

SOKKIA

SHC6400

Field Computer



SOKKIA

SHC6400 User Manual

Part Number 1068442-01 Sokkia (31278-02 JS)

Revision C

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Preface

Thank you for purchasing this Sokkia product. The materials available in this Manual (the “Manual”) have been prepared by Topcon Positioning Systems, Inc. (“TPS”) for owners of the covered Topcon product (the “Product”) and are designed to assist owners with the Product. Use of the Product is subject to these terms and conditions (the “Terms and Conditions”).



NOTE Please read the terms and conditions carefully.

Terms and Conditions

Use

This product is designed to be used by a professional. The user should have a good knowledge of the safe use of the Product and implement the types of safety procedures recommended by the local government protection agency for both private use and commercial job sites.

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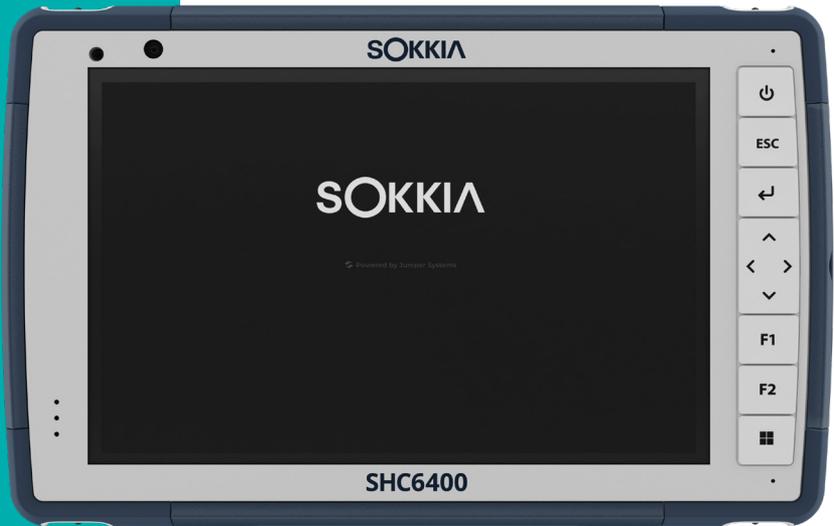
Manual Conventions

Convention	Description	Example
Bold	Button or key commands	Select Display .
<i>Italic</i>	Link or cross-reference	See <i>Chapter 3</i> for more information.

Icon	Purpose
 NOTE	Further information to note about the system configuration, maintenance, or setup.
 CAUTION	Notification that an action has the potential to result in minor personal injury, system damage, loss of data, or loss of warranty.
 WARNING	Notification that an action has the potential to result in personal injury or property damage.

1

Getting Started



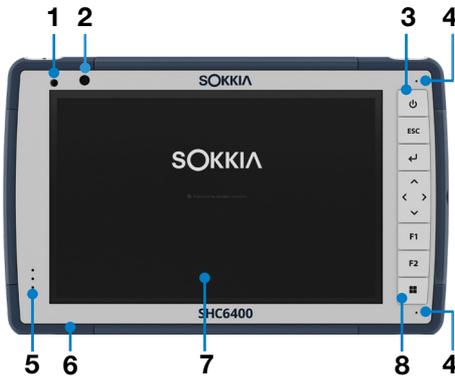
1. Getting Started

1.1 Overview

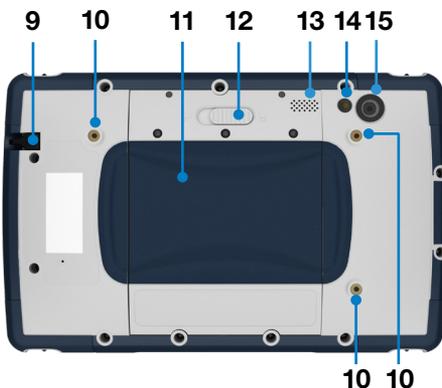
The SHC6400 from Sokkia has the Windows 11 Pro operating system. Standard features include a 7-inch display, capacitive touchscreen, keypad, front and rear cameras, *Bluetooth*, GPS/GNSS receiver, 4G LTE data modem, and Wi-Fi. Standard accessories include lithium-ion battery packs, an AC wall charger, a hand strap, a connector port cover, and a fine hard-tip capacitive stylus and tether. Optional features include an extended-range *Bluetooth* module.

1.2 The Anatomy of the SHC6400

1.2.1 Front and Back Features

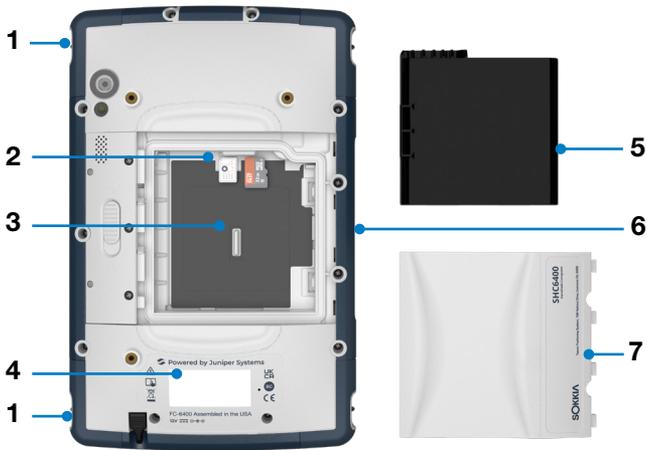


- 1 Ambient light sensor
- 2 Front camera, 5 MP
- 3 Power button
- 4 Microphone (one on each side)
- 5 Notification LEDs
- 6 Protective over-molded bumper (all four corners)
- 7 Touchscreen and display
- 8 Keypad



- 9 Storage slot for stylus
- 10 External device attachment point (three on the back)
- 11 Door to removable battery compartment and card slots
- 12 Battery door lock
- 13 Speaker
- 14 Camera flash
- 15 Rear camera, 13 MP

