mesa pro

Mesa Pro User's Manual

Part Number 31082-03

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Cautions

⚠ **WARNING! This symbol indicates that failure to follow directions could result in serious injury.**

🛈 **CAUTION: This symbol indicates that failure to follow directions could result in damage to equipment or loss of information.**

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1

Getting Started

1. Getting Started

1.1 Overview

The Mesa Pro Rugged Tablet™ from Juniper Systems can withstand dust ingress and long-term immersion in water (rated IP68). It has the Windows 11 IoT Enterprise or Windows 11 Pro operating system. Standard features include a 10-inch display, capacitive touchscreen, hot-swappable battery, keypad, Bluetooth, Wi-Fi, and front and rear cameras. Standard accessories include lithium-ion battery packs, an AC wall charger, hand strap, and a fine tip capacitive stylus and tether. Optional features include a 4G LTE data modem with a GNSS receiver, barcode imager, and RS-232 port.

1.2 The Anatomy of the Mesa Pro

1.2.1 Front and Back Features

Front:

1. Camera status LED
2. Front-facing camera
3. LED indicator lights
4. Microphone
5. Light sensor
6. Keypad
7. Display/touchscreen
8. Speaker
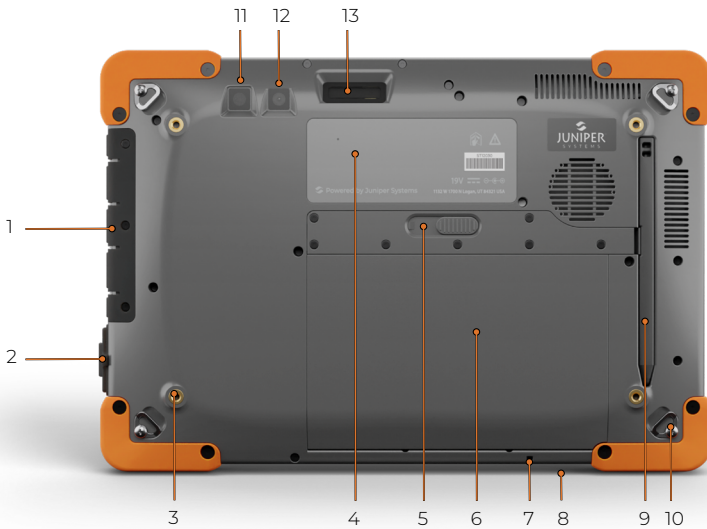
Back:

1. I/O Port Cover
2. RS-232 (optional)
3. Threaded mounting holes (x4)
4. Label
5. Battery Door Latch
6. Battery Door
7. Stylus tether attachment point
8. Security lock slot
9. Stylus
10. Hand strap tether loop (x4)
11. Flash
12. Rear Camera
13. Barcode Imager (optional)

1.2.2 Connector Ports
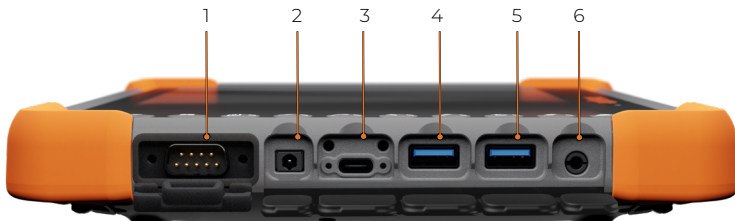
1. RS-232 (optional)
2. 19 V DC input port
3. USB-C
4. USB 3.1, Gen 1
5. USB 3.1, Gen 1
6. 3.5 mm audio jack

1.3 Perform Initial Tasks

When you receive your Mesa Pro, perform the tasks outlined in this section before first use.

1.3.1 Review Documentation

This user's manual and other documents (e.g. release notes) are available on our website: *https://junipersys.com/support/mesa-pro/documentation.* View, download, and print documents as desired, either on the Mesa Pro or another computer with an internet connection.

1.3.2 Charge and Install the Battery Packs

The Mesa Pro comes with one or two rechargeable and removable Li-ion battery packs (depending on the configuration).

(!) **CAUTION: The Mesa Pro must have at least one battery installed to operate.**

To install and charge the battery packs:

1. The battery compartment is accessed from the back of the tablet. Push the battery door latch in, slide it left to the unlocked position, and remove the door.

(!) **CAUTION: The Mesa Pro is not sealed against water and dust when the battery door is not installed.**

2. If you are using an SD card for additional memory or a SIM card with the 4G LTE data modem (optional), you can install them now before you install the battery packs or at another time. If you do this, make sure you replace the card tray before battery installation. See *2.7 Micro SD and Nano SIM Cards on page 21* for details.
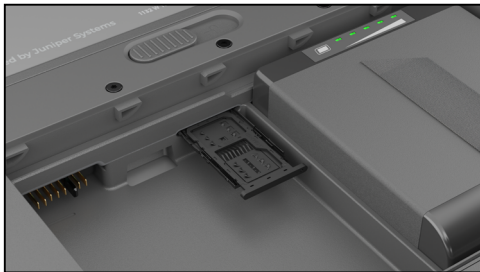
3. Insert the battery packs.

   a. Hold the battery so the black tab is on the back edge of the battery and connector is facing the door latch.

b. Place the front edge in first, gently pushing it underneath the two battery catches.

c. Rotate the back of the battery down until it sits flat inside the battery compartment.

⚠ **CAUTION: Do not insert the battery pack straight down. Damage to the unit could occur.**

4. Replace the door and press down on it while sliding the latch into the lock position.

5. Attach the appropriate plug for your country into the AC wall charger and plug it into a wall socket. Plug the other end into the DC power jack on the Mesa Pro.

Note: Use the AC wall charger that comes with the Mesa Pro or another approved charger from Juniper Systems. If you use a USB-C charger ensure it can deliver 20 V with a minimum of 60 Watts.

6. Charge the battery packs at room temperature (68°F or 20°C) until fully charged.

While the battery packs are charging, the red LED blinks. When batteries are fully charged and external power is applied, the red LED is solid. For more information, see *2.4 LED Activity Indicators on page 19.*

The battery packs can also be charged in the battery charger. This is an optional accessory that allows you to charge extra batteries outside of the Mesa Pro.

Each battery has five LED charge indicators. Press the white rectangle button on the battery to see the LEDs light up according to the charge percentage.

- Five lights: 100% charged
- Four lights: 80% charged
- Three lights: 60% charged
- Two lights: 40% charged
- One light: 20% charged
- Flashing lights: discharged

1.3.3 Perform Set Up

The first time the tablet is powered on, Windows setup options are shown. Here you can set up the Mesa Pro for work or school, or with a personal account.

Follow the prompts to set up your unit as desired. For additional help setting up your Mesa Pro, see *https://junipersys.com/support/article/14923*.

1.3.4 Attach the Hand Strap

A hand strap is included with the Mesa Pro. This allows you to hold the Mesa Pro securely and ergonomically by resting most of the weight of the tablet on your forearm.

To attach the hand strap, fasten it to three corners as shown in the pictures below.
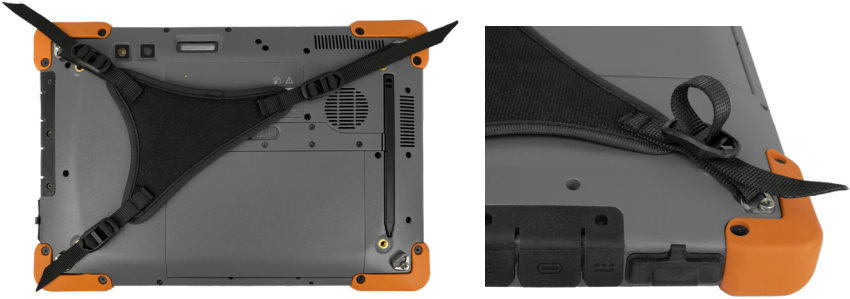
1.3.5 Attach the Stylus Tether

A fine tip capacitive stylus and tether are included with the Mesa Pro. To attach the stylus tether:

1. Remove the stylus by pressing on one end of the stylus until it releases.

2. Attach one end of the stylus tether to the stylus.

3. Push the free tether loop through the tether attachment point located on the bottom right side of the Mesa Pro.

4. Insert the stylus with the attached tether through this loop and tighten the loop.

5. Place the stylus into the stylus storage slot located on the back side of the Mesa Pro by lining up the notched end of the stylus with the stylus catch on the Mesa Pro.

