---|---|
| Touchscreen | Resistive dual touch | **Capacitive multi-touch** |
| Display Technology Sunlight Readability | Very Good | **Excellent** |
| Processor | 1.6 GHz single core | **1.6 GHz dual core** |
| RAM | 1 GB | **4 GB** |
| Solid State Drive | 32 GB then 80 GB | **Choice of 64 GB or 128 GB** |
| GPS Accuracy | 4 - 6 meter | **2 - 4 meter** |
| Battery Life[3] | 4 hours with standard batteries<br>8 hours with extended batteries | **5+ hours with standard batteries**<br>**10+ hours with extended batteries*** |
| Data Connectivity | Optional via add-on data cards | **Optional 3.75G dual-mode (CDMA and GSM) with SIM Card and Auto Carrier Recognition** |
| IP Rating | IP67 | **IP65** |

| | | |
|---|---|---|
| Pricing | $3999 Market Price for base configuration | **$2999 Market Price for base configuration** |

* AS MEASURED IN MOBILE MARK 2007 WITH PATCH 5.

## What operating systems does the Yuma 2 tablet support?

All Yuma 2 tablets have the Microsoft® Windows 7 Professional operating system.

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

When the Yuma 2 is turned on for the first time, the operating system prompts the user to select one of 8 available languages:

- English
- Spanish
- French
- German
- Italian
- Portuguese (Brazil)
- Korean
- Japanese

Then, the Microsoft® Windows License agreement process also prompts the user to select one of many languages available. This selection is different from the operating system of the Yuma 2 tablet computer itself. **CHOOSING A LANGUAGE IS A ONE-TIME ACTION and cannot be undone.** Microsoft offers more than 30 languages for Microsoft supported programs, compared to the operating system for the Yuma 2.

## If a Yuma 2 has been set up in English, can it later be switched to another language?

Choosing a language is a one-time action and cannot be re-done except by doing a complete operating system restore from the system recovery partition.

## What level of GPS accuracy can I expect with my Trimble Yuma 2?

In its current configurations, the Yuma 2 will collect at 2 to 4 meter accuracy. It contains an integrated antenna, with automatic SBAS corrections. The accuracy may improve by attaching an external GPS antenna, if the antenna has a better view of the sky than the Yuma 2 tablet.

## What are SBAS corrections and how does the Trimble Yuma 2 use SBAS?

All Yuma 2 models have an integrated GPS receiver that supports SBAS (Satellite Based Augmentation Systems) satellites under normal conditions. SBAS is an augmentation technology for GPS, which calculates GPS integrity and correction data with RIMS (Ranging

and Integrity Monitoring Stations) on the ground and uses geostationary satellites (GEOs) to broadcast GPS integrity and correction data to GPS users.

There are several compatible SBAS systems available around the world including:

- WAAS (Wide Area Augmentation System) for North America
- MSAS (Multi-Functional Satellite Augmentation System) for Asia
- EGNOS (European Geostationary Navigation Overlay Service)

## Can I use an external GPS antenna with my Yuma 2?

Yes, there is an accessory kit available that enables a direct connection with an external antenna. (part number:ACCAA-312, Yuma 2 External GPS kit)

## Can I use an external GPS Receiver with my Yuma 2?

Yes you can. Trimble GIS makes a Pro series receiver that connects easily to the Yuma 2. However, please research the specifications and connection options prior to making model and configuration assumptions for an external GPS receiver.

## Is raw GPS data available?

Raw data output in the NMEA format is supported. The raw data stream can be used in external applications that offer precision positioning, real-time kinematics (RTK) and attitude sensing.

## What wireless connectivity options does the Yuma 2 support?

All Yuma 2 models have Bluetooth and Wi-Fi wireless technology. The CX and CLX models are equipped with a 3.75G cellular modem for connecting to the Internet.

## How can I use the Yuma 2 Wi-Fi capability?

Trimble Yuma 2 tablet computers have an integrated Wi-Fi wireless Local Area Network (WLAN) radio 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 802.11b, 802.11g or 802.11n 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, depending on factors such as:

- proximity to the access point (more distance requires more energy)
- total data sent and received over time (more data requires more energy)
- ratio of upload and download activity (transmission, or upload, requires more energy)

## How can I use the Bluetooth capability?

All standard versions of the Trimble Yuma 2 include 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.

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

All Trimble Yuma 2 tablet computers include a 5 megapixel integrated digital camera with an LED flash and geo-tagging. 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.