1.2.2 Battery Compartment and Card Slots



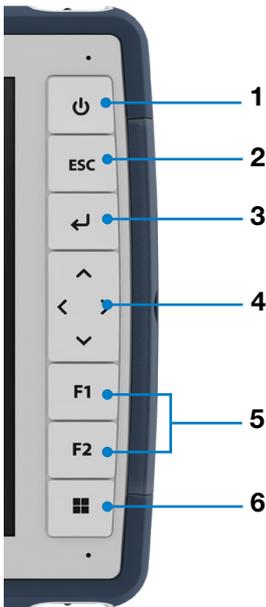
- 1 Hand strap attachment point (two on each side)
- 2 Nano SIM and micro SD card slots
- 3 Battery compartment
- 4 Location of internal battery (not user accessible)
- 5 Removable battery pack
- 6 Accessory connection pins
- 7 Battery door

1.2.3 Connector Ports



- 1 Connector port protector
- 2 USB-C
- 3 USB-A
- 4 Power input jack
- 5 Storage slot for fine hard-tip stylus

1.2.4 Keypad



- 1 Power button
- 2 Escape
- 3 Enter (return)
- 4 Directional cursor control
- 5 Programmable buttons
- 6 Windows Start screen

The Esc, F1, and F2 buttons are programmable. To assign other functions to the programmable buttons, see *Programmable Buttons on page 18*.

1.3 Perform Initial Tasks

When you receive your SHC6400, perform the tasks outlined in this section before first use.

1.3.1 Review Documentation

This user manual and other documents, such as release notes, are available on our website: <https://us.sokkia.com/sokkia-care>. View, download, and print documents as you desire. A PDF viewer is included with your SHC6400 apps.

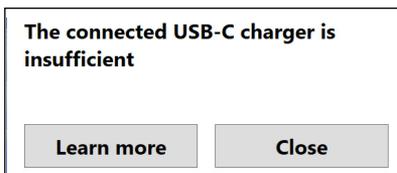
1.3.2 Charge the Battery Pack

The SHC6400 comes with a rechargeable and removable Li-ion battery pack, which is installed in the SHC6400 before shipping.

Before powering on the tablet for the first time, charge the battery pack at room temperature with the AC wall charger that came with the SHC6400 or a USB-C charger until fully charged.

- **AC wall charger**—Attach the appropriate plug for your country to the AC wall charger that came with the SHC6400 (or another approved charger from Sokkia). Plug the other end of the AC wall charger into the DC power jack on the SHC6400. With an approved AC wall charger, the batteries cannot be overcharged. (See [6.1.2 Wall Charger Warnings on page 51](#).)
- **USB-C charger**—Insert the USB-C charger into the USB-C port on the SHC6400. Connect the cable to a computer or wall charger. The USB-C charger must deliver 9–20 V with a minimum 27 W.

If the USB-C charger is insufficient to charge the SHC6400, an error message appears.



To view the charger's voltage and watt delivery, tap **Learn More**.

While the battery pack is charging, the red LED on the front of the SHC6400 blinks. When the battery pack is fully charged, the LED stops blinking.

1.3.3 Set Up Windows

When you power on the tablet for the first time, you are prompted to set up Windows. Follow the prompts to set up the tablet.

1.3.4 Attach the Hand Strap

A hand strap is included with the SHC6400. This allows you to securely hold the SHC6400. To attach the hand strap, fasten it to the two attachment points on the left or right side of the tablet, as shown in the images below.



1



2



3

1.3.5 Attach the Stylus Tether

A fine hard-tip capacitive stylus and tether is included with the SHC6400. To attach the stylus tether:

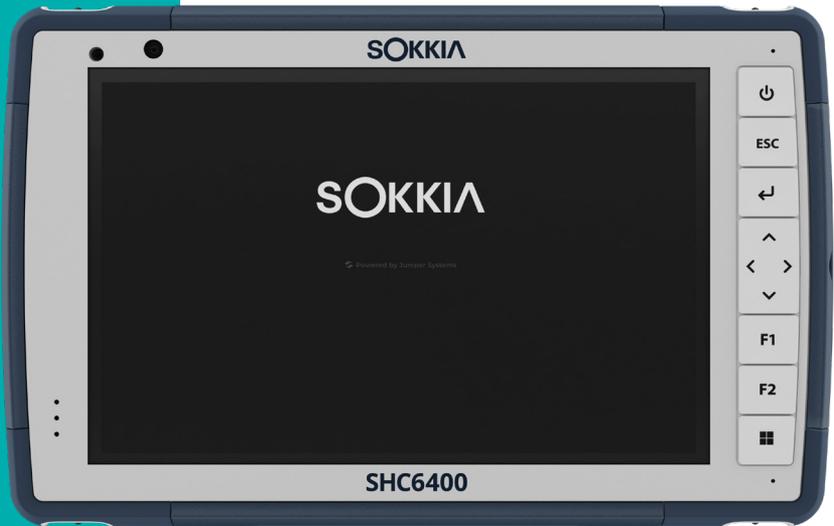
1. Attach one end of the stylus tether to the stylus.
2. Push the free tether loop through one of the tether attachment points located by each corner on the SHC6400.



3. Insert the stylus with the attached tether through this loop and tighten the loop.
4. Place the stylus into the stylus storage slot located on the bottom of the SHC6400.

2

Standard Features



2. Standard Features

This chapter discusses the standard features included with every model of the SHC6400.

2.1 Display

The SHC6400 has a bright color display and capacitive touchscreen with a diagonal viewing area of 7 inches (178 mm).

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



NOTE To quickly adjust the display brightness, tap the **Network**, **Sound**, or **Battery** icons on the right side of the taskbar and move the Brightness slider.

2.2 Camera

The SHC6400 has a 13 MP rear camera with auto focus and flash and a 5 MP front camera.

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

2.2.1 Photo and Video Library

Photos and videos are automatically stored in the Pictures folder. To locate the Pictures folder, open File Explorer and select **Home** in the left navigation pane.