2

Standard Features

2. Standard Features

This chapter discusses the standard features included with every model of the Mesa Pro Rugged Tablet™ with Windows 11.

2.1 Display

The Mesa Pro has a bright color display and capacitive touchscreen with a diagonal viewing area of 10.1 inches (256.54 mm).

To adjust the display settings, including the text size, brightness, and orientation, go to Settings > System and select **Display**.

A shortcut to adjust the display brightness can be accessed in the Action Center by tapping the Wi-Fi, volume, or battery icon on the desktop.

2.2 Camera

The Mesa Pro has a 13 MP rear facing auto-focus camera and a 2 MP front facing camera.

You can capture both still images and videos using the camera application. Other options include a timer, brightness settings, and a rear camera flash.

2.2.1 Photo and Video Library

Photos and videos are automatically stored in the Pictures folder.

2.3 Device Settings App

The Mesa Pro has a built-in app called Device Settings. In this app you can see detailed information about your device, including the serial number, model number, and OS version. The Device Settings app also includes options to adjust settings for the touchscreen profiles, programmable keys, and GNSS. If you do not have a cell module, the GNSS feature will not be shown in the app. If your device has the optional RS-232, you will see this option in the Device Settings app as well. For more information about these optional features, see *3. Optional Features and Accessories on page 32*.

2.3.1 About Screen

The About screen in Device Settings can tell you the serial number, model number, OS version, product name, BIOS version, embedded controller version, motherboard version, processor type, SSD model, SSD capacity, cell type, barcode type, expansion ID, and battery status of your unit. You can also find the regulatory information for the Mesa Pro here.
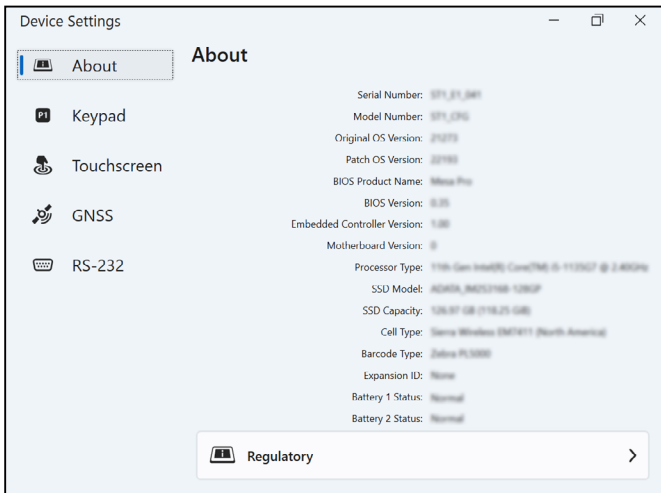
2.3.2 Keypad Screen

The Keypad screen in Device Settings allows you to customize the keypad backlight brightness, program 8 of the keypad buttons, or restore keypad defaults.
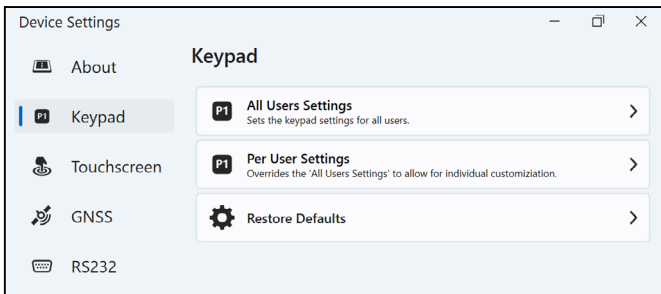
On the Keypad screen, select **All Users Settings** to make keypad changes for any user logged into the device. Select **Per User Settings** to customize keypad changes for your individual account. If Per User Settings are used, they take precedence over the All User Settings.

Select **Restore Defaults** to restore the Keypad settings for All Users or Per User.
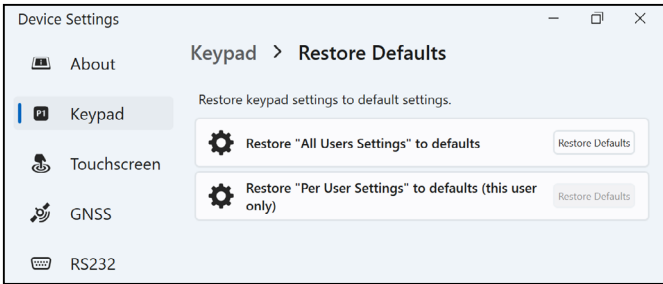
Keypad Backlight Brightness

To adjust the keypad backlight brightness, go to the Keypad User(s) Settings. The first keypad option is the Keypad Backlight Brightness. Use the drop-down menu to the right to select a brightness of 0%, 25%, 50%, 75%, or 100%. Dimming the keypad backlight extends battery life when the Mesa Pro is in use.
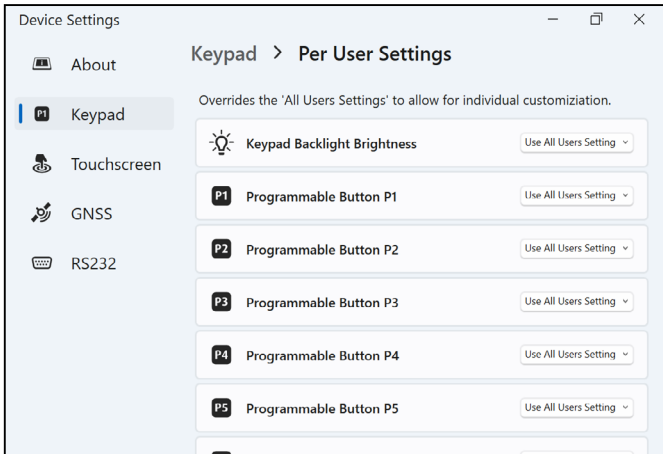
Programmable Keys

The Mesa Pro has a power/suspend key, Windows key, and eight programmable keys (P1–P8). The default function of each programmable key is indicated on the key.

P1, Volume up

P2, Volume down

P3, Enter (return)

P4, Up arrow

P5, Down arrow.

P6, Left arrow

P7, Right arrow

P8, On-screen keyboard

Windows start screen

Power/suspend
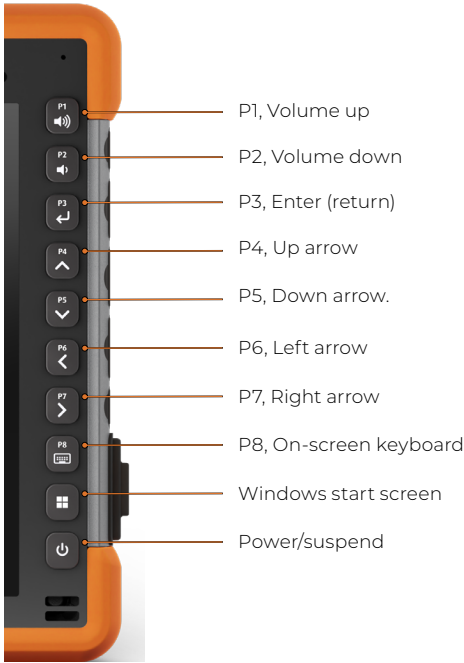
To assign other functions to the programmable keys, go to the Keypad User(s) Settings. The programmable keys and their current assignments are shown. Select your preferred function for each key from the drop-down menus.

2.3.3 Touchscreen Profiles

To adjust the touchscreen profile, go to Device Settings and select **Touchscreen**. Select the touch profile you want the screen optimized for: Finger/Stylus (default), Finger, Fine Hard-Tip Stylus, Glove, Wet/Finger, or Wet/Stylus. As the new profile loads, a progress bar is shown. You can try different profiles to see which one works best.
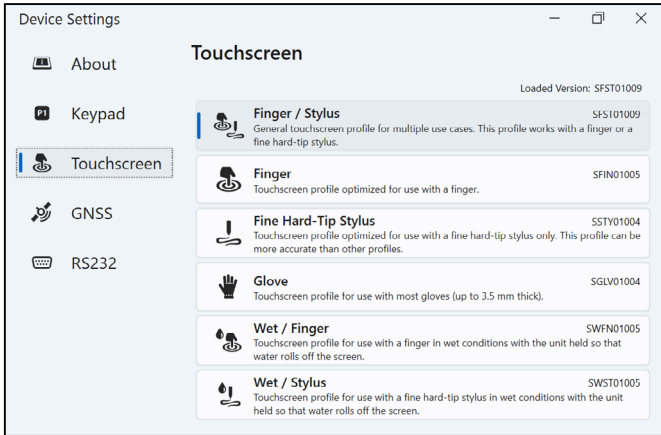
Using the Mesa Pro in Wet Conditions

When you use either of the wet touchscreen profiles, keep the Mesa Pro tilted at an angle of at least 30° to prevent water from pooling on the screen.

