Removing the External Battery

1. Press the locking switch on the top-left side to the unlock position.

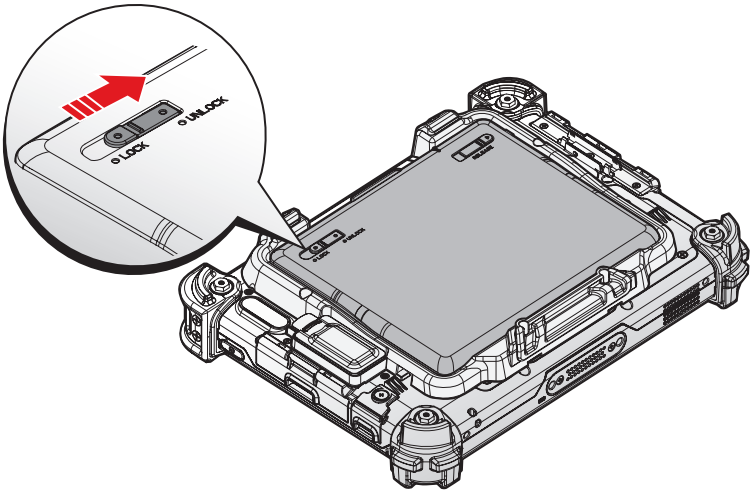

Figure 66. Unlock the External Battery

2. Press and hold the release button as shown in the image to release the battery.
3. Hold the battery and angle the top side up to remove.

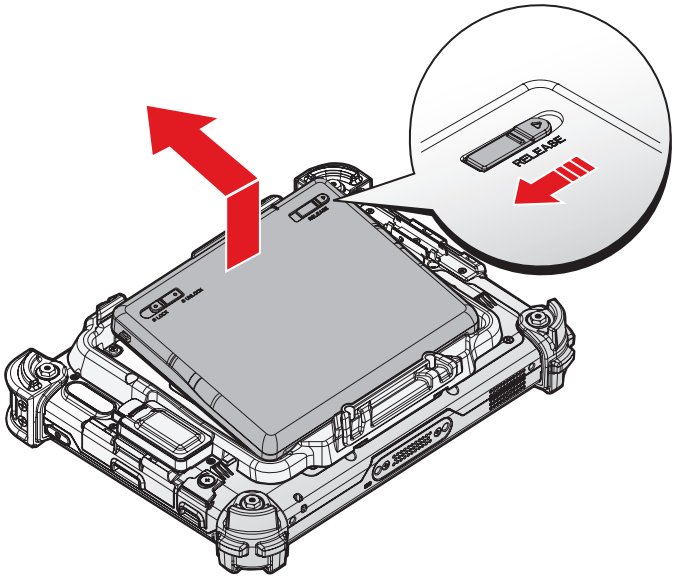

Figure 67. Removing the External Battery

4. Flip the connector cover up to remove it from the cover placeholder.

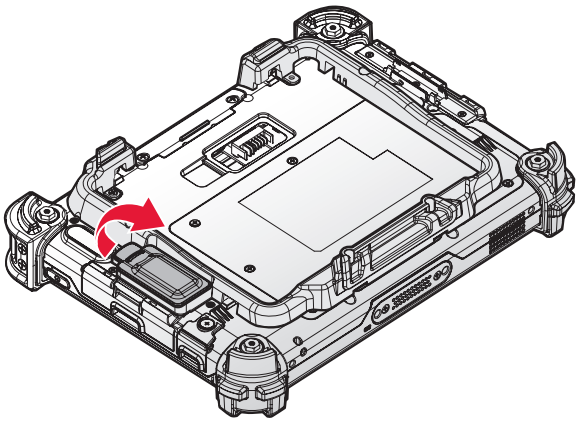

Figure 68. Removing the External Battery Connector Cover

5. Remove the screws securing the external battery bracket.

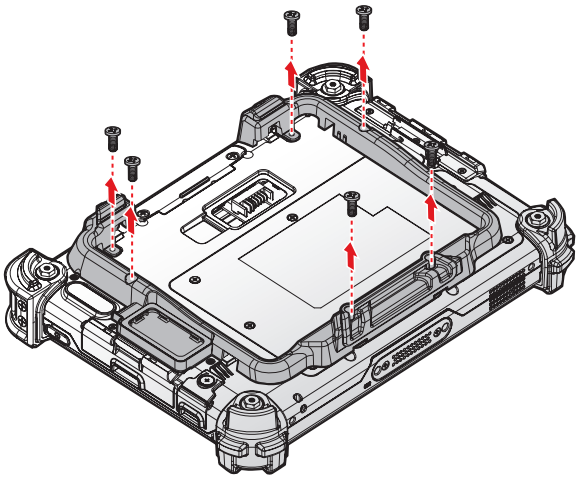

Figure 69. Removing the Screws

6. Push the external battery bracket forward the bottom of the PM-311B to release the bracket.

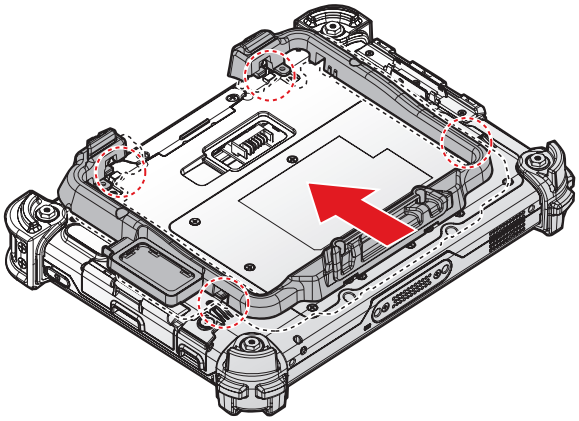

Figure 70. Releasing the External Battery Bracket

7. Remove the external battery bracket.

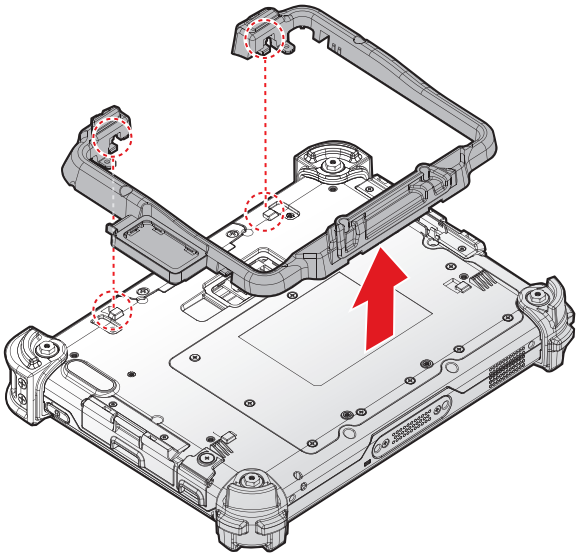

Figure 71. Removing the External Battery Bracket

8. Install the connector cover in the external battery compartment to protect the battery connector.

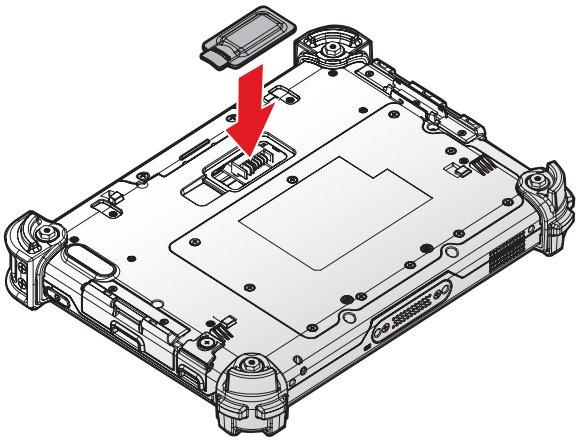

Figure 72. Installing the External Battery Connector Cover

Magnetic Stripe Reader and Barcode Scanner

The Magnetic Stripe Reader (MSR) and Barcode Scanner modules are optional components. Contact your representative for ordering information.