2.3 Device Settings App

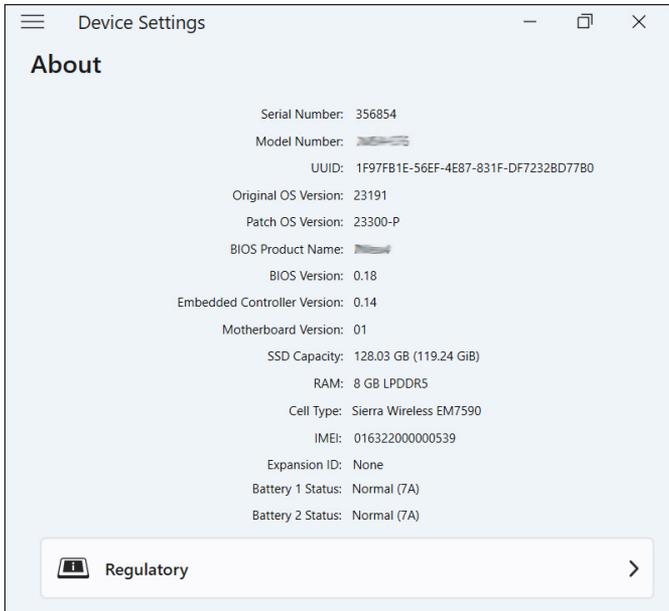
Device Settings is a built-in app that allows you to view detailed information about your device, including the serial number, model number, and OS version. The Device Settings app also includes options to adjust the touchscreen profiles, customize the programmable buttons, modify the GNSS settings, and update the SHC6400.

For information on the GNSS settings, see [2.14 GPS/GNSS Receiver on page 34](#).

2.3.1 About

From the About screen in Device Settings, view the serial number, model number, OS version, product name, BIOS version, embedded UUID controller version, motherboard version, SSD capacity, cell type, expansion

ID, and battery status of your tablet. The About screen also contains the regulatory information for the SHC6400.

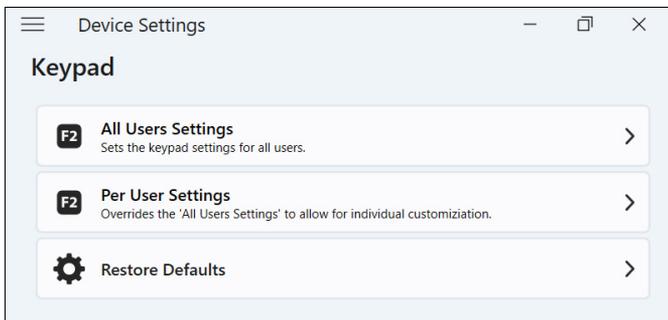


2.3.2 Keypad Settings

From the Keypad screen in Device Settings, customize the keypad backlight brightness, set the preferred function of each programmable button, and restore the default keypad settings.

To modify the keypad settings:

1. Select **Device Settings > Keypad**.



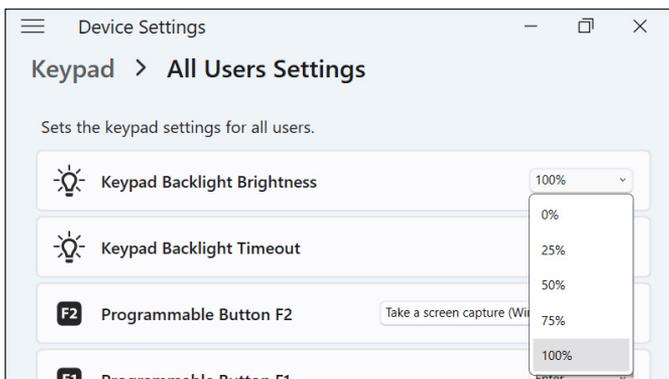
- Tap **All Users Settings** to make keypad changes for all users who sign in to the tablet.

- Tap **Per User Settings** to customize keypad changes for your individual account. Per User Settings override All User Settings.
- Tap **Restore Defaults** to restore the default settings for All Users or Per User.

Keypad Backlight Brightness

Adjust the keypad backlight brightness for All User Settings or Per User Settings.

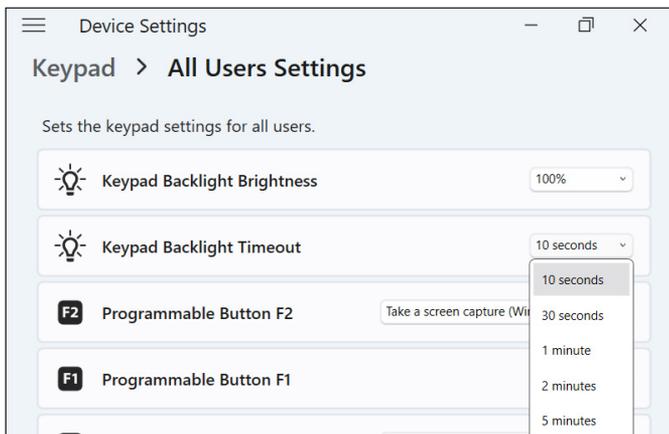
1. Select the drop-down menu for **Keypad Backlight Brightness**.
2. Select a brightness from 0–100%.



Keypad Backlight Timeout

Adjust the amount of time that the keypad remains lit for All User Settings or Per User Settings.