Using a Stylus

The profiles intended for a stylus work best with the fine-tipped stylus included with the device. Touch screen performance is not guaranteed with third party styli.

🛇 **CAUTION: Do not use the Windows 11 screen calibration tool. If used, it may degrade the touchscreen performance.**

2.4 LED Activity Indicators

LED activity indicators are located on the front of the Mesa Pro in the upper-left corner.

Red LED, solid

When the Mesa Pro is put to sleep or powered off by pressing the power key ⏻, the red LED is solid until the unit has successfully completed the process, and then the red LED turns off. If powering off the device, do not remove the batteries while the

light is solid.

The AC wall charger is plugged in and the batteries are full (not charging) and the device is running or put to sleep. If the Mesa Pro is shutdown the red LED light turns off.

Red LED, blinking

The AC wall charger is plugged in and the batteries are in the process of charging.

White light

Front facing camera is in use.

Green LED, solid

Does not have an assigned function, but it can be programmed as desired.

Blue LED, solid or blinking

Does not have an assigned function, but it can be programmed as desired.

Note: These LEDs can be programmed by a developer. Sample code is available upon request.

2.5 Light Sensor

All units have an ambient light sensor located on the front of the Mesa Pro in the upper-right corner. The light sensor allows the backlight on the display to adjust automatically when the lighting changes.

To enable this process, go to the Start menu and select **Settings** > **System** > **Display** > **Brightness**. Check "Change brightness automatically when lighting changes."

2.6 I/O Connector Ports

The Mesa Pro has a 19 V DC power input jack, two USB 3.1 Gen 1, one USB-C, and a 3.5 mm audio jack.

2.6.1 I/O Port Cover

The I/O Port Cover is removable and replaceable. If you need a new rubber cover, contact your sales representative.

To replace the I/O port cover,

1. Unscrew the rubber I/O cover from the back of the Mesa Pro with a Torx T6 screwdriver.
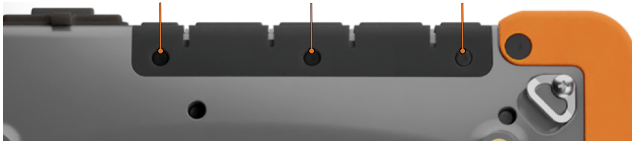
2. Pull the cover out of the ports, then gently pull the curved rubber retainers out of the holes they are in.

3. Insert the replacement rubber cover back into the holes.

4. Screw the cover into the back of the Mesa.

Note: The I/O Port Cover is not required to maintain the seal of the connectors or the tablet. The cover is intended as a port dust cover.

2.7 Micro SD and Nano SIM Cards

The Mesa Pro has a slot for an SD card and a SIM card located in the battery compartment. The card slot and tray are designed to hold the card securely in place so it will not come out or disconnect if the tablet is dropped.

Note: If you use Verizon as your cell network, you must use a Light Weight Machine to Machine (LWM2M) SIM card.

To insert or remove a card, follow these steps:

1. Power off the tablet.

2. Remove the battery door. Before doing this, review the proper procedure for removing the battery door in *1.3.2 Charge and Install the Battery Packs on page 9*.

(!) **CAUTION: Always power off the tablet before removing the battery. Failure to do so may cause loss of data or damage to the tablet.**

3. Remove the battery pack by pulling up on the black tab on the battery pack.

(!) **CAUTION: The Mesa Pro is not sealed against water and dust when the battery pack and battery door are not installed properly.**

4. Use the card tray eject pin that came with your Mesa Pro to pop out the card tray.
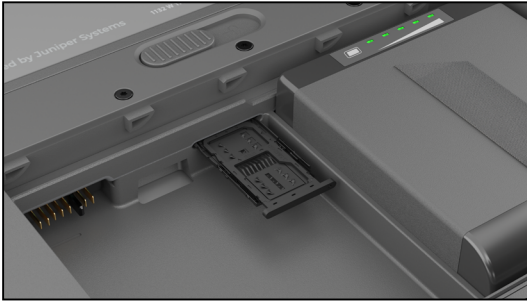
5. Insert your SD card or SIM card into the card tray.

6. Use the image on the battery compartment label to correctly align the SD card (slot on the right side of the left battery compartment).

7. Push the card tray back into place.

8. Replace the battery pack and return the battery door.

2.8 Audio Features

The Mesa Pro has the following audio features:

- Speaker

  The speaker can provide audible indicators and program feedback in loud environments. You can listen to audio files and watch videos. For stereo audio, use Bluetooth or the audio jack.

- Microphone

  Use the microphone to record audio notes or capture sound in a video.

- Audio Jack

  The audio jack supports a stereo headset or headset/microphone combination with a 3.5 mm connection.

2.9 USB-C

The USB-C port allows for charging, data transfer, and a display connection.

Note: If you use a USB-C charger ensure it can deliver 20 V with a minimum of 60 Watts.

2.10 Rugged

The Mesa Pro has earned an IP68 rating meaning that it is protected against dust and the effects of continuous immersion in water.

ⓘ **CAUTION: If the tablet is submerged in water or mud, rinse the ports and fan with fresh water to remove any salt water or debris. Drain the ports and fan. Allow the ports to dry before using.**

2.11 Sensors

The Mesa Pro has a built-in compass, accelerometer, and gyroscope.

2.11.1 Compass, Accelerometer, and Gyroscope

With the compass, accelerometer, and gyroscope, the Mesa Pro can determine direction, even when the device is not resting flat. The gyroscope senses change in angular motion. The compass, accelerometer, and gyroscope can also be used by other user applications.

2.11.2 Compass Calibration

Periodically calibrate the compass in your device to help maintain its performance.

To calibrate the compass,

1. Open an app that uses the compass.

2. Move the Mesa Pro around in the air so that it is oriented in different directions and angles. An effective way to assure this is properly done is to move the Mesa Pro back and forth making a sideways figure eight for approximately 30 seconds.

2.12 Bluetooth® Wireless Communication

The Mesa Pro has built-in Bluetooth® wireless technology, allowing you to connect it to other wireless devices with Bluetooth technology.

2.12.1 Pair a Bluetooth Device

To connect the Mesa Pro and another device with Bluetooth technology,

1. Turn both devices on.

2. Place them within a few feet of each other. (The Mesa has long range Bluetooth, but the other device might not.)

3. Make Bluetooth discoverable on both devices. Bluetooth on the Mesa Pro is on by default. If you need to activate it, open the Action Center by tapping on the Wi-Fi, volume, or battery icon.

4. Tap and hold the Bluetooth icon. Select **Go to Settings**.

5. In the Bluetooth settings screen next to the "Pair new device" option, tap **Add Device**.

6. Choose the kind of device you would like to add, then select the device you would like to pair to from the list of available options.

7. If prompted, enter the PIN or pass code of the paired device. You should now be paired with the device.

Note: If Bluetooth is on and the tablet enters Sleep or Hibernate mode, Bluetooth turns off to save battery power. The connection is resumed once it powers back on.

2.13 Wi-Fi Wireless Networking

The Mesa Pro has built-in Wi-Fi wireless networking to connect to the internet or an office network.

2.13.1 Connect to a Wi-Fi Network

To use Wi-Fi, you need to be in range of a Wi-Fi access point to make a connection. When Wi-Fi is turned on (the default), the Mesa Pro automatically starts scanning the area for available Wi-Fi networks.

From the Action Center, click and hold the Wi-Fi network icon, then select **Go to settings**. A list of available networks is shown. Select the network you want to use and enter the network security key. The Mesa Pro remembers the Wi-Fi network connections created.

Wi-Fi can be turned off and on and settings can be managed from this set up screen.

2.14 Power Management

The Mesa Pro runs on battery power, using one or two rechargeable, Li-ion battery packs.

2.14.1 Charge the Battery Packs

For instructions on how to insert and charge the removable battery packs, refer to *1.3.2 Charge and Install the Battery Packs on page 9*. The intelligent battery charging circuit first charges the battery with the least amount of energy. When this battery pack comes to the same level as the other battery pack, then both battery packs are charged at the same time until they are fully charged.