Installing the Module

1. Power off the PM-311B. See *"Powering Off the Device"* on page 20.
2. Remove the snap-on module connector cover. See *"Removing the Snap-on Module Connector Cover"* on page 31.
3. Align the module correctly. The barcode scanner sensor must be facing the rear of the device.
4. Align connectors on the module and the device.
5. Insert the device over the connector and press down. An audible click sounds when the module is installed correctly.

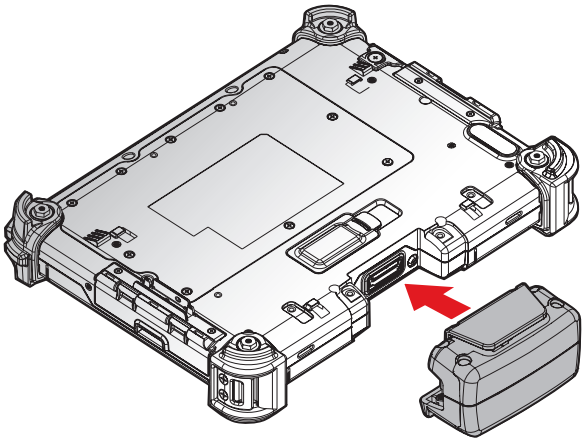

Figure 73. Installing the Module

6. Secure the module and the PM-311B with the screws.

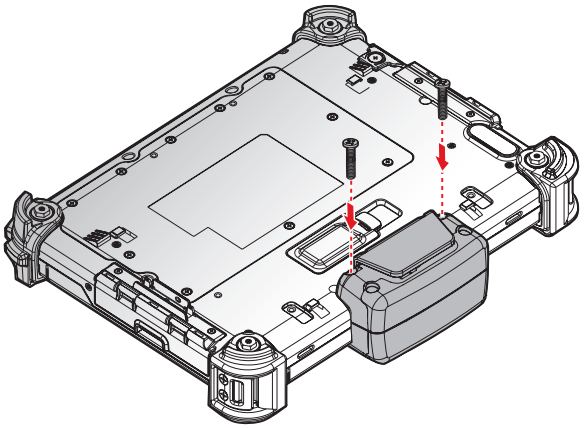

Figure 74. Installing the Screws

Removing the Module

1. Power off the PM-311B. See *"Powering Off the Device"* on page 20.
2. Remove the screws securing the module.

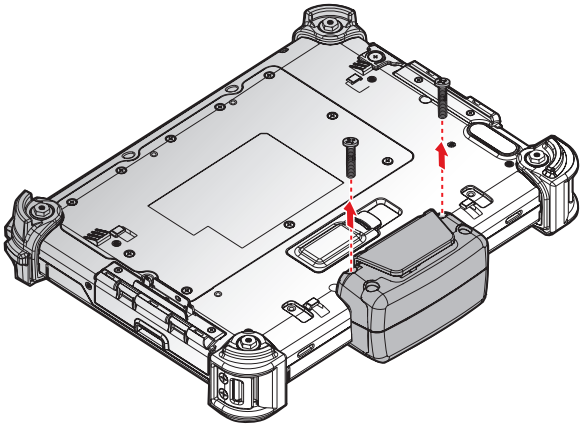

Figure 75. Removing the Screws

3. Grasp the module from both sides and gently pull the module off.
4. Remove the module.

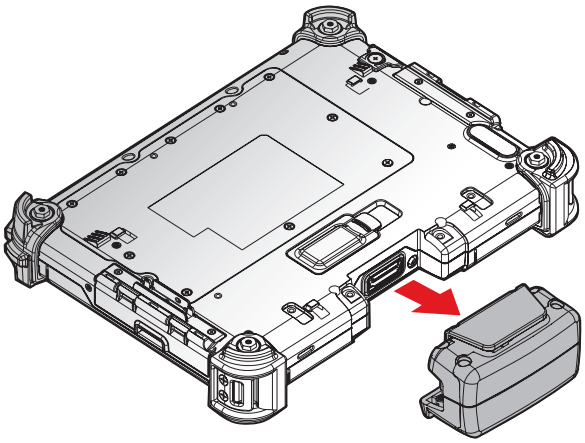

Figure 76. Removing the Module

5. Replace the snap-on module connector cover. See *"Replacing the Snap-on Module Connector Cover"* on page 32.

Connecting to a Wireless Network

Before you can make use of the PM-311B wireless functions, you need to connect to a network. The following is a set of procedures for connecting to a wireless network.

1. Before beginning, make sure your Wi-Fi setting is enabled and you are within range of a wireless network. If your Wi-Fi setting is disabled, proceed to step 2.
   - Find the network icon located on the right side of the taskbar. If the icon displays an X in a red circle, you are not within range of a wireless network. Move to a different spot until the Wi-Fi icon changes status indicating availability to a wireless network.
2. From any screen, open the Charms bar by sliding your finger inward from the screen's right edge. The Charms bar displays along the screen's right side.
3. In the Charms bar, tap **Settings** to open the **Settings** menu.

4. In **Settings**, tap the Network icon to display the Networks connection settings.
5. The Wi-Fi menu displays. By default, the Wi-Fi menu is set to Off. Tap the bar next to Off to toggle Wi-Fi to On. This enables the Wi-Fi option.
6. Once Wi-Fi is enabled a listing of all available wireless networks displays. The wireless networks with the strongest signal are atop the list.
7. Select the network you want to connect, and tap the **Connect** button. You can tap the **Connect Automatically** check box if you connect to this network frequently. If you connect to the network, you are finished with the process. The network is considered an Open unsecured network, no password is required.
8. If a password is required, type the password in the **Enter the network security key** field. Alternatively, you can also push the WPS button on your router to begin the security handshake.
9. Tap **Next** to finish the connection process.

You have successfully connected to a wireless network.

Paring the NFC Device

The NFC function allows the transfer of information between two NFC-equipped devices. Before beginning the procedure make sure your smart device has the NFC function enabled.

To enable and use the NFC function:

1. Tap **APPS** > **Setting** > **More...**.
2. Tap **NFC** to turn the NFC function on.
3. Use your NFC-enabled device to touch to the PM-311B.

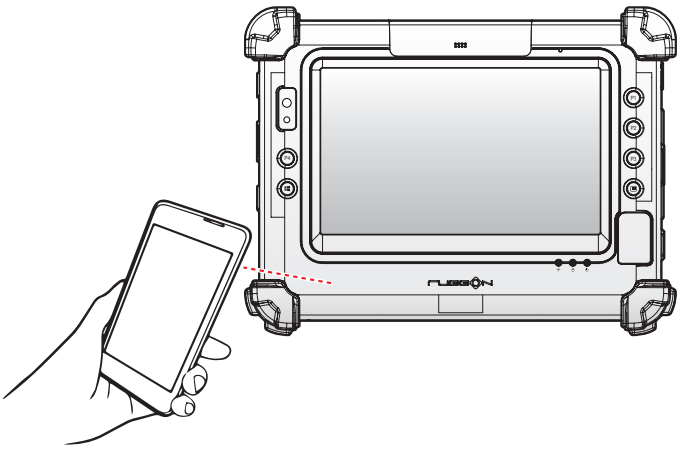

Figure 77. Paring the NFC Device

Once the two devices are paired, information sharing is available through the NFC connection.