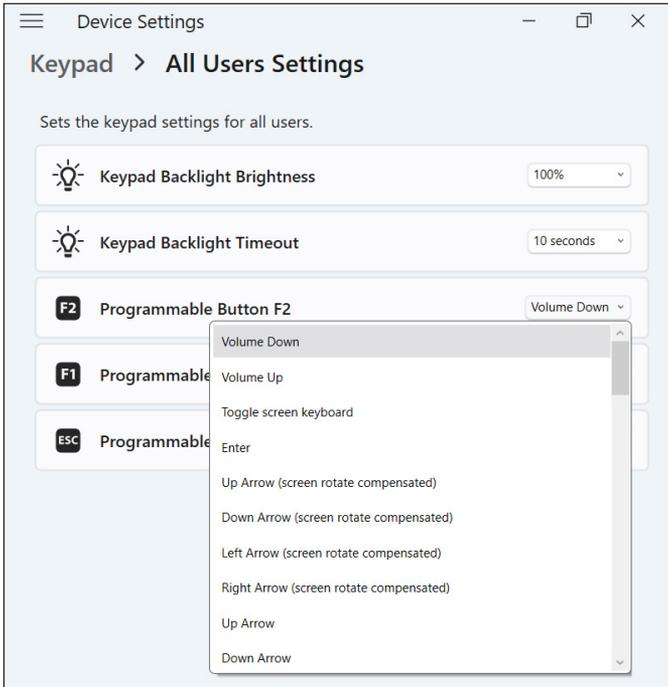
1. Select the drop-down menu for **Keypad Backlight Timeout**.
2. Select the amount of time that the keypad remains lit after it is inactive.



Programmable Buttons

The SHC6400 has three programmable buttons on the keypad that can be used for various functions, such as turning up or down the volume, opening the camera, capturing screenshots, or closing an app.

Select the preferred function for each programmable button for All User Settings or Per User Settings.

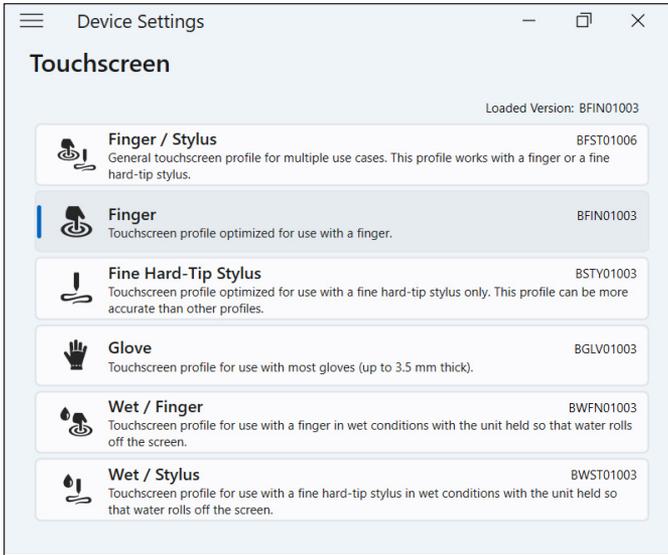


2.3.3 Touchscreen Profile Settings

The SHC6400 has many touchscreen profiles available for customizing the tablet to fit your work environment.

To change the touchscreen profile:

1. Select **Device Settings > Touchscreen**.



2. Select a touchscreen profile. The profiles are detailed in the table below.

TOUCHSCREEN PROFILE	USAGE
Finger/Stylus	Works with either a finger or the fine hard-tipped stylus but is not optimized for either use. Use only in dry environments. Does not work with a gloved hand.
Finger	Optimized for finger touch. Use only in dry environments. Does not work with a gloved hand.
Fine hard-tip stylus	Optimized for the fine hard-tipped stylus. Use in dry environments or in light moisture. Stylus works with a gloved hand.
Glove	Optimized for a gloved finger. Use in dry environments or in light moisture.

TOUCHSCREEN PROFILE	USAGE
Wet/Finger	Optimized for finger touch in wet environments, including rain, snow, and ice. Does not work with a gloved hand.
Wet/Stylus	Optimized for the fine hard-tipped stylus in wet environments, including rain, snow, and ice. Stylus works with a gloved hand.

Using the SHC6400 in Wet Conditions

When using the SHC6400 in wet conditions, keep it tilted at a 30° or higher angle to prevent water from pooling on the screen. The touchscreen does not work well when water droplets are greater than 1 inch (2.54 cm).



NOTE Pooling water reduces the touchscreen functionality and may cause false touches.

The SHC6400 works in some salt water conditions, but salt water reduces the responsiveness of the touchscreen.

Using a Fine Hard-Tipped Stylus

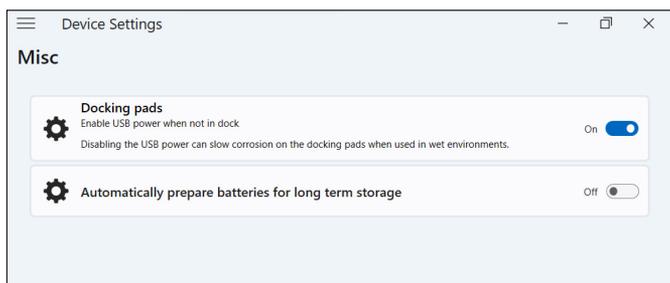
The touchscreen profiles intended for a stylus work best with the fine hard-tipped stylus included with the SHC6400. Touchscreen performance is not guaranteed with third-party styli or styli used with the SHC6000.



CAUTION Do not use the Windows 11 screen calibration tool. It may degrade the touchscreen performance.

2.3.4 Miscellaneous Settings

The Misc screen has settings for controlling power to the connection pins and preparing the SHC6400 batteries for long-term storage.



Docking Pads

The accessory connection pins connect to and power SHC6400 accessories, such as the detachable keyboard and powered vehicle dock.

Control the power to the connection pins by turning on or off the docking pad power.

To control power to the connection pins:

1. Select **Device Settings > Misc.**
 - **On**—Enables constant power to the connection pins. Set to On if you are using the detachable keyboard.
 - **Off**—Disables power to the connection pins when no accessory is connected.



NOTE In a wet environment, turning off the power to the connection pins when not in use slows corrosion.