The battery packs can be charged through the AC wall charger or the USB-C. The power source must be 60 W or higher to allow for a successful charge.

Battery packs are charged most efficiently at room temperature (68°F or 20°C). They will not charge if too hot or too cold.

⚠ CAUTION: Only use the AC wall charger that came with your Mesa Pro. The Mesa Pro requires a 60 W or higher power supply with a 19 V output. This is required to power the tablet and charge the batteries simultaneously within 3–4 hours.

2.14.2 Battery Status and Management

To find out how much battery life remains, tap the battery icon on the bottom of the desktop screen. In the bottom left corner of the pop-up, the cumulative amount of remaining battery life for the batteries is shown.
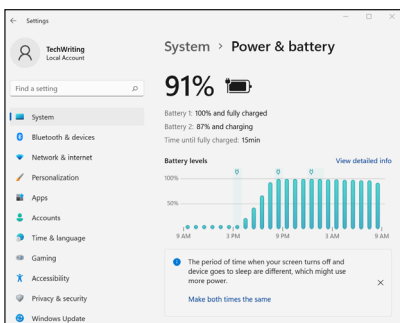
For more information, tap on the percentage shown. This will take you to Settings > System > Power & battery where you can see the individual charge of each battery and the time before they are fully charged. The amount of time left varies depending on what you are doing with the unit.

If the Mesa Pro battery reaches a low charge, it automatically hibernates to prevent further drain on the battery.

Note: Data and programs are secure as long as they have been saved, even if the battery pack becomes discharged. The tablet does not depend on the battery to store the data for extended periods.

To take the Mesa Pro out of hibernation, plug it in with the AC wall charger.

You will see a warning to keep the charger connected until the charge is sufficient.

It is safe to disconnect the charger

There is battery power available

[**Close**]

After the battery is charged enough to keep the Mesa Pro on, you can unplug it.

2.14.3 Battery Life

Battery life on a full charge is about 4.5 hours with one battery or 9.5 hours with two. This varies depending on your usage of applications, backlight, and radio.

The shelf life for battery packs is about one year. The battery packs should be recharged at least once per year. This prevents the battery packs from discharging to a level that might damage the batteries. Battery packs that are not recharged at least every year, could fail to work or may have reduced capacity. Battery packs typically last 1,000 to 3,000 charging cycles.

⊘ **CAUTION: Only use batteries designed for the Mesa Pro from an approved vendor. Use of non-approved batteries may void your product warranty.**

⊘ **CAUTION: The unit is not designed to run on external power without a battery installed. Doing so can damage internal components and void the warranty of your unit if external power is accidentally lost.**

2.14.4 Power Off the Mesa Pro

Short-term Storage

When you charge the tablet with the accompanying wall charger, the batteries will not be overcharged.

To power off the Mesa Pro for short-term storage,

1. Charge the Mesa Pro to 50–70%.

2. Press and hold the power button for 4 seconds.

3. A message displays asking you to swipe the screen down to shut down your device. Follow the instructions to swipe the screen.

Long-term Storage

To power off the Mesa Pro for long-term storage:

1. Unplug external power.

2. Power off the Mesa Pro as described in the previous section, Short-term Storage.

3. Wait for the red LED to turn off.

4. Press and hold the power button for 20 seconds. The red LED will start blinking at 10 seconds, then turn off around 17 seconds. At this point, the batteries have been disconnected from the system.

5. Take out the removable batteries and store them in a cool, dry location.

6. When you are ready to power on the Mesa Pro, replace the battery packs. Before powering the unit on, plug in the AC wall charger and connect it to the Mesa Pro.

2.15 Settings in BIOS

The settings in the BIOS include the ability to disable several of the radios and LEDs. Depending on how your unit is configured you may need to have admin rights to access the BIOS settings. To get into the BIOS settings:

1. Restart your Mesa Pro. During the boot, press and hold the Windows key on the keypad or the ESC key on an external keyboard.

Note: If Windows Fast Startup is enabled (this is enabled by default) and you shut down the Mesa Pro before breaking into the BIOS, changes saved in the BIOS will not be seen on your Mesa Pro unless you perform a subsequent reboot. If you perform a Windows reboot to break into the BIOS then a reboot is not needed after the changes are saved.

2. In the BIOS, arrow down (either with external keyboard, or with the arrow keys on the keypad) to Setup Utility and press Enter.

Note: In the BIOS, the Windows key acts like the ESC key and the P1 button acts like the F10 key.

3. Under the Setup Utility tab, arrow right to the Advanced tab.

4. Arrow down and select **Device Configuration**. Press Enter to select the front camera, rear camera, WLAN, Bluetooth, cell modem/GNSS, or LEDs and turn them on or off.

5. After changes are made, select P1 on the keypad (or F10 on an external keyboard) to save the changes. The Mesa Pro will reboot.

2.16 View Task Manager

Press and hold down the Windows key, then press the power key. A list that includes the Task Manager is shown. Select **Task Manager** to see which apps are running. Select **More details** to view Processes, Performance, and other items. This can be useful for troubleshooting.

2.17 Mesa Pro is Locked Up

If the Mesa Pro is completely stuck and won't respond or you cannot get to the Start menu, hold the power key down for five seconds and wait for at least five minutes for the system to show the "Slide to shut down your PC" message. If that doesn't work, hold down the power key for 10 seconds. This causes a hardware shut off. Press the power button again to power it on.

If 10 seconds doesn't work, hold the power button down for 20 seconds. Batteries are forced to electrically disconnect from the tablet, causing a complete shut down. The tablet cannot be powered on again until it is plugged in with the AC wall charger. Keep this in mind if you are in the field.

CAUTION: Holding the power button down for 10 or 20 seconds for a forced disconnect is recommended only as a last resort. Forcing the power off causes all unsaved data to be lost and corrupts active data transfers to storage.

3

Optional Features and Accessories

3. Optional Features and Accessories

This chapter discusses the optional features that can be included with the Mesa Pro Rugged Tablet.

3.1 RS-232 Port

An RS-232 9-Pin D-Sub connector is an optional feature for the Mesa Pro. Depending on the settings, it will provide either 5 V DC or 12 V DC on pin 9.

The Device Settings app allows you to configure the behavior of the RS-232 port. To view the default configuration and make adjustments, go to the Device Settings app > RS-232. The default configuration for RS-232 is shown:
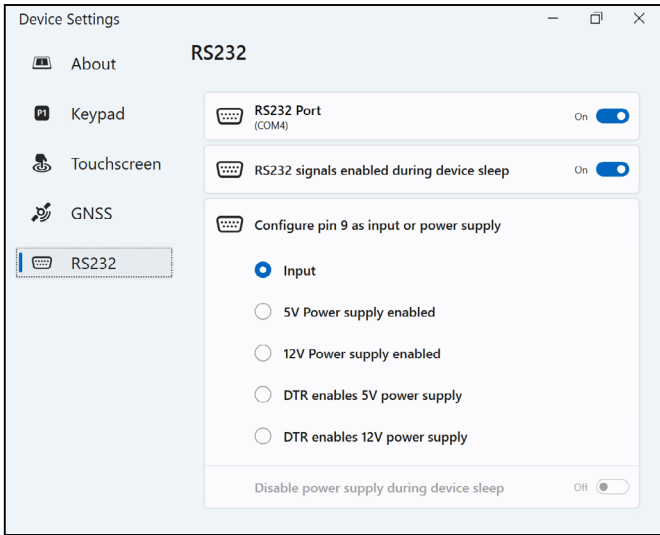
The following options can be edited to suit your application:

- RS-232 port: When this is turned off, the RS-232 port powers down. When this option is on, it powers up the RS-232 hardware. It then displays the assigned COM port number.

  Note: If you do not have a device plugged into the RS-232 port, the port pins corrode more quickly when left powered up. Use the setting to power down when it is not going to be used.
  Note: Power consumption during sleep is higher when the RS-232 hardware is powered up.

- RS-232 signals enabled during device sleep: when this is on the RS-232 input and output signals are enabled when the Mesa Pro is running or in sleep mode.

- Configure pin 9 as input or power supply: Pin 9 is the Ring-In signal input. It is rarely used by devices anymore and has become a popular pin to provide a power source to an RS-232 device.

  - Select Input if your device uses Ring-In signal or if it does not need to be powered from the RS-232 port.

  - Select Power supply enabled to make pin 9 a power supply to be used by the RS-232 device. The power supply is enabled automatically without needing any interaction with the COM port. Depending on the settings, the power supply can provide either 5 V DC or 12 V DC.