Chapter 4. Using BIOS Setup Utility

Your ruggedized tablet has a BIOS setup utility which allows you to configure important system settings, including settings for the Boot and AP menus as well as the device's basic settings--the system reads the basic settings during initialization in order to boot correctly

When to Use the BIOS Setup Utility

You need to run the BIOS Setup utility when:

- Restoring to BIOS settings to factory default
- Modifying specific hardware settings
- Modifying specific settings to optimize system performance
- Installing Windows 10 operating system

Accessing the BIOS Setup Utility

The BIOS Setup Utility screens shown in this chapter are for your reference only. The actual images or settings on your tablet computer may differ.

The BIOS Setup Utility program may have been updated after the publication of this manual.

To run the BIOS Setup Utility, use the following procedures:

1. Connect a keyboard to the PM-311B.
2. When the PM-311B is powered off, press the Power button to start up the device. The power LED lights. Press **F5** on the keyboard or **Home** key on the PM-311B until the BIOS Post screen displays.

The BIOS POST screen appears as shown.

3. From the BIOS POST screen select **App Menu** to open the BIOS Setup Utility.

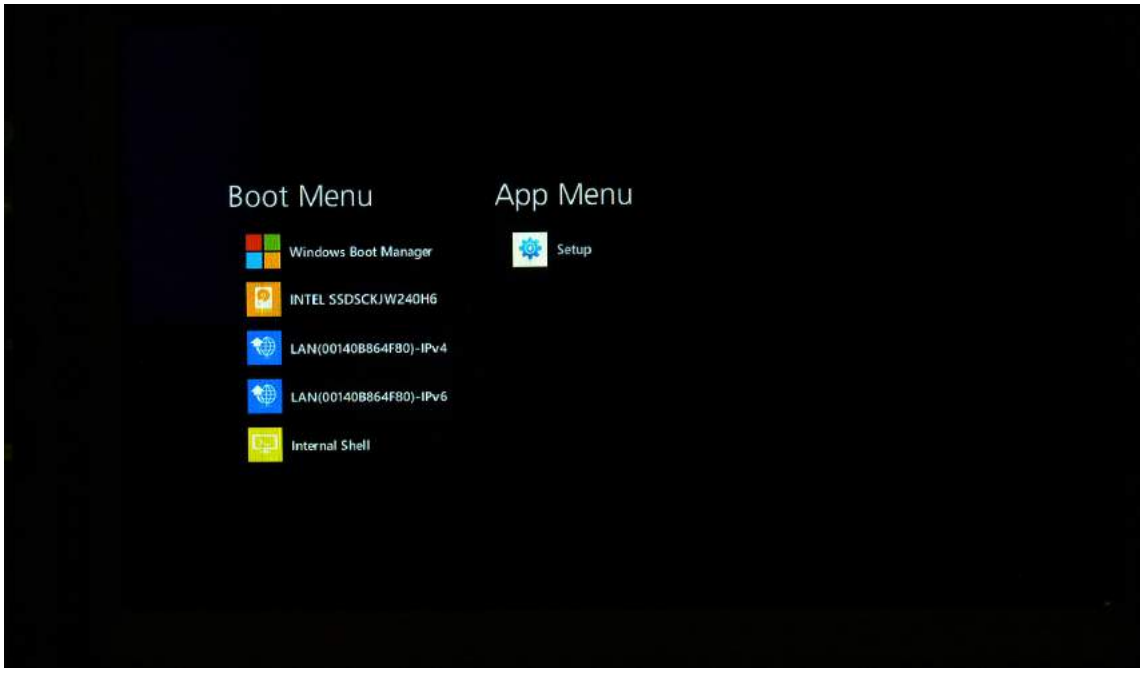

Figure 78. BIOS POST Screen

Due to the device's fast boot up and boot down time, there is only a small time frame of a few seconds between the release of the Power button and the opportunity to press the Windows Home key.

The App Menu displays.

Figure 79. BIOS Setup Utility: App Menu Screen

Installation an Operating System

Setting Up a Windows 10 Installation Environment

There are several settings in BIOS that must be modified before you can install a Windows 10 operating system.

Use the following guidelines to prepare the BIOS environment:

- Step 1: Enable CSM Support
  1. Access the BIOS Setup Utility, see *"Accessing the BIOS Setup Utility"* on page 52.
  2. Navigate to **APP Menu** > **Main** > **Boot Features**.
  3. Locate the **CSM Support** setting and tap the drop-down menu to display the options.
  4. Tap **Yes** to enable CSM support.

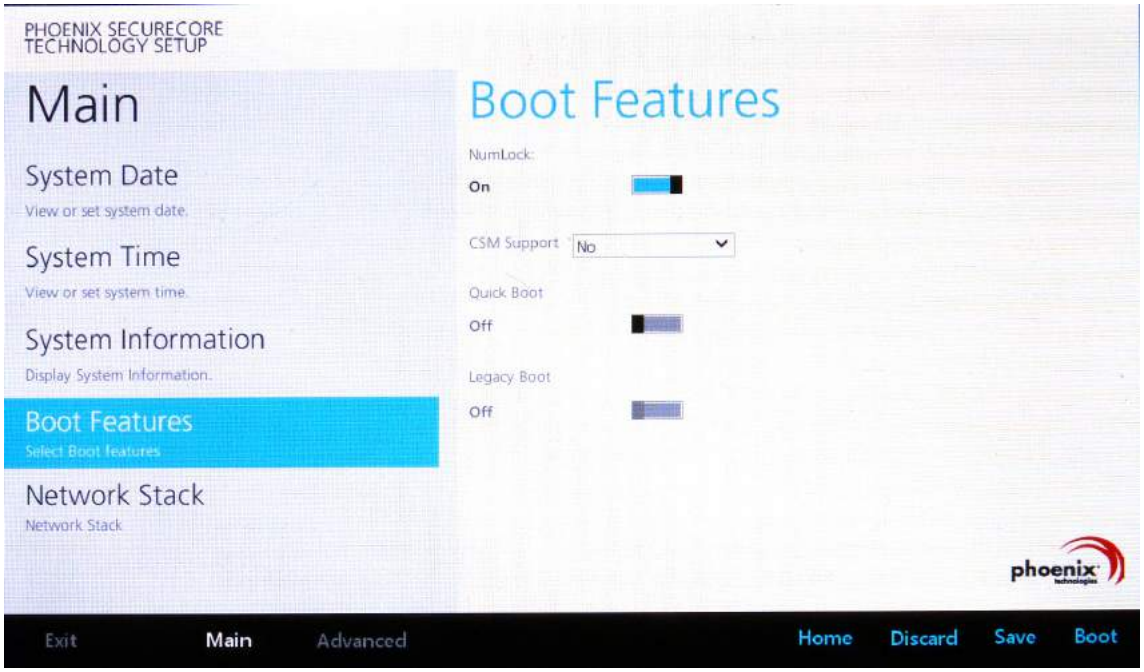

Figure 80. Main > Boot Features

- Step 2 Enable Legacy Boot
  1. Access the BIOS Setup Utility, see *"Accessing the BIOS Setup Utility"* on page 52.
  2. Navigate to **APP Menu** > **Main** > **Boot Features**.
  3. Locate the **Legacy Boot** setting and tap on the menu to select **On** enable legacy boot.