Storage

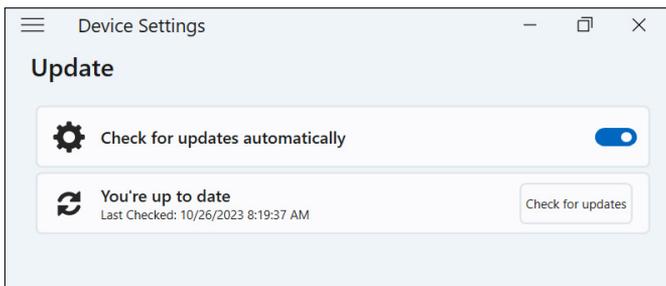
If you do not plan to use the SHC6400 for more than a month, use the storage feature to prepare the tablet and batteries for long-term storage. See [Long-Term Storage on page 27](#).

2.3.5 Update the SHC6400

You decide when and how to get the updates that keep your tablet running smoothly. Update the device-specific drivers, firmware, and applications from the Update screen in Device Settings.

To manage your options and see available updates:

1. Select **Device Settings > Update.**



NOTE To update the Windows OS, go to **Settings > Windows Update.**

2.4 LED Activity Indicators

LED activity indicators are located on the front of the SHC6400 in the upper-left corner. The lights function as explained below.

Red LED, solid

- Turns on when you put the tablet to sleep or power it off by pressing the power button . When the tablet completes the shutdown process, the red LED turns off. Do not remove the battery while the solid red light is on.
- Turns on when the tablet is plugged in for charging but the batteries are full (not charging) and the tablet is running or in sleep mode. If you power off the SHC6400, the red LED light turns off.

Red LED, blinking

- Turns on when the tablet is plugged in and the battery is charging.

Amber light

- Turns on when either camera is in use.

Green LED

- Turns on when the system is booting or resuming from sleep mode. The LED turns off when the screen turns on. This LED indicator is programmable.

Blue LED

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



NOTE The green and blue LEDs are in the same location and do not show simultaneously. These LEDs are programmable, and sample code is available upon request.

2.5 Connector Ports

The SHC6400 has a power input jack, a USB-A port, and a USB-C port. All ports are protected by the connector protector when not in use.

2.5.1 Connector Protector

The connector protector is a removable and replaceable dust cover. The connector protector is not required to maintain the seal of the connectors or tablet.

- To remove the connector protector, gently pull on the top of the protector and remove the rubber retainers from the holes.
- To replace the connector protector, insert the rubber retainers into the holes and push the protector into place.

Contact your sales representative if you need a new connector protector.

2.5.2 Power Input Jack

Use the power input jack and the SHC6400 AC wall charger to charge the SHC6400 tablet. The input jack is a nominal 12 V, 2.5 A, 30 W input. The allowable voltage range is 10.8–21.25 V with a minimum of 2.5 A.

2.5.3 USB-A Port

Use the USB-A port to connect a USB drive, mouse, or other equipment.

2.5.4 USB-C Port

Use the USB-C port to transfer data and charge the tablet. If you charge the SHC6400 from the USB-C port, the allowable charger range is 9–20 V with a minimum of 27 W.

2.6 Power Management

The SHC6400 runs on battery power. The tablet uses rechargeable Li-ion battery packs. One battery pack is removable, and the other is internal and non-removable.

2.6.1 Charge the Battery Packs

The intelligent battery charging circuit charges the battery pack with the least amount of energy first. When this battery pack reaches the same level as the other battery pack, both batteries are charged at the same time until they are fully charged.

Charge the battery packs with the AC wall charger that came with the SHC6400 or a USB-C charger. (See [1.3.2 Charge the Battery Pack on page 11](#).)

While the battery packs are charging, the red LED on the front of the SHC6400 blinks. When the battery packs are fully charged, the red LED:

- Turns off if the tablet is powered off.
- Changes to a solid red light if the tablet is powered on.

Battery packs charge most efficiently at room temperature and may not charge in extreme temperatures.

2.6.2 Remove and Install the Battery Pack

Access the removable Li-ion battery pack from the back of the tablet for replacement or charging on an external battery charger. (See [3.2 Battery Charger on page 39](#).) The non-removable internal battery allows you to hot swap the removable battery pack for another one while the tablet is powered on.



NOTE To use a SHC6000 battery pack in a SHC6400 tablet, the battery pack must be updated to firmware version 7A or later.

Remove the Battery Pack

To remove the battery pack:

1. Push in the battery lock switch, slide it to the unlocked position, and remove the door.



CAUTION While the battery door is open, the SHC6400 is not sealed against water and dust.

2. Pull up on the black tab on the battery pack to lift up the tabbed edge. Gently remove the battery pack.



Install the Battery Pack

To install the battery pack:

1. Hold the battery so that the black tab on the edge of the battery is up and facing the door latch.
2. Place the opposite edge into the battery compartment. Push it gently under the two battery catches.



3. Rotate the tabbed edge down until the battery sits flat in the compartment.

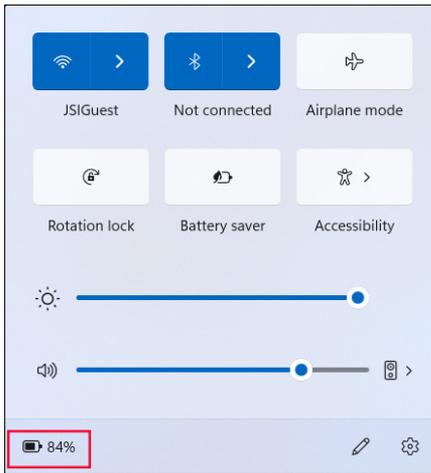


CAUTION Do not insert the battery pack straight down. You can damage the tablet.

4. Replace the door and press down on it until the latch pops into the locked position.

2.6.3 Battery Status and Management

To view the battery life, tap the **Network**, **Sound**, or **Battery** icons on the right side of the taskbar. The cumulative amount of remaining battery life is displayed in the bottom left corner.



Tap the battery life percentage to open the power and battery settings. From this screen, you can view the charge level for each battery and the estimated time remaining for battery life.



If the SHC6400 battery reaches a very low charge, the tablet hibernates to prevent further drain on the battery. To exit hibernation, charge the battery until the charge is sufficient to power the tablet. Then, press the power button.