  - Select DTR enables power supply to make pin 9 a power supply (5 V DC or 12 V DC depending on settings). The power supply remains off until the user application opens the COM port and asserts the DTR signal. When the DTR signal de-asserts, the power supply turns off again.

- Disable power supply during device sleep: turn this option on to have the RS-232 input and output signals disabled automatically when the tablet is in sleep mode. If your app and/or RS-232 device experiences communication failures when the tablet enters or exits sleep mode, then do not use this option.

3.2 4G LTE Data Modem & GNSS

The 4G LTE data modem is an option for the Mesa Pro, adding Wireless Wide Area Network data modem capability.

This modem supports all major service providers in North America, Europe, and many other regions of the world.

3.2.1 Set up a Data Account with a Wireless Provider

Contact a wireless provider to set up data service for the cellular data modem and obtain an account and SIM card. You need to provide the following information when setting up an account:

1. Billing Information and business ID, such as your Federal Tax ID or VAT number.

2. The wireless services required. Specify that you need data service only. You do not need voice or messaging services.

3. You may be asked for the modem's IMEI number. From the Start menu, go to Settings > Network & Internet > Cellular. Under More cellular settings, tap **Mobile operator settings**. The IMEI number is listed under Properties.

3.2.2 Install the SIM Card

⊘ **CAUTION: The Mesa Pro must be turned off before changing the SD or SIM card.**

The card slot and tray are designed to hold the card securely in place so it will not come out or disconnect if the tablet is dropped. To insert or remove a card,

1. Power off the tablet.

2. Remove the battery door as outlined in *1.3.2 Charge and Install the Battery Packs on page 9.*

⊘ **CAUTION: The Mesa Pro is not sealed against water and dust when the battery door is not installed properly.**

3. Remove the battery pack by pulling up on the black tab on the front of the battery pack.

4. An image on the battery compartment label shows the correct location and orientation for the SIM card (slot on the right in the left battery compartment).

5. Use the card tray eject pin that came with your Mesa Pro to pop out the card tray.
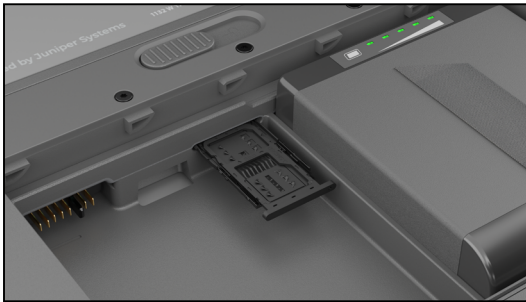
6. Place your SIM card in the tray.

7. Push the card tray back into place, covering the card slots.

8. Replace the battery pack, and return the battery door.

Note: If the modem was on before shutting the Mesa Pro down to insert the SIM card, you are prompted to configure the data connection when you reboot.

3.2.3 GPS/GNSS

Mesa Pro Geo/Cell models use an integrated 4G LTE cell modem and GPS/GNSS receiver with an internal antenna to provide position information. Use the Device Settings app to turn different GNSS sentences on and off as desired. You can also return the GNSS sentence settings to default.

Integrated GPS/GNSS Support in Windows

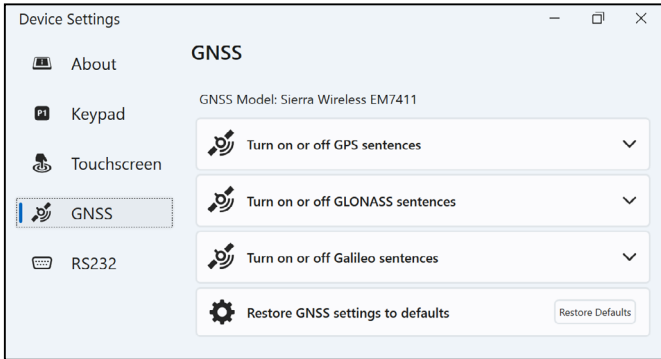The Windows operating system provides built-in support for GPS/GNSS devices. As part of that support, the Windows Sensor and Location platform provides a standard way for GPS/GNSS information to be made available to applications that have been designed using the Windows Sensor and Location application programming interfaces (APIs).

Legacy Support

In addition to the Sensor and Location APIs, legacy applications that require access to a serial port can access NMEA data through a serial COM port interface. The name of the COM port can be found by using Device Manager and looking under Ports (COM & LPT) for Sierra Wireless NMEA port (COMx) or Quectel USB NMEA Port (COMx) where "x" is the port number allocated on your device.

3.2.4 GPS/GNSS Accuracy

The GPS/GNSS antenna in the Mesa Pro is at the top under the Mesa Pro label. It is intended to work in both portrait and landscape view. Do not put your hand or another object over this area; accuracy could be reduced. The more items between the antenna and the satellites, the lower the accuracy.

3.3 Barcode Imager

The Mesa Pro Rugged Tablet with a barcode imager allows you to read 1D and 2D barcodes and easily import barcode data into custom or standard programs running on the Mesa Pro. It is accessed through the Barcode Connector Utility.

3.3.1 Barcode Connector™ Utility

The Barcode Connector utility is a barcode wedge program provided with the barcode imager. If the utility is not available you can download it from *https://junipersys.com/support/article/13028*.

Home Screen

When the Barcode Connector utility loads, the home screen appears. From the home screen, you can do a Scan Test.

1.   Aim the imager towards a barcode.

2.   Tap **Scan** on the screen or press the scan button on the keypad (P2 is the default).

3.   When a red aiming LED appears, place it on or near the barcode.

After a successful scan, the Scan Symbology Type and Scan Data are shown on the screen.

Barcode Menu

Select the menu symbol in the upper left corner of the home screen or swipe the screen from left to right to see the menu (you can do this from any screen in the application). This menu gives you access to several setting screens.

User Settings

From the menu, select **User** to open the User settings screen. From this screen, set up options like Barcode Scan Time and which button to use to scan barcodes.
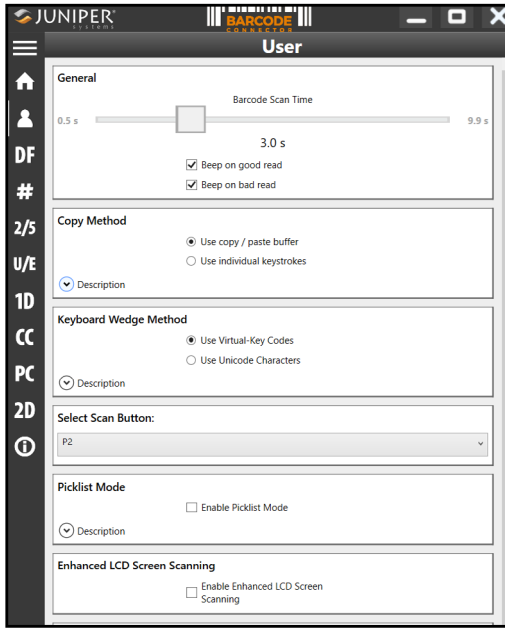
Data Format and Barcode Types

On the Data Format screen, you can set up a prefix and suffix.

Use the rest of the menu options to set up different types of barcodes, including 1D code types, composite Codes, postal codes, and 2D code types.

3.3.2 Read a Tag

Now that the Barcode Connector utility is set up, you can start scanning barcodes.

1. Minimize the Barcode Connector utility.

2. Open an application or document to receive the barcode data and put the cursor where you want the data to be placed.

3. The barcode imager is located on the top of the Mesa Pro when in landscape mode. Aim the barcode imager at the barcode.

4. The distance required between the barcode and Mesa Pro varies depending on the barcode being read. There is a red aiming LED that helps you aim at the correct barcode. Press the scan button. When the barcode is successfully scanned, the barcode information is placed in your document.

The Mesa Pro barcode imager can read all of the barcode types shown below.

1D Barcodes

Code 39

Code 128

UPC-A

2D Barcodes

Aztec
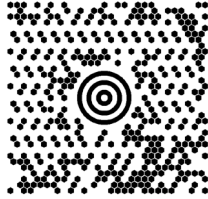
Maxicode

MicroPDF417

QR Code

3.3.3 Troubleshoot the Barcode Imager

If the barcode imager is not functioning correctly, you can set it to factory default settings.

1. Launch Barcode Connector.

2. Scan the Set Factory Default barcode, shown here.

3. Use the Reset Settings button on the User page of the Barcode Connector to restore the settings of the Barcode Connector program.