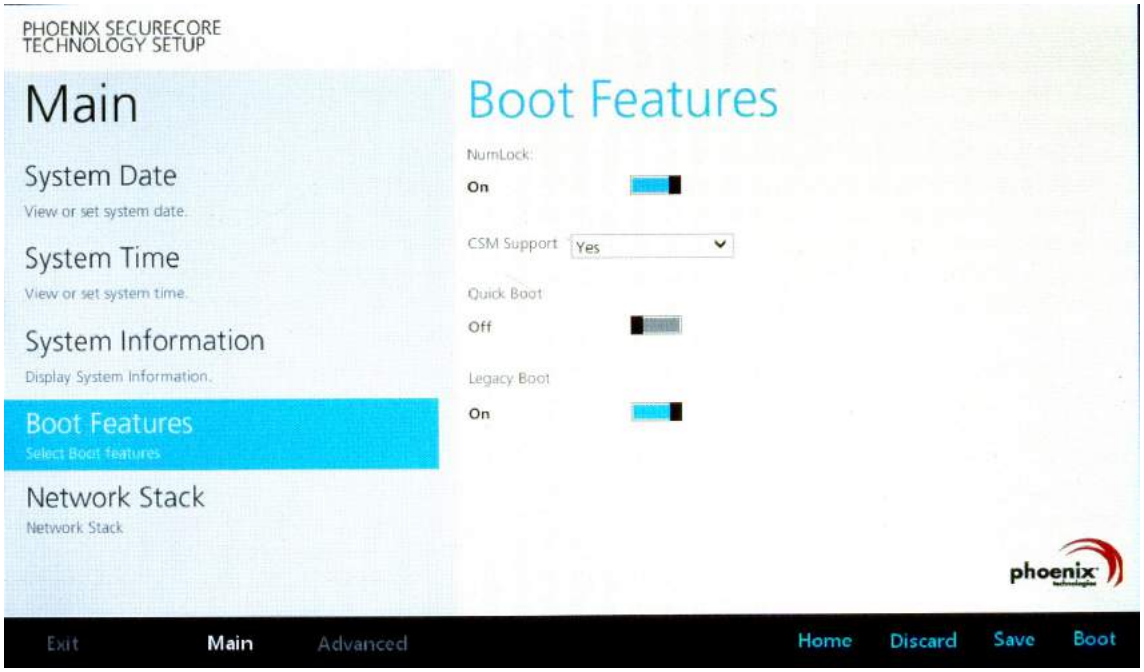

Figure 81. Main > Boot Features

- Step 3: Advanced > Miscellaneous Configuration
- Save the Settings

After you configure BIOS, you will need to save the settings.

1. Navigate to **APP Menu** > **Exit** and tap **Exit Saving Changes**.

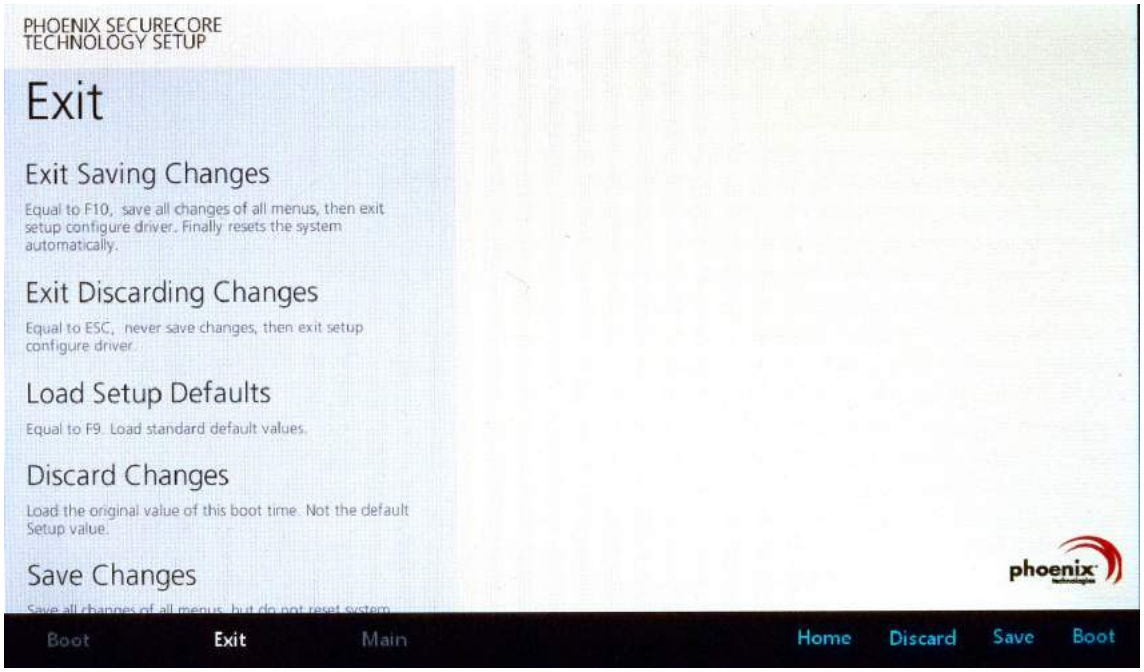

Figure 82. Exit the BIOS Utility

2. A prompt display, tap **Yes** to save the configuration.

The BIOS settings are configured and the Windows 10 operating system can be installed.

BIOS Passwords

Setting Up a Supervisor Password

To setup a supervisor password, follow the procedure as described:

1. Go to **APP Menu** > **Security** > **Account's Password Status**.
2. Tap the **Enter** icon next to **Setup the Supervisor Password** to access the virtual keyboard.