Warning! Keep the charger connected or shut down the device

There is not enough battery power available

Close

If the battery is depleted and the tablet is running on external power, this message appears. Keep the charger connected or shut down the tablet until the battery charge is sufficient.

It is safe to disconnect the charger

There is battery power available

Close

After the battery is charged enough to power the SHC6400, you can disconnect the charger.

2.6.4 Battery Life

Battery life on a full charge with typical usage is 15 hours. The actual amount of battery life you experience can vary significantly depending on your usage of applications, backlight, and radios (such as Wi-Fi, cellular, GNSS, and Bluetooth).

Battery packs typically last 1,000 to 3,000 charging cycles and have a one-year shelf life. Recharge the battery packs at least once per year to prevent the batteries from discharging to a level that might damage or permanently reduce the capacity of the batteries.



CAUTION Only use batteries designed for the SHC6400 from an approved vendor. Using non-approved batteries may void your tablet warranty. The SHC6400 must be returned to a certified repair center to replace the internal battery.

2.6.5 Power Off the SHC6400

When you power off the SHC6400, it stops using battery power and the battery's charge level stabilizes. In sleep mode, the tablet continues to draw a small amount of power.

If you will not be using your SHC6400 for more than a few days, power it off for short-term storage. If you do not plan to use the tablet for more than a month, follow the steps for long-term storage.

Short-Term Storage

To store the tablet for a few days:

1. Completely shut down the SHC6400, using one of the following methods.
 - Select **Start**, and then select **Power > Shut down**.
 - Press and hold the power button for five seconds until the message "Slide to shut down your PC" appears. Swipe to the bottom of the screen to power off the tablet.

Long-Term Storage

If you do not plan to use the SHC6400 for more than a month, use the storage feature to prepare the tablet for long-term storage. The storage feature sets the battery charge level at about 40% (the optimal charge level for storage) and electronically disconnects the battery from the tablet.



NOTE Storing the battery pack at a high charge level or at an elevated temperature can permanently reduce the battery capacity and shorten battery life.

To prepare the tablet for long-term storage:

1. Go to **Device Settings > Misc**.
2. Turn on **Automatically prepare batteries for long term storage**. Follow the on-screen prompts.

3. Store the SHC6400 in a cool, dry location. At this point, you can safely remove the battery from the tablet, if desired.
4. When you are ready to power on the SHC6400, replace the battery pack. Plug in the tablet with the AC wall charger or USB-C charger. Then, press and hold the power button for about 1 second until the red LED turns on.

2.6.6 Power On SHC6400

Use the following processes for powering on the SHC6400 tablet.

POWER STATE	PROCESS
Completely shutdown	Press and hold the power button for about 1 second until the red LED turns on and then release the button.
Sleep mode	Quickly press and release the power button. The tablet wakes from sleep mode. If the tablet was completely shutdown, quickly pressing and releasing the power button will not power on the tablet.

2.7 Micro SD and Nano SIM Cards

The SHC6400 has slots for a micro SD card and nano SIM card located in the battery compartment. The card slots hold the cards securely, so they will not come out or disconnect if the tablet is dropped.

Insert a Card

To insert a card:

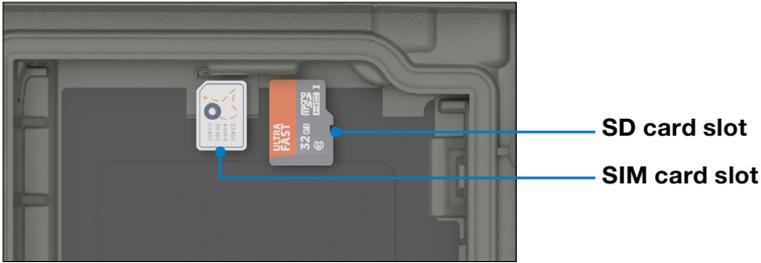
1. On the battery compartment, push in the battery lock switch, slide it to the unlocked position, and remove the door.



CAUTION The SHC6400 is not sealed against water and dust when the battery door is open.

2. Remove the battery pack by pulling up on the black tab on the battery pack.
3. Use the label in the battery compartment to correctly align the card.

4. Push the card into the slot.



5. Replace the battery pack and attach the battery door.

Remove a card

To remove a card, pull it out. Use a tape or eraser if you have trouble.

CAUTION Before removing an SD card, eject the card from within Windows.

2.8 Audio Features

The SHC6400 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* headphones.
- **Microphone**—Use the microphone to record audio notes or include sound in a video.

2.9 Rugged

The SHC6400 has earned an IP68 rating meaning 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 with fresh water to remove any salt water or debris. Drain the ports. Allow them to dry before using the ports.

2.10 Sensors

2.10.1 Compass, Accelerometer, and Gyroscope

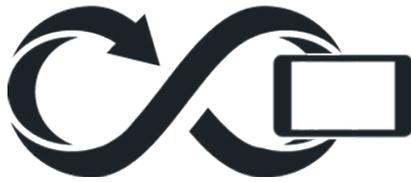
The SHC6400 has a built-in compass, accelerometer, and gyroscope. The accelerometer assists the compass in determining direction, even if the tablet is not resting flat. The gyroscope senses change in angular motion. The compass, accelerometer, and gyroscope can also be used by other user applications.

Compass Calibration

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

To calibrate the compass:

1. Open an app that uses the compass.
2. Move the SHC6400 around in the air so that it is oriented in different directions and angles. An effective method is to move the SHC6400 back and forth making a sideways figure eight for approximately 10 seconds.