## What are the power options for the Yuma 2?

The Yuma 2 ships with two standard rechargeable batteries. The standard batteries will provide at least five (5) hours of operational time, depending on the features activated. The batteries are internally rechargeable using the International AC Charging Kit that is included with the unit.

For workers who are doing extensive field readings and are not close to a source for energy replenishment via an AC adapter or vehicle charger, Trimble offers the Extended Battery Set accessory that doubles the operational time of the Yuma 2 between charges.

In the field, batteries can also be hot-swappable; that is the batteries can be changed out for new ones while the unit is working. As long as there is some charge in at least one battery, users can change out the other side, and then if needed change the second one as well.

## What type of cable connections does the Yuma 2 support?

The Yuma 2 features two USB host ports and one HDMI port.

The Yuma 2 supports a Serial connection via the USB to Serial Adapter accessory.

The Yuma 2 supports an external GPS antenna with SMA connector via the SMA GPS Adapter accessory. The adapter is included in the GPS Antenna Kit accessory.

## Will the Yuma 2 support USB accessories?

Generally the answer is yes, for those accessories with device drivers that are compatible with the Microsoft® Windows 7 Professional operating system. Users can add keyboards, printers, monitoring devices, measurement instruments, barcode readers and RFID readers; almost anything that can connect via USB.

## What is in the Yuma 2 box?

The Yuma 2 Rugged Table Computer includes the following accessory items:

- Standard Battery Set

- International AC Charging Kit with 4 adapters
- Microfiber Cloth for display cleaning and two Clear View Screen Protectors
- Capacitive Stylus with Tether
- Quick Start Guide

## What optional accessories are available for the Yuma 2?

| Image | Description | Part Number |
|---|---|---|
|  | Standard Battery Set | ACCAA-115 |
|  | Extended Battery Set | ACCAA-116 |
|  | Hand Strap | ACCAA-259 |
|  | Rugged keyboard | ACCAA-303 |
|  | Capacitive Touchscreen Gloves | ACCAA-310 and ACCAB-310 |
|  | GPS Antenna Kit | ACCAA-312 |
|  | SMA GPS Adapter | ACCAA-313 |

| | | |
|---|---|---|
|  | Screen Protector | ACCAA-368 |
|  | USB to Serial Adapter | ACCAA-566 |
|  | Carrying Case | ACCAA-619 |
|  | International Charger | ACCAA-672 |
|  | Vehicle Charger (12-32 VDC input) | ACCAA-673 |
|  | Pole Mount | ACCAA-768 |
|  | Vehicle Soft Mount | ACCAA-769 |
|  | Vehicle Hard Mount | ACCAA-770 |
|  | Mounting Plate | ACCAA-771 |

| | | |
|---|---|---|
|  | Stylus and Tether | ACCAA-811 |

## What are the environmental performance characteristics of the Yuma 2?

Water: Survives rain and water spray, any direction.

Dust: Protected against dust: IEC 60529, IP6x, dust chamber under pressure

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

Operating Temperature: -22 ºF to 144 ºF (-30 ºC to 60 ºC),MIL-STD-810G,

Storage Temperature: -40 ºF to 158 ºF (-40 ºC to 70 ºC), MIL-STD-810G

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

Capacitive touchscreens are very common in today's tablet computers and smartphones. The Yuma 2 has a capacitive touchscreen that is highly responsive to the touch of a finger, as well as a capacitive stylus. Users 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 the user is using gloves, such as during very cold weather, we recommend using gloves that are designed for capacitive touchscreens.

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

Yes, there are a wide variety of capacitive touch styluses available in the market place that work well with the Yuma 2 tablet.

## 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.

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

By default, the accelerometer and magnetometer are disabled on your tablet computer. To enable these features, perform the following:

1. Tap **Start** > **Control Panel** > **Location and Other Sensors**.
2. On the **STMicroelectronics 6-Axis, Accelerometer/Magnetometer Enabled** box, tap to enable or disable this feature.
3. Tap the **Apply** button to save changes.

### Will Windows 8 run on the Yuma 2?

Microsoft® Windows 8 is not supported on the Yuma 2. It is designed for the Windows 7 Professional operating system.

### Will Windows XP run on the Yuma 2?

Yes, however it is not supported and is done at the user's own risk.

### Where can I get more information?

Visit www.trimble.com/rugged , www.TrimbleMCS.com, or contact your local Trimble reseller to learn more about the Yuma 2 and the Nomad, Juno T41 and Ranger rugged handheld computers.

For more information, please contact:
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