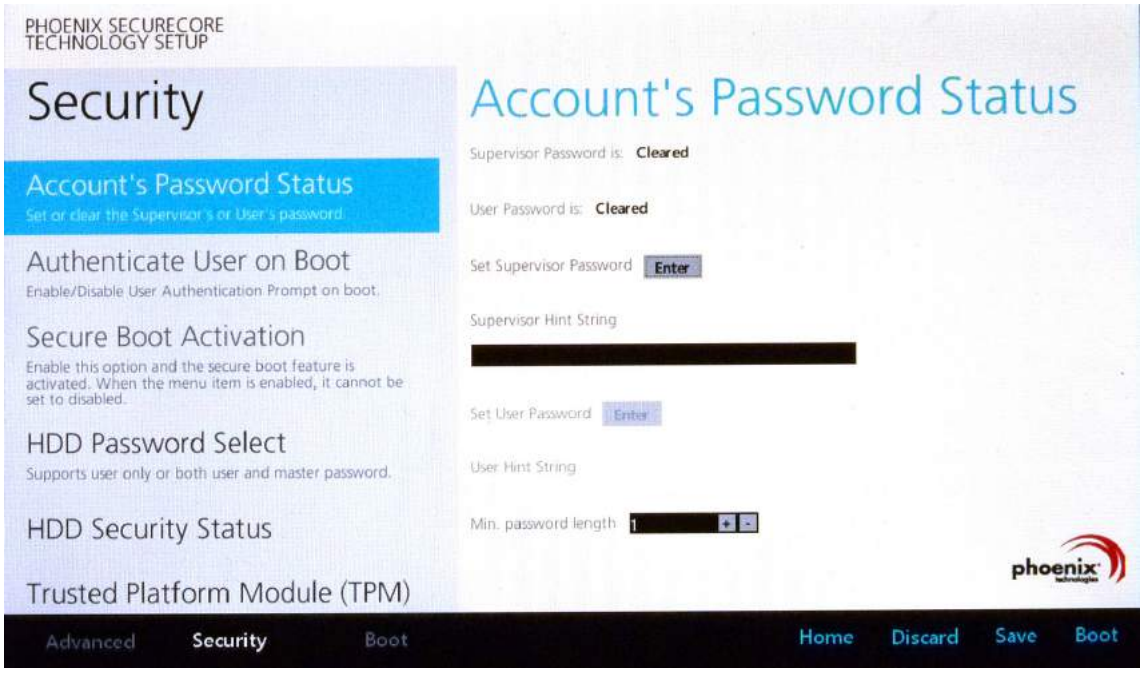

Figure 83. Security > Account's Password Status

3. Tap the password to use for the Supervisor profile and tap **Enter**.

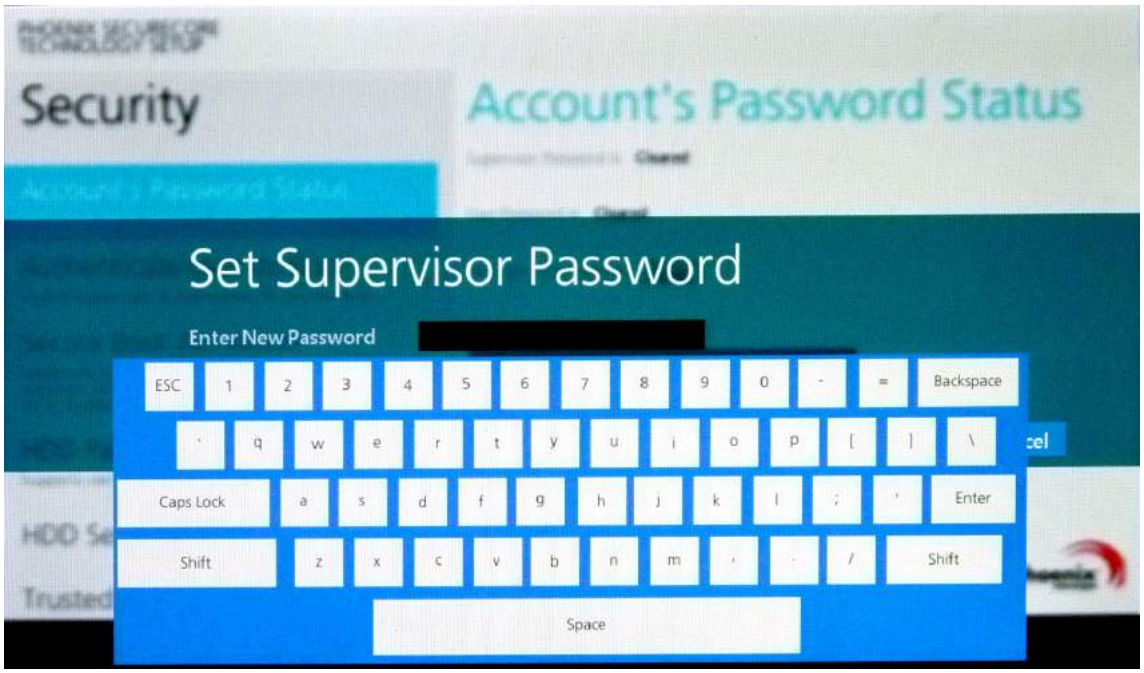

Figure 84. Set Supervisor Password

4. Verification of the password is required. Tap the same password again and tap **Enter** to confirm the new password.
5. Navigate to **APP Menu** > **Exit**.

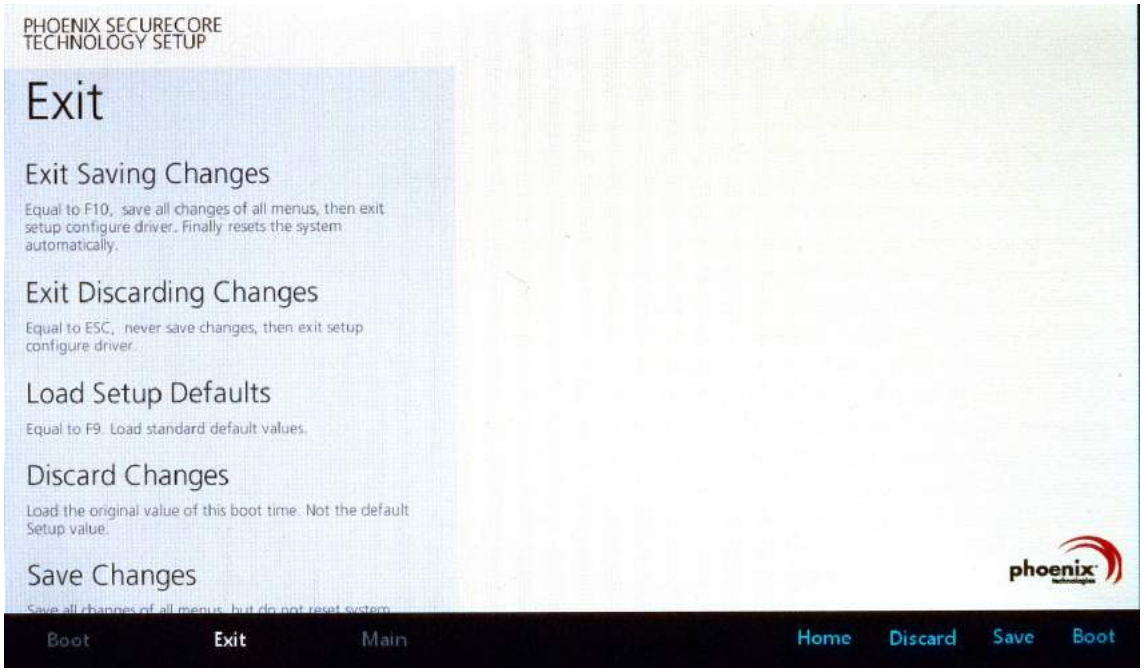

Figure 85. Exit Screen

6. Tap **Exit Saving Changes** to display the confirmation screen.
7. Tap **Yes** to save the new configuration settings.

After setting the Supervisor password, the password is required to access the BIOS Setup Utility.

Changing a Supervisor Password

1. Navigate to **APP Menu** > **Security** > **Account's Password Status**.
2. Tap the **Enter** icon next to **Setup Supervisor Password**.
3. Enter the current supervisor password.
4. Enter a new password.
5. Enter the new password again to confirm.
6. Go to **APP Menu** > **Exit**.
7. Tap **Exit Saving Changes** and tap **Yes** to save the configuration.

Resetting a Supervisor Password

A supervisor password can not be reset. In the event that you forget the supervisory password, you will need to reflash the BIOS to enter the BIOS menus. Refer to *"Updating BIOS"* on page 58 to reflash the BIOS.

EC and BIOS

Updating BIOS

This procedure allows you to update and reflash the system BIOS. Both procedures follow the same steps as described in the following.

Make sure to protect your device from power loss during the BIOS update procedure to prevent irreparable damage to your system's mainboard.

For this procedure, it is highly recommended to connect the device to the AC adapter to prevent a sudden loss of power during the BIOS updating process.

1. Contact your technical sales or technical representative to obtain the correct BIOS file.
2. Copy the BIOS file on to the USB device.
3. Connect the USB device to one of the device's USB ports and power on the PM-311B.

A USB keyboard is required for entering command.

4. Once the device is on and the Windows 10 Home screen displays, open the Charms bar by sliding your finger inward from the screen's right edge. The Charms bar displays.
5. Tap **All settings** from the displayed menus.