4. Close the Barcode Connector program.

5. Launch Barcode Connector and verify that correct functionality has been restored.

3.4 Battery Charger

The Battery Charger allows you to charge spare battery packs for the Mesa Pro.

3.4.1 How to Use the Battery Charger

Batteries charge best at room temperature (about 68°F or 20°C). Batteries will not charge (or might charge slowly) at temperatures below 32°F (0°C) or above 122°F (50°C).

Power the Battery Charger by using the AC wall charger provided with your Mesa Pro. Insert the battery pack into the battery charger, orienting it so that the battery contacts meet the charging contacts in the battery charger. The LEDs will flash slowly, indicating that the battery pack is charging.

The Battery Charger can charge two battery packs at once. If needed, it can be mounted.

3.4.2 Battery Charger LED Indicator

The LED indicates the charging status:

- Solid, on: The battery pack is fully charged.
- Blinking (slow): The battery pack is charging.
- Off: There is no power. The battery is not charging.

3.5 Office Stand

The Office Stand is freestanding and enables you to use your Mesa Pro as a desktop computer

When you receive the office stand, screw the two pieces together with the four screws and lock nuts included as shown in the picture to the left.

4

Storage, Maintenance, and Recycling

4. Storage, Maintenance, and Recycling

Follow the instructions in this chapter to properly maintain and recycle the Mesa Pro.

4.1 Store the Mesa Pro and Battery Pack

When the tablet is not being charged and is in a sleep state, it draws a small amount of power. This power draw is used to maintain the memory (RAM) of the tablet in the same state it was in when it was awake. Charge the tablet each night or weekend when it is in a sleep state.

If the Mesa Pro battery reaches a low charge, it automatically hibernates to prevent further drain on the battery. For more information, see *2.14.2 Battery Status and Management on page 26*.

Note: Data and programs are secure as long as they have been saved, even if the battery pack becomes discharged. The tablet does not depend on the battery to store the data for extended periods.

4.1.1 Store the Mesa Pro for More than Two Weeks

To store the tablet for two weeks or more, see *Long-term Storage on page 27*.

4.2 Protect the Touchscreen

Protect the touchscreen from impact, pressure, or abrasive substances that could damage it. To further protect the touchscreen, apply a screen protector (optional accessory) using the directions that come in the package.

(!) **CAUTION: Replace the screen protector as often as the screen protector instructions recommend.**

4.3 Clean the Mesa Pro

Make sure the battery door is securely installed. Remove the screen protector if you want to clean underneath it. Use warm water, a mild cleaning solution, and a soft bristle brush to gently clean the Mesa Pro.

(!) **CAUTION: Do not direct a high-pressure stream of water at the device to clean it. This action could break the seal, causing water to get inside the device and void the warranty.**

(!) CAUTION: Exposure to some cleaning solutions may damage your device, including automotive brake cleaner, isopropyl alcohol, carburetor cleaner, and similar solutions. If you are uncertain about the strength or effect of a cleaner, apply a small amount to a less visible location as a test. If any visual change becomes apparent, promptly rinse and wash with a mild cleaning solution or with water.

4.4 Recycle the Mesa Pro and Batteries

When the Mesa Pro and Li-ion battery packs for your Mesa Pro reach the end of their service life, they must not be disposed of with municipal waste. It is your responsibility to dispose of your waste equipment by handing it over to a designated electrical equipment recycling collection point.

5

Warranty and Repair Information

5. Warranty and Repair Information

5.1 Limited Product Warranty

5.1.1 Two Year Warranty

Juniper Systems, Inc. ("JS") warrants that the Mesa Pro Rugged Tablet and optional internal battery shall be free from defects in materials and workmanship, under normal intended use, for a period of 24 months from the date of shipment, excepting that this warranty shall not apply to user replaceable battery packs, media containing tablet and desktop PC programs, user documentation, and any accessories.

5.1.2 Ninety Day Warranty

JS warrants that the following items shall be free from defects in materials and workmanship, under normal intended use, for a period of ninety (90) days from the date of shipment:

- User replaceable battery packs
- User documentation
- Accessories

5.1.3 Warranty Exclusions

This warranty shall not apply if:

i.   the product has been set up improperly or has been improperly installed or calibrated,

ii. the product is operated in a manner that is not in accordance with the user documentation,

iii. the product is used for a purpose other than for which it was designed,

iv. the product has been used in environmental conditions outside of those specified for the product,

v.   the product has been subject to any modification, alteration, or change by or on behalf of customer (except and unless modified, changed or altered by JS or under direct supervision of JS),

vi. the defect or malfunction results from misuse or accident,

vii. the serial number on the product has been tampered with or removed, or

viii. the product has been opened or tampered with in any way (such as the tamper evident VOID label indicating certified IP [Ingress Protection] seal area has been tampered with or removed).

Parts that are excessively worn are not covered under warranty. These may include, but are not limited to, the keyboard elastomer and switch matrix, hand straps, and the touch screen (if applicable).

This warranty is exclusive and JS will not assume and hereby expressly disclaims any further warranties, whether expressed or implied, including, without limitation, any warranty as to merchantability, fitness for a particular purpose, non-infringement or any warranties arising from the course of performance, dealing, or usage of trade. JS specifically makes no warranties as to the suitability of its products for any particular application. JS makes no warranties that

- its products will meet your requirements or will work in combination with any hardware or applications software products provided by third parties,

- the operation of its products will be uninterrupted or error free, or

- all defects in the product will be corrected.

JS shall not be responsible for software, firmware, information, or memory data contained in, stored on, or integrated with any products returned to JS for repair, whether under warranty or not.

5.1.4 Remedy

In the event a defect in materials or workmanship is discovered and reported to JS within the specified warranty period, after evaluation by a technician at a certified repair center, JS will, at its option, repair the defect or replace the defective part or product. Replacement products may be new or reconditioned. JS warrants any replaced or repaired product for a period of ninety (90) days from the date of return shipment, or through the end of the original warranty period, whichever is longer.

5.1.5 Limitation of Liability

To the fullest extent allowed by law, the obligation of JS shall be limited to the repair or replacement of the product. JS shall in no event be liable for special, incidental, or consequential, indirect, special, or punitive damages of any kind, or for loss of

revenue or profits, loss of business, loss of information or data, or other financial loss arising out of or in connection with the sale, installation, maintenance, use, performance, failure, or interruption of any product. Any responsibility and/or liability of JS shall, in connection with a warranted product, be limited in the maximum amount to the original purchase price.

5.1.6 Governing Law

This warranty is governed by the laws of Utah, U.S.A. and excludes the United Nations Convention on Contracts for the International Sale of Goods. The courts of Utah shall have exclusive personal jurisdiction in case of any disputes arising out of or in connection with this warranty.

5.1.7 Warranty Repairs

Warranty information for the Mesa Pro Rugged Tablet is located on our website at *https://junipersys.com/support/mesa-pro/my-product* in the Warranty section. You can check warranty status, view warranty terms and conditions, etc.

Standard repair orders and 3-Day Expedite Service repair orders are valid for 30 days from the date issued. 1-Day Expedite Service repair orders are valid for 7 days from the date issued. If you will not be sending the product to us immediately, please wait to request a repair until closer to the time when you are ready to send us the product.

Services and Materials Provided Under Warranty

- Analysis of problem by service technician
- Labor and materials required to fix defective parts
- Functional analysis performed after repair
- Shipping costs to return device to customer

JS strives to provide continued full repair services for our products for up to five years from the final production date of each product model. However, in some rare cases (depending on the repair need), it may not be possible to perform a repair due to an unforeseen discontinuation or lack of supplied parts from third-party vendors. Repair support for a product may continue beyond five years if obtaining replacement parts or tools remains economically feasible. Our policy is that we will do what is best and most beneficial for our customers and company.

5.2 Complete Care Service Plans

We offer service plan options that provide additional benefits through participating repair centers. Services include:

- Service plan coverage up to five years from the original product ship date.

- Up to a 50% discount on all charged repairs.

- Expedited repairs and return shipping at no additional charge.

- Replacement of worn and/or damaged parts at no additional charge.

- Complete comprehensive coverage to protect your investment even when accidents occur.

- Loaner product option when an expedited repair is not enough.

- Priority support through a personal account specialist.

For more information about our Complete Care service plans, go to our website at *https://junipersys.com/support/mesa-pro/my-product* then Warranty/Complete Care Options or Warranty/Complete Care Terms and Conditions.