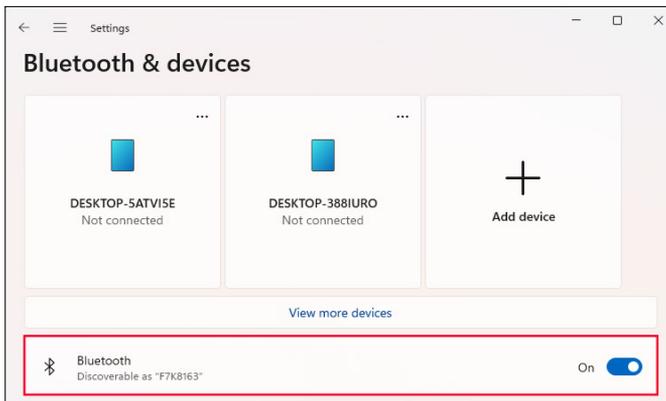
2.11 Bluetooth Wireless Communication

The SHC6400 has built-in *Bluetooth* wireless technology, allowing you to connect to other wireless devices with *Bluetooth* technology.

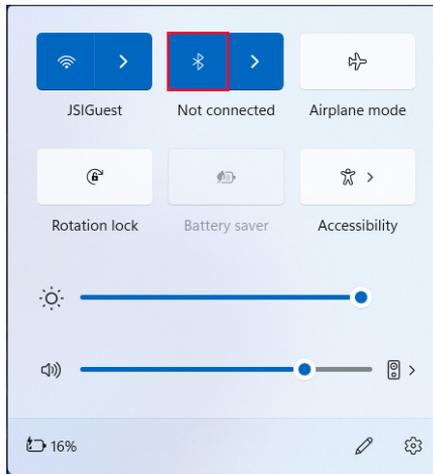
2.11.1 Turn On or Off *Bluetooth*

To turn on or off *Bluetooth*, use one of the following methods.

- From Settings, select **Bluetooth & devices**. Turn on or off **Bluetooth**.



- Tap the **Network**, **Sound**, or **Battery** icons on the right side of the taskbar. Tap the **Bluetooth** quick setting to turn it on or off. If *Bluetooth* is turned on without any paired devices, the quick setting displays “Not connected.”

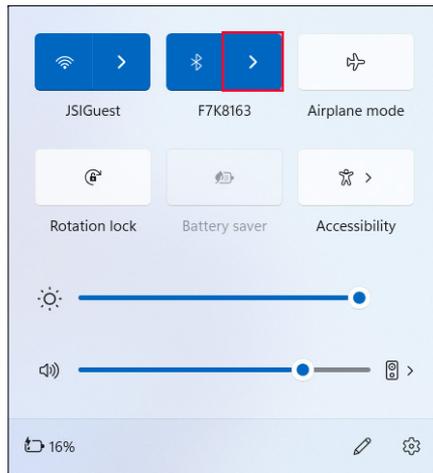


2.11.2 Pair a *Bluetooth* Device

To connect the SHC6400 and another device with *Bluetooth* technology:

1. Power on both devices.
2. Place them within a few feet of each other. (The SHC6400 has long range *Bluetooth*, but the other device may not.)
3. Turn on the *Bluetooth* on both devices.
4. On the SHC6400, tap the **Network**, **Sound**, or **Battery** icons on the right side of the taskbar.

5. Tap the arrow on the **Bluetooth** quick setting.



6. Select from the list of unpaired devices.
7. If prompted, enter the PIN or passcode of the paired device.



NOTE If *Bluetooth* is on and the tablet enters sleep or hibernate mode, *Bluetooth* turns off to save battery power. The *Bluetooth* connection is resumed after the tablet powers on.

2.12 Wi-Fi Wireless Networking

The SHC6400 has built-in Wi-Fi wireless networking to connect to the internet or an office network.

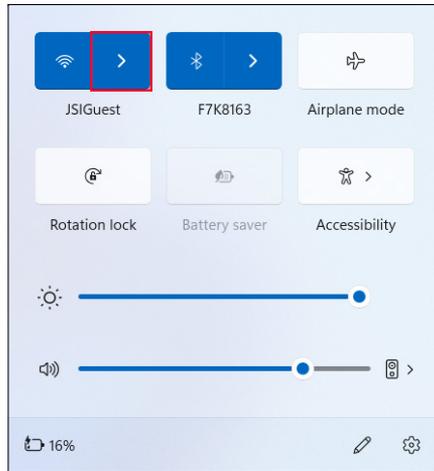
2.12.1 Connect to a Wi-Fi Network

To connect to Wi-Fi, the tablet must be in the range of a Wi-Fi access point. When Wi-Fi is turned on, the SHC6400 automatically scans the area for available Wi-Fi networks.

To connect to a Wi-Fi network:

1. Tap the **Network**, **Sound**, or **Battery** icons on the right side of the taskbar.
2. Turn on the Wi-Fi (if needed) by tapping the **Wi-Fi** quick setting.

3. Tap the arrow on the **Wi-Fi** quick setting to view a list of available networks.



4. Select the desired network and tap **Connect**.
5. Enter the network security key or password and tap **Next**.

The tablet remembers the Wi-Fi network connections you create.

To manage the network and internet settings, open Settings and select **Network & internet**.

2.13 4G LTE Data Modem

The 4G LTE data modem adds 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.

2.13.1 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 a SIM card. You need to provide the following information when setting up an account:

- Billing Information and business ID, such as your Federal Tax ID or VAT number.
- The wireless services required. Specify that you need data service only. You do not need voice or messaging services.
- The modem's IMEI number. To view the IMEI number, open **Device Settings > About**.

Install the SIM Card

For instructions on installing the SIM card, see [2.7 Micro SD and Nano SIM Cards on page 28](#).