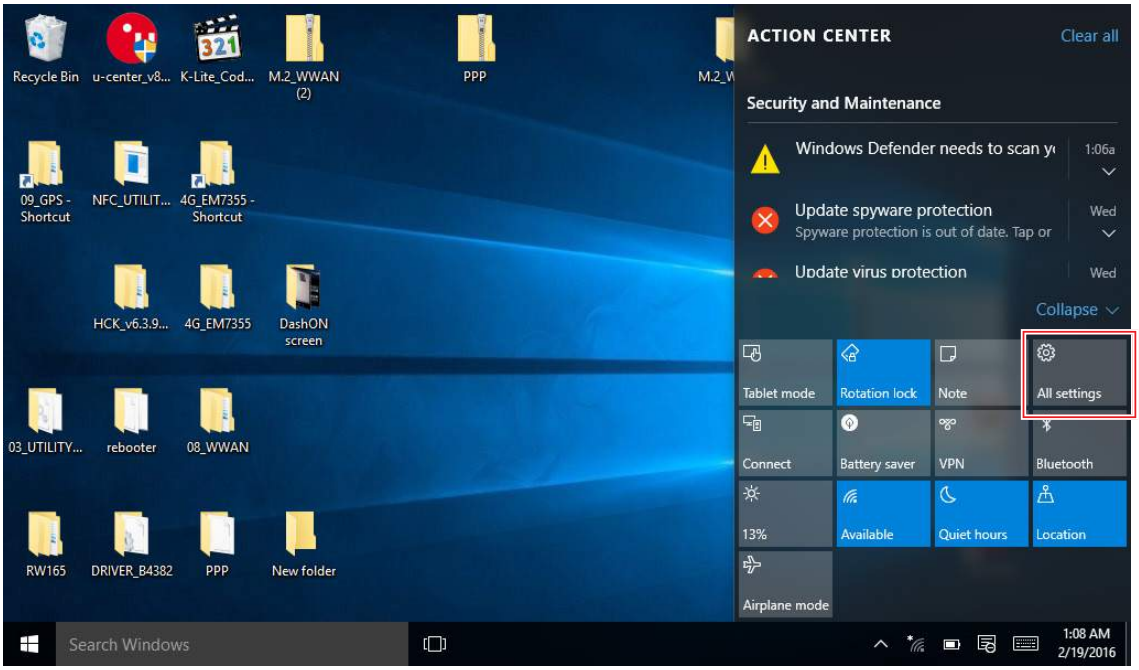

Figure 86. Charms Bar > All Settings

6. Tap **UPDATE & SECURITY**.

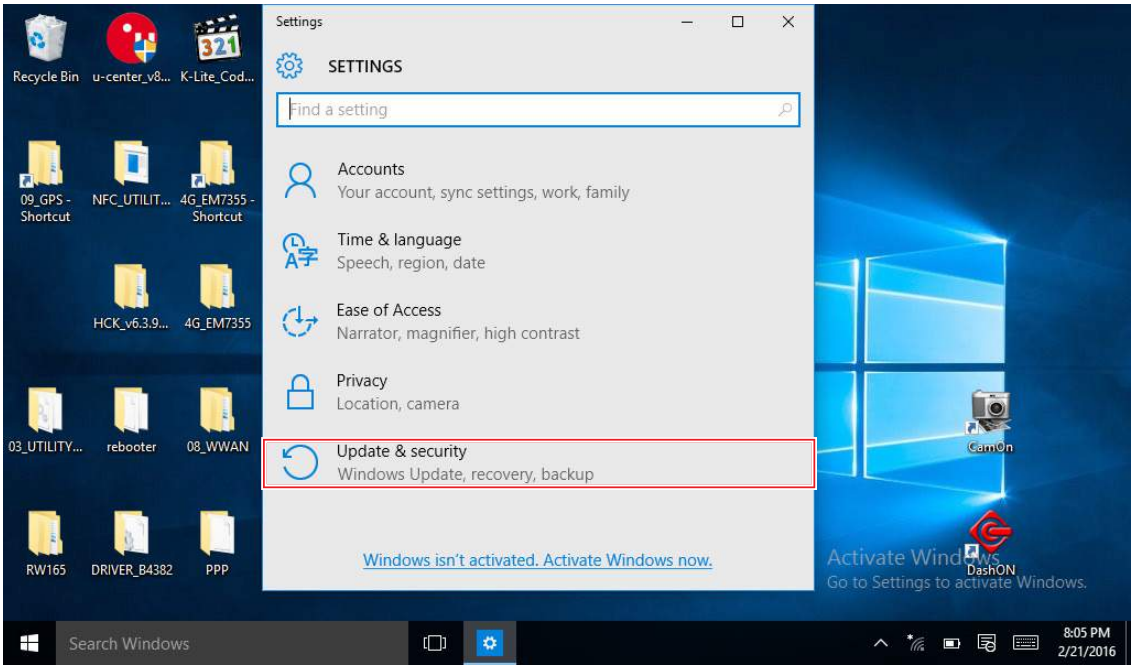

Figure 87. UPDATE & SECURITY

7. From the **UPDATE & SECURITY** menu, tap **Recovery** to continue.

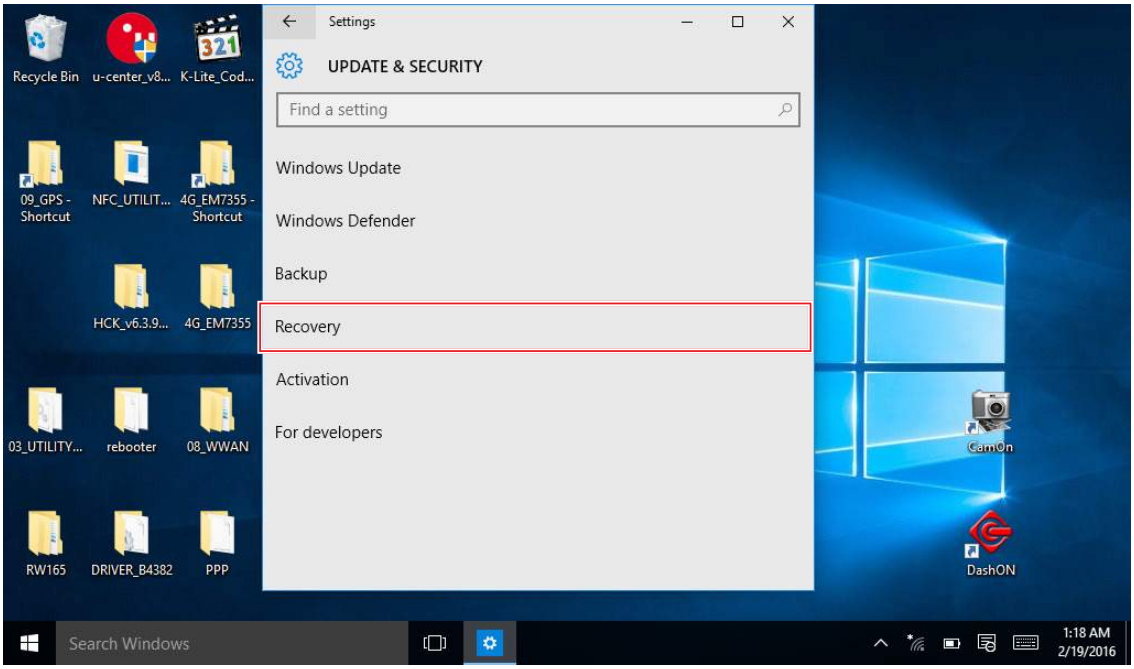

Figure 88. Recovery

8. From the **RECOVERY** screen, tap **Restart now**.

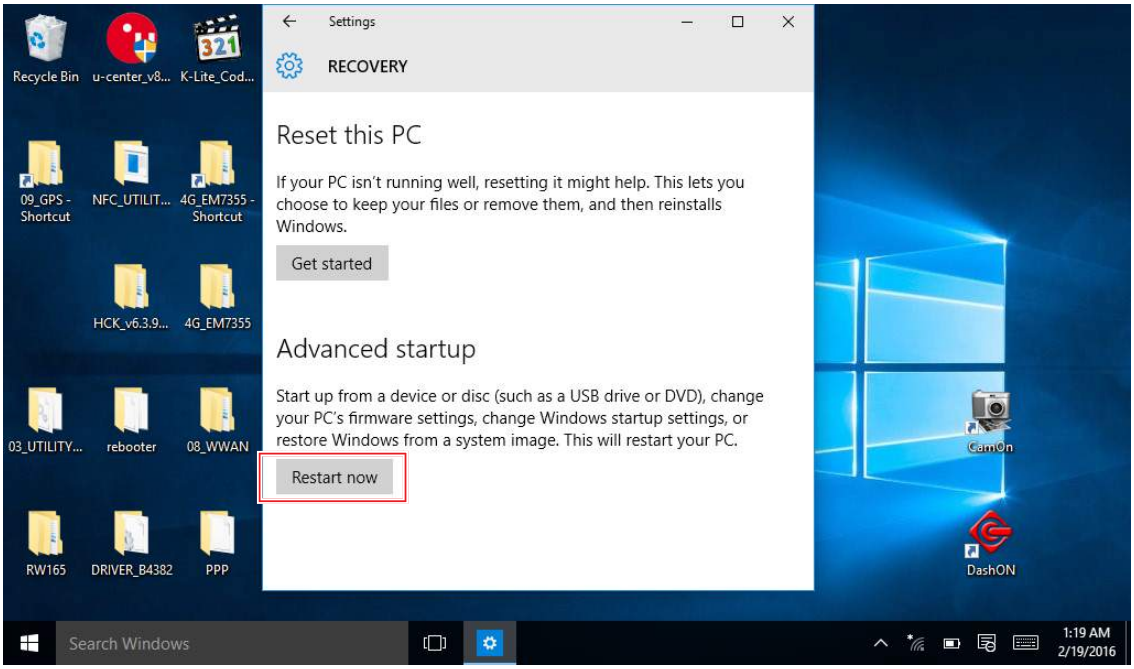

Figure 89. Restart Now

9. Tap **Use a device** to select a boot up preference.