5.3 Repairs, Upgrades, and Evaluations

⚠ **CAUTION: Do not attempt to repair the Mesa Pro yourself. This action voids the warranty.**

Information about repairs, upgrades, and evaluations is located on our website at *https://junipersys.com/support/mesa-pro/my-product* in the Repairs section. You can locate a repair center, submit a repair order, check repair status, view terms and conditions, get shipping instructions, and view lead times.

Before returning a unit, please get permission by submitting a repair order from our website and waiting for confirmation or by contacting a repair center directly. Be prepared to provide the following information:

- The product serial number. This information can be located by opening Device Settings or inside the battery compartment.

Note: Before opening the battery door and removing the battery, see the proper procedure in 1.3.2 Charge and Install the Battery Packs on page 9.

- Name and shipping address of company/university/agency.

- Best contact method (phone, fax, email, cell/mobile).

- Clear, highly-detailed description of the repair or upgrade.
- Credit card/purchase order number and billing address (for a repair or upgrade that is not covered by the standard warranty or an extended warranty policy).

5.4 System Information for your Mesa Pro

You might be asked to provide additional information about your Mesa Pro when you contact a repair center. To view information like the operating system edition, OS build, and serial number, open Device Settings. You can find additional information under Action Center and select **All Settings** > **System** > **About**.

6

Warnings, Regulatory Information, and Licensing

6. Warnings, Regulatory Information, Licensing

6.1 Product Warnings

Follow the warnings listed below to use the Mesa Pro and accessories safely.

6.1.1 Battery Warnings

⚠️ **WARNING! This device comes with a lithium-ion rechargeable battery pack. To reduce the risk of fire or burns, do not disassemble, crush, puncture, short external contacts, or expose the battery pack to fire.**

Do not disassemble or open, crush, bend or deform, puncture or shred.

Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, expose to fire, explosion or other hazard.

Only use the battery for the system for which it is specified.

Only use the battery with a charging system that has been qualified with the system per this standard. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.

Do not short circuit a battery or allow metallic conductive objects to contact battery terminals.

Replace the battery only with another battery that has been qualified with the system.

Use of an unqualified battery may present a risk of fire, explosion, leakage, or other hazard.

Promptly dispose of used batteries in accordance with local regulations.

Battery usage by children should be supervised.

Avoid dropping the battery. If the battery is dropped, especially on a hard surface, and the user suspects damage, take it to a service center for inspection.

Improper battery use may result in a fire, explosion or other hazard.

🛈 **CAUTION: Risk of explosion if the battery is replaced by an incorrect type.**

6.1.2 Wall Charger Warnings

⚠ **WARNING! To reduce the risk of personal injury, electrical shock, fire or damage to the equipment:**

- Plug the wall charger into an electrical outlet that is easily accessible at all times.

- Do not place anything on the wall charger cord or any of the other cables. Arrange them so that no one may accidentally step on or trip over them.

- Do not pull on a cord or cable. When unplugging the wall charger from the electrical outlet, pull on the plug, not the cord.

- The AC wall charger must be approved by Juniper Systems, have an output rating of 19 V DC and a minimum 3.16 A, and be certified or listed by a nationally recognized testing laboratory. The AC wall charger provided with the Mesa Pro meets these criteria. Using any other external power source can damage your product and void your warranty.

6.2 Regulatory Information

To access the regulatory information for the Mesa Pro, go to Device Settings > About > Regulatory.
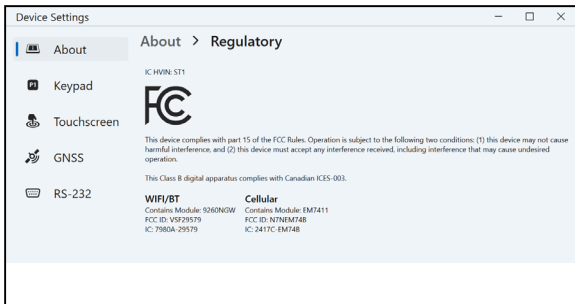
6.3 Certifications and Standards

There are North American, European Union, and Australian versions of the Mesa Pro, with different certifications and standards.

6.3.1 United States

In compliance with the FCC rules 47 CFR 15.19(a)(3), the statements that follow must appear on the device or in the user documentation.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- The device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

In compliance with the FCC rules, 47 CFR 15.105(b), the user must be notified that 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. 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 communications. 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 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.
- In compliance with the FCC rules, 47 CFR 15.21, the user must be notified that changes or modifications to the Rugged Tablet that are not expressly approved by the manufacturer could void the user's authority to operate the equipment.

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. Wall chargers approved for this product employ special provisions to avoid radio interference and should not be altered or substituted.

6.3.2 Canada

In compliance with Industry Canada rules, the following statement must appear on the device or in the user documentation:

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

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.

Canadian regulations restrict the use of channels in the band 5150 MHz to 5250 MHz to indoor use only. When this product is connected with an access point that is operating in this frequency range, or when using ad-hoc mode, the use of this product is restricted to indoor use only.

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.

La réglementation canadienne restreignent l'utilisation des canaux dans la bande 5150 MHz à 5250 MHz pour une utilisation en intérieur. Lorsque ce produit est connecté à un point d'accès qui fonctionne dans cette gamme de fréquences, ou lorsque vous utilisez le mode ad-hoc, l'utilisation de ce produit est limitée à une utilisation en intérieur.

6.3.3 Radio Frequency Safety

This equipment complies with radiation exposure limits set forth for an uncontrolled environment. This equipment is in direct contact with the body of the user under normal operating conditions. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux radiations dans un environnement non contrôlé. Cet équipement est en contact direct avec le corps de l'utilisateur dans des conditions de fonctionnement normales. Cet émetteur ne doit pas être co-localisées ou opérant en conjonction avec tout autre antenne ou transmetteur.

6.3.4 CE Marking (European Union)

The EU Declaration of Conformity is available at: *http://www.junipersys.com/doc*

This device is restricted to indoor use when the WLAN radio is operating in the 5150 to 5350 MHz frequency range.

6.3.5 UKCA Marking

The UK Declaration of Conformity is available at: *http://www.junipersys.com/doc*

This device is restricted to indoor use when the WLAN radio is operating in the 5150 to 5350 MHz frequency range.

6.3.6 Restricted Materials Conformity

The Mesa Pro conforms to the following restricted materials regulations:

- RoHS 2011/65/EU
- RoHS 2015/863
- REACH 1907/2006 (33)
- REACH 1907/2006 (67)
- POP 2019/1021
- Proposition 65
- Canada Prohibition of Certain Toxic Substances
- TSCA

6.4 Licensing Information

This Product is licensed under the AVC, the VC-1 and the MPEG-4 Part 2 Visual patent portfolio licenses for the personal and non-commercial use of a consumer to (i) encode video in compliance with the above standards ("Video Standards") and/or (ii) decode AVC, VC-1 and MPEG-4 Part 2 Visual that was encoded by a consumer engaged in personal and non-commercial activity or was obtained from a video provider licensed to provide such video. None of the licenses extend to any other product regardless of whether such product is included with this product in a single article. No license is granted or will be implied for any other use. Additional information may be obtained from MPEG LA, LLC. See *www.mpegla.com*.

No rights are given for Dolby patents used in the Dolby portion of this product. A list of relevant patents may be obtained from Dolby Laboratories, Inc. No rights are granted to any Dolby copyrights, including the right to reproduce or distribute any portions of this product that includes Dolby intellectual property. Licenses for these activities may be obtained from Dolby.

Any use of this product in any manner other than personal use that complies with the MPEG-2 standard for encoding video information for packaged media is expressly prohibited without a license under applicable patents in the MPEG-2 patent portfolio, which license is available from MPEG LA, LLC, 6312 S. Fiddlers Green Circle, Suite 400E, Greenwood Village, Colorado 80111 U.S.A.

Windows 11 is automatically updated, which is always enabled. ISP fees may apply. Additional requirements may apply over time for updates.

Cortana experience may vary by device.

7
Specifications

7. Mesa Pro Specifications

Note: Specifications are subject to change without notice.