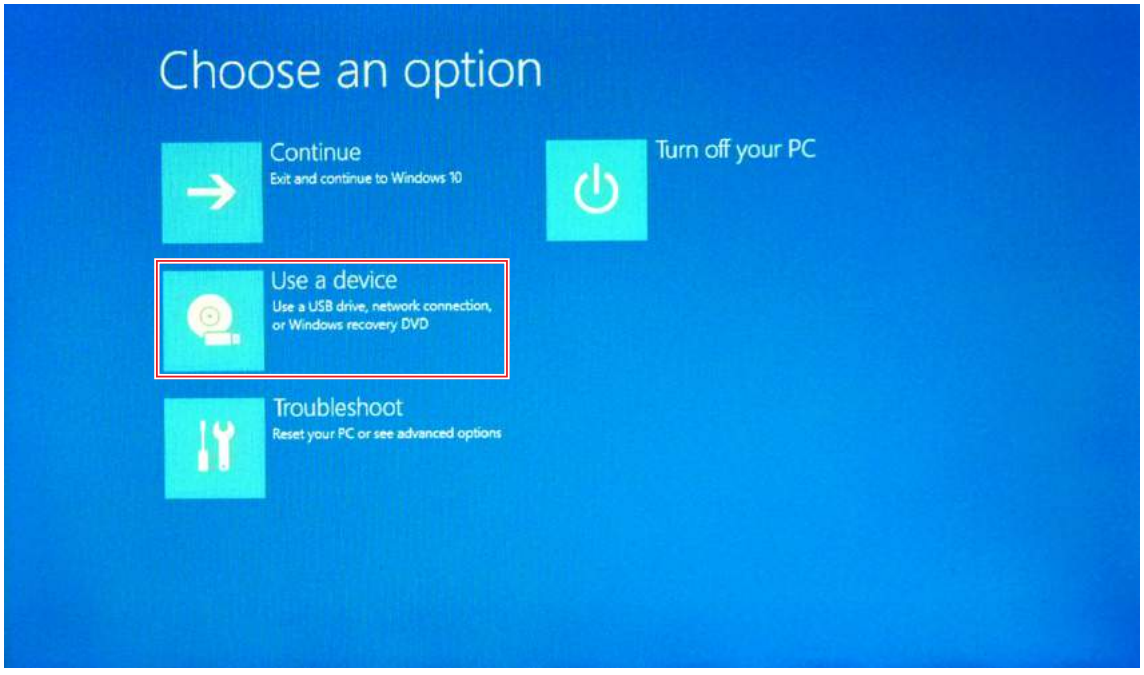

Figure 90. Use a Device

10. From the **Use a device** menu, tap **Internal Shell** to open the command screen.

Make sure connect the PM-311B to the AC adapter to prevent a sudden loss of power.

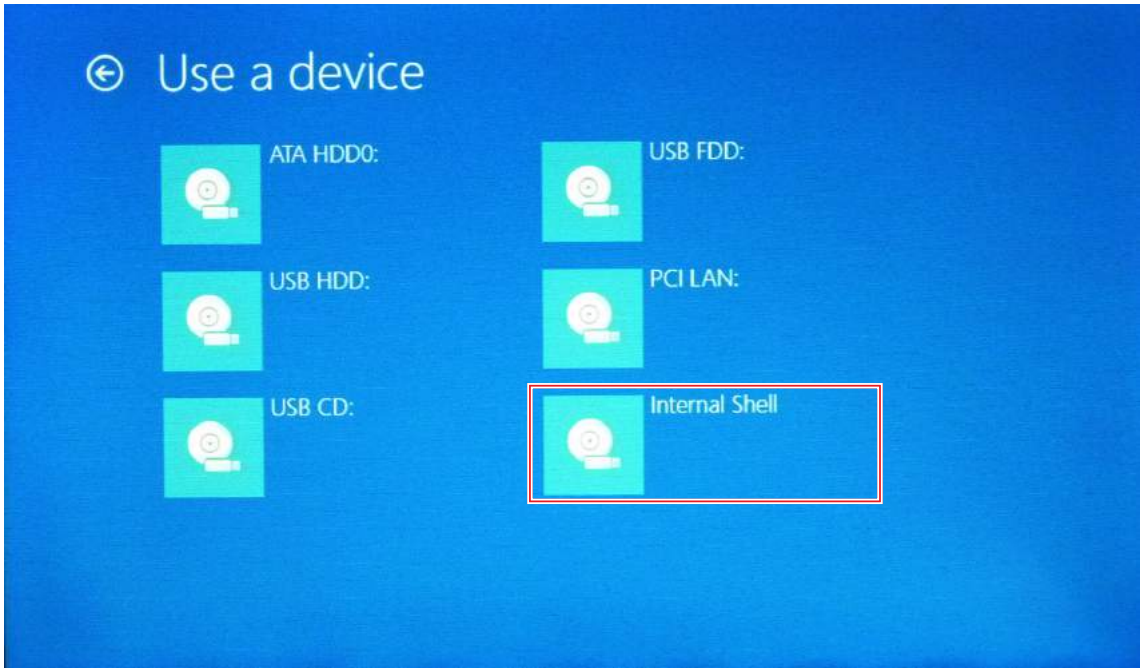

Figure 91. Internal Shell

11. In the command screen, enter `fs1:` to select the USB device already connected to the device. The command directs you to the USB device's root menu.