FEATURE	SPECIFICATION
Operating System	• Microsoft® Windows 11 IOT Enterprise or Windows 11 Pro • Multiple languages supported (English, French, German, Spanish, and Portuguese)
Processor(s)	• Intel® 11th Generation Core™ i5 (Standard) • Intel® 11th Generation Core™ i7 • Intel® 11th Generation Celeron®
Memory	• 8 GB LPDDR4X RAM (Celeron model) • 16 GB LPDDR4X RAM (i7 and i5 models)
Storage	• 256 GB (PCIe) • 512 GB (PCIe) • 1 TB (PCIe) • MicroSD expansion, up to 1TB
Micro SD/SDXC Card Slot	• SD/SDXC slot, user accessible
Physical Features	• Dimensions: 7.7" height x 11.2" length x 1.2" depth (195.6 mm x 284.5 mm x 30.5 mm) • Weight: 3.4 lb (1.76 kg) depending on battery and expansion configuration • Durable, chemical- and shock-resistant design • Easy-to-grip, impact-absorbing bumpers • Lightweight and ergonomic design
Graphics	• Intel® Iris® Xe Graphics (i5 and i7 only) • Intel® UHD Graphics (Celeron)
Display	• Active viewing area: 10.1" (256.54 mm) • 1920 x 1200 resolution • High-visibility backlit LCD for best-in-class sunlight view-ability

FEATURE	SPECIFICATION
Touchscreen	• Projected capacitive multi-touch interface for use with gloves, small tip stylus, and in wet conditions • Optically bonded for increase visibility and strength • Chemically-strengthened Dragontrail™ High Ion-Exchange (HIE™) coverglass for impact and scratch resistance
Keypad	• Adjustable LED backlit keys • Power, Windows key, keyboard shortcut, directional arrows (4x), enter, volume up, volume down (8x programmable function keys) • OEM configurable/customizable
Batteries	• Removable Li-ion battery, 43.2 Whr (with integrated 5 LED charge indicators) • Optional second Li-ion battery, 43.2 Whr (depending on configuration) • Removable batteries, easily changeable in field • Optimized for strong performance in cold temperatures • Excellent life-cycle performance • Hot-swap capability (one battery at a time)
Ports	• 19 V DC power input jack • USB-C (x1) • USB 3.1 (x2) • 3.5 mm audio and microphone jack • Optional RS-232 9-pin D-sub connector with 5 V DC or 12 V DC power output • Loud output speaker for noisy environments • Digital microphone input

FEATURE	SPECIFICATION
Wireless Connectivity	• 4G LTE multi-carrier capable: Optional FirstNet, mobile broadband • Bluetooth® wireless technology 5.1 (Class 1.5, BLE support) • Wi-Fi 802.11 a/b/g/n/ac 2.4 GHz and 5 GHz
Audio	• Monophonic speaker, loud and clear • Microphone, low noise
LED Activity Indicators	• Red: power applied/charging status • Green: application programmable • Blue: application programmable • White: camera notification LED
Standard Sensors/ Features	• Ambient light sensor • Compass • Accelerometer • Gyroscope

FEATURE	SPECIFICATION
Environmental Ratings and Standards	• IP68* (IEC 60529-1) • Water resistant and dust proof • Operating temperature: -22°F to 122°F (-30°C to 50°C) • Startup temperature: -4°F to 122°F (-20°C to 50°C) • Storage temperature: -22°F to 158°F (-30°C to 70°C) • Certified to MIL-STD-810H test procedures: Method 501.5 High Temperature Method 502.5 Low Temperature Method 514.6 Vibration Shockproof: multiple drops from 4' (1.2 m) onto concrete, test procedure IV • Designed to meet MIL-STD-810H test procedures: Method 500.5 Low Pressure (altitude) Method 503.5 Temperature Shock Method 506.5 Rain Method 507.5 Humidity Method 510.5 Sand and Dust Method 516.6 Shock

* Only units purchased or shipped after August 1, 2023, are rated for IP68. Devices shipped previously are rated for IP65.

FEATURE	SPECIFICATION
Certifications and Standards	• United States: FCC Class B, FCC Radio Certifications • Canada: ICES-003 Class B, ISED Radio Certifications • European Union and EFTA countries: CE marking (Radio Equipment Directive, RoHS Directive) • Australia: ACMA • Safety: IEC/EN 62368-1 • Optional Class I, II, III, Division 2, Groups A, B, C, D, F, G (Classified Areas/ Hazardous Locations) • US Toxic Substances Control Act (TSCA) • Canada Prohibition of Certain Toxic Substances • RoHS 2, RoHS 3, REACH, SCIP, POP • Bluetooth SIG qualification • PTCRB certification • AT&T Network Ready with FirstNet • Verizon • Security chip TPM (v2.0) • NIST BIOS Compliant
Warranties	• 24 months for Mesa Pro • 90 days for accessories • Extended service and maintenance plans

FEATURE	SPECIFICATION
Software Included	- Clock - Calculator - Calendar - Camera - Cortana - Device Manager - Device Settings - File Explorer - Magnifier - Mail - Maps - Media Player - Microsoft Edge - Microsoft Store - Narrator - OneNote - Photos - Snipping Tool - Sticky Notes - Task Manager - Voice Recorder - Windows PowerShell - Windows Speech Recognition **Software on individual units may vary from list based on the model.**

FEATURE	SPECIFICATION

Configurations	All models and features for the Mesa Pro are configured for United States/Canada, European Union or Australia.
	
	Mesa Pro is offered in the following models:
	
	   · Intel® 11th Generation Core™ i5 (Standard)
	   · Intel® 11th Generation Core™ i7
	   · Intel® 11th Generation Celeron®
	
	The following configurations are available:
	
	   · Storage: 256 GB, 512 GB, and 1 TB
	   · Wi-Fi
	   · Long range Bluetooth wireless technology
	   · Front and rear facing cameras
	   · 4G LTE cell modem
	   · Hot-swappable batteries
	   · Keypad
	   · Barcode scanner (optional)
	   · RS-232 port (optional)

Camera	· Rear: 13 MP with LED illumination and auto-focus · Front: 2MP
4G LTE Data Modem (optional)	· Sierra Wireless EM7411 (North America) · Quectel EM06-E (EU/Australia) · Supports nano SIM card only. Nano SIM card header inside battery compartment with card detect feature and card tray. · Does not support voice calls or SMS · Supports HSUPA, HSDPA, HSPA, HSPA+, WCDMA, LTE, FirstNet *For more details, see *4G LTE Data Modem - Additional Information* at the end of this chapter.

FEATURE	SPECIFICATION
GPS/GNSS (optional)	• 3 to 5 meter typical accuracy • gpsOneXTRA correction services • 30 simultaneous GNSS tracking channels
Barcode 1D/2D Imager (optional)	• Optional built-in barcode imager and decoder • Symbologies: All common 1D, 2D (PDF417, MicroPDF417, Composite, RSS, TLC-39, Data matrix, QR code, Micro QR code, Aztec, MaxiCode, Postal codes, etc.) • Visible aiming bullseye with low-light illumination • Barcode Connector™ Utility: Wedge and configuration, SDK support available
RS-232 (optional)	• RS-232C 9-pin D-sub connector • Software configurable for either 5 V @ 600 mA or 12 V @ 390 mA available on pin 9
Standard Accessories	• Removable Li-ion battery • Adjustable hand strap • AC wall charger with international plug kit • Capacitive fine tip stylus with tether • Quick Start Guide • Connector port dust cover • User's Manual (on our website) • Two year warranty on Mesa Pro

FEATURE	SPECIFICATION

Optional Accessories	• Integrated RS-232 9-Pin, D-Sub Communication
	• Survey/GPS pole clamp and mount
	• Office Stand
	• AC wall charger, 60 W
	  - includes cord with U.S. plug
	  - Input: 120-240 V AC, 50/60 Hz
	  - Output: 19 V DC, 3.16 A
	• Battery charger
	• Shoulder strap
	• Serial cable
	• 4-point harness
	• SD cards in various memory sizes
	• Screen protector (anti-glare or ultraclear)
	• Office 365

Customization	• Available upon request

4G LTE Data Modem - Additional Information

MODE	MODEL/REGION	FREQUENCY BANDS
LTE	North America	B2, B4, B5, B7, B12, B13, B14, B25, B26, B41, B42, B43, B48, B66, B71
LTE	EU/Australia/ROW	B1, B3, B5, B7, B8, B20, B28, B32, B38, B40, B41
WCDMA/ HSPA	North America	B2, B4, B5

MODE	MODEL/REGION	FREQUENCY BANDS
WCDMA/ HSPA	EU/Australia/ROW	B1, B3, B5, B8
FirstNet	North America	B14
CBRS	North America	B48

Note: ROW = Rest of World, or Non-North America

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