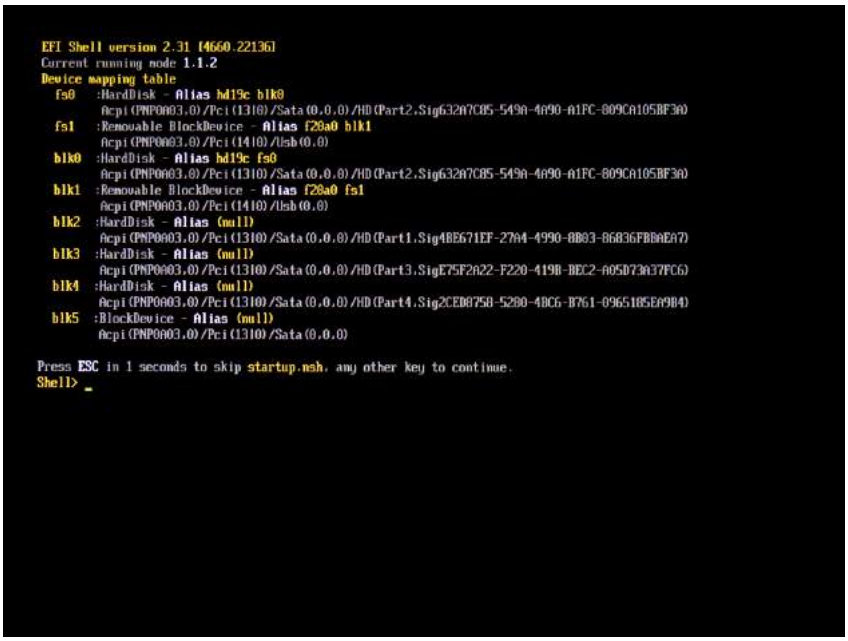

Figure 92. Internal Shell Command Screen

12. If the BIOS file is in a folder and not in the root directory, navigate to the target folder.
13. Type `wf` (.nsh) and tap Enter. `wf` is the designated BIOS file.
    Do not turn off your device or interfere with the reflash process until the process is complete.
14. Once the process is complete, the PM-311B automatically reboots.

The BIOS is now updated.

Updating EC

Connect the PM-311B to the AC adapter to prevent a sudden loss of power.

1. Updating EC requires the use of the Internal Shell Command menu, refer to steps 1 to 12 of *“Updating BIOS”*.
2. Enter the EC source file folder.
3. In the source folder, enter `f`.
4. Do not turn off your device or interfere with the reflash process until the process is complete.

   The system reboots once the process is completed.

Chapter 5. Using the DashON Utility

Overview

The DashON resident program is designed to provide near-instant access to your device's settings and configuration within a single, easy to use interface.

The following information illustrates and describes the various settings available for configuration through the DashON menus.

Important: Do not terminate or remove the DashON program manually or the ambient light sensor and the function buttons will be malfunction.

Figure 93. DashON Overview

Function	Description
EXIT	Minimize DashON and return to the desktop.
Button Lock	Lock or unlock all the physical buttons except Power button.
Screen Auto Rotate	Disable or enable screen auto rotate function.
Airplane	Turn on or off the airplane mode.
Battery	Shows the battery level or charging status.
Brightness	Adjust brightness level and enable or disable auto brightness function.
Volume Control	Adjust volume level and enable or disable mute function.
GNSS	Disable or enable GNSS function.
Wi-Fi	Disable or enable Wi-Fi function.
Bluetooth	Disable or enable Bluetooth function.
Touch Screen Lock	Lock or unlock the touch screen.
ECO Mode	Disable or enable ECO mode to save battery life when using the device.

Function	Description
Power Plan	Manage how your tablet uses power.
Info Viewer	View system specifications. The menu is for display only.
Display Switch	Choose a display mode when connect to another output device.
Button Setting	Pre-defined functions settings. Supports function button customizing.
Camera	Use the rear camera to take photos and videos.

Chapter 6. Troubleshooting

Use the troubleshooting tables in this section to fix problems with the Wi-Fi connection, 802.1x security, or general problems with operating the computer.

If you send the computer in for service, it is your responsibility to save the computer data and configuration. RuggON is responsible only for ensuring that the hardware matches the original configuration when repairing or replacing the computer.

Troubleshoot the Wi-Fi Connection

Use this troubleshooting table to help solve problems with your 802.11 radio connection.

Q. When you turn on the computer after it was suspended for a while (10 to 15 minutes or longer), it can no longer send or receive messages over the network.

A. Host may have deactivated or lost current terminal emulation session. In a TCP/IP direct connect network, turn off the “Keep Alive” message from host to maintain the TCP session while the computer is suspended.

Q. The computer is connected to the network and you move to a new site to collect data. Your computer now shows you are not connected to the network.

A. Move closer to an access point or to a different location to reestablish communications until you reconnect with the network.

Q. The computer appears to be connected to the network, but you cannot establish a terminal emulation session with the host computer.

A. There may be a problem with the host computer, or with the connection between the access point and the host computer. Check with the network administrator to make sure the host is running and allowing users to log in to the system.

Q. The computer appears to be connected to the network, but the host computer is not receiving any information from the computer.

A. There may be a problem with the connection between the access point and the host computer. Check with the network administrator or use your access point user’s manual.

Q. A network connection icon appears in the toolbar, but then disappears.

A. The computer may not be communicating with the intended access point. Make sure the network name matches the access point network name.
The access point may not be communicating with the server. Ensure the access point is turned on, properly configured, and has 802.1x security enabled.

Troubleshoot Operating the Computer

Use this section to troubleshoot problems that may prevent you from being able to operate the computer.

Q. You press the Power button and nothing happens.

A. Make sure that power is connected to the computer.

Q. The computer appears to be locked up and you cannot enter data.

A. Restart the computer.

Call Product Support

Simple instructions please contact the dealer, contact ruggon representative, or leave a message visit the RuggON website at www.ruggon.com.

To better assist you have the following information ready:

- Configuration number
- Serial number
- Operating system, BIOS, and MCU versions
- Service pack version
- System component versions
- If you are using security, know the type and the full set of parameters

Chapter 7. Maintenance

Cleaning the Device

Danger to electric shock when cleaning or maintaining the PM-311B.

To avoid electric shock, turn the PM-311B off and disconnect it from the power supply before cleaning or maintaining it.

Housing

- The housing of the PM-311B is best cleaned with a damp cloth.
- Use compressed air, a high-pressure cleaner or vacuum cleaner may damage the surface.
- Use a high-pressure cleaner, the additional risk of water entering the PM-311B may damage the electronics or touch screen.

Touch Screen

- Use neutral detergent or isopropyl alcohol on a clean soft cloth to clean the panel surface.
- Prevent using any kind of chemical solvent, acidic or alkali solution.

Returning the Device

Please put the contents in the original package gently when you need to return the PM-311B.

Contacting RuggON

If you experience technical difficulties, please consult your distributor or contact the technical services department:

www.ruggon.com

RUGGPAD