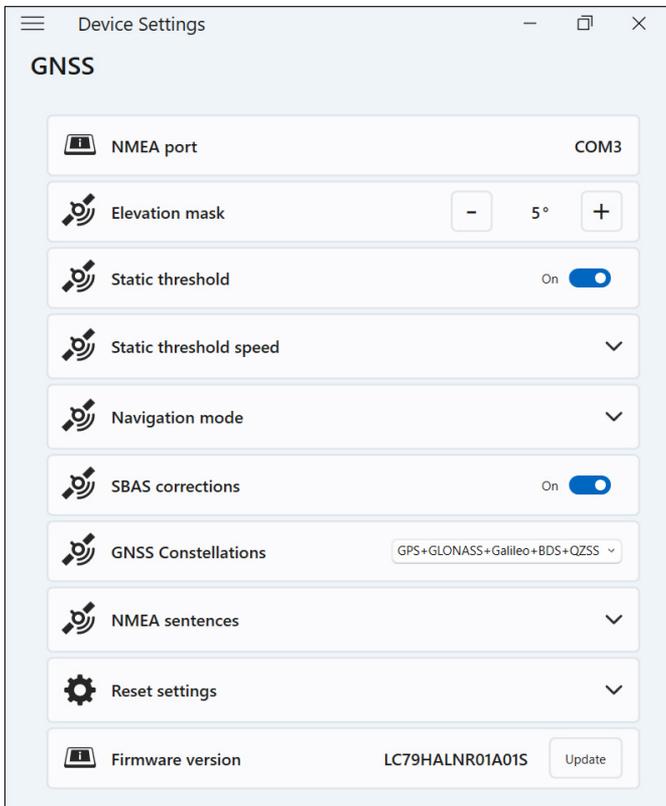
2.14 GPS/GNSS Receiver

The SHC6400 has a Quectel GNSS receiver with an internal antenna to provide position information.

The GNSS internal antenna is at the top of the device under the SHC6400 label and works with the tablet in portrait or landscape view. Putting your hand or another object over the antenna area reduces accuracy. The more items between the antenna and the satellites, the lower the accuracy becomes.

2.14.1 GNSS Settings

To change the GNSS settings, select **Device Settings** > **GNSS**.



Change the following settings to fit your application.

SETTING	ACTION
NMEA port	Displays the port that can be used by legacy applications to get raw NMEA messages.
Elevation mask	<p>Enter the angle that the GNSS receiver uses to determine which satellites to include in location calculations. Satellites below the angle are not used by the receiver.</p> <p>Satellites that appear near the horizon (0° angle) are subject to signal fade and pick up more atmospheric noise. The satellite viewing area restricts as you increase the angle. The default angle is 5° above the horizon.</p>
Static threshold	<p>Turn on or off static threshold.</p> <p>Turn on static threshold when the GNSS receiver location is stationary or moving at low speeds.</p>
Static threshold speed	If you turn on static threshold, set the maximum meters per second that the GNSS receiver can travel before the location data updates.
Navigation mode	<p>Tap Navigation mode to expand the section. Select one of the following modes:</p> <ul style="list-style-type: none"> ▪ Normal is good for most applications and uses SBAS corrections on L1 frequencies. ▪ Fitness is more accurate for slow moving applications, such as walking or jogging speeds. This mode uses L1 and L5 frequencies without SBAS corrections.
SBAS corrections	<p>Turn on or off SBAS corrections.</p> <p>Satellite-Based Augmentation Systems (SBAS) provide accurate, real-time GNSS corrections and are especially helpful in environments where GNSS signals may be obstructed.</p>
GNSS constellations	Select which GNSS constellations to use.
NMEA sentences	<p>Tap NMEA sentences to expand the section. Select the NMEA sentences that you want the receiver to transmit to the device.</p> <p>The default NMEA sentences are good for basic location applications.</p>

SETTING	ACTION
Reset settings	Tap Reset Settings to expand the section. <ul style="list-style-type: none"> ▪ Tap Reset to reset the GNSS receiver. ▪ Tap Restore to restore the default GNSS settings.
Firmware version	Displays the GNSS firmware version. Tap Update to update the firmware.

2.14.2 GNSS Support

Integrated GNSS Support in Windows

The Windows 11 Pro operating system provides built-in support for GNSS devices. As part of that support, the Windows Sensor and Location platform provides a standard way for GNSS information to be made available to applications that have been designed using the Windows Sensor and Location application programming interfaces (APIs).

Legacy Support

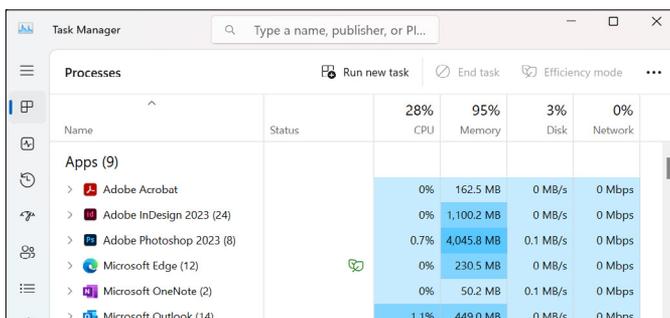
In addition to the Sensor and Location APIs, legacy applications can access NMEA data through a serial COM port interface. To view the allocated COM port, go to **Device Settings > GNSS**.

2.15 Task Manager

The Task Manager displays the processes and programs currently running on the SHC6400 and can be useful for managing and troubleshooting tasks.

To open the Task Manager:

1. Press and hold the Windows button on the keypad and then press the power button.
2. Select **Task Manager** from the list.



From the Task Manager, view performance data (such as CPU, memory use, and disk space) for apps and processes currently running on the SHC6400.

2.16 SHC6400 is Locked Up

If the SHC6400 locks up, you can force the device to shut down.

Five-Second Shutdown

If the SHC6400 will not respond and you cannot get to the Start menu, hold the power button for 5 seconds until the message “Slide to shut down your PC” appears. Swipe to the bottom of the screen to power off the tablet. To power on the tablet, press the power button.

Ten-Second Shutdown

If the SHC6400 has been locked up for at least 5 minutes and did not respond to the 5-second shutdown, disconnect the SHC6400 from all external power, including an AC wall charger, a USB-C charger, or a dock. Force the hardware to shut down by holding the power button for 10 seconds. To power on the tablet, press the power button.

Twenty-Second Shutdown

If the SHC6400 has been locked up for at least 5 minutes and did not respond to the 10-second shutdown, hold the power button down for 20 seconds. The removable and internal batteries are electrically disconnected from the tablet, causing a complete shut down. To power on the tablet and connect the batteries, plug in the tablet with the AC wall charger or a USB-C charger and press the power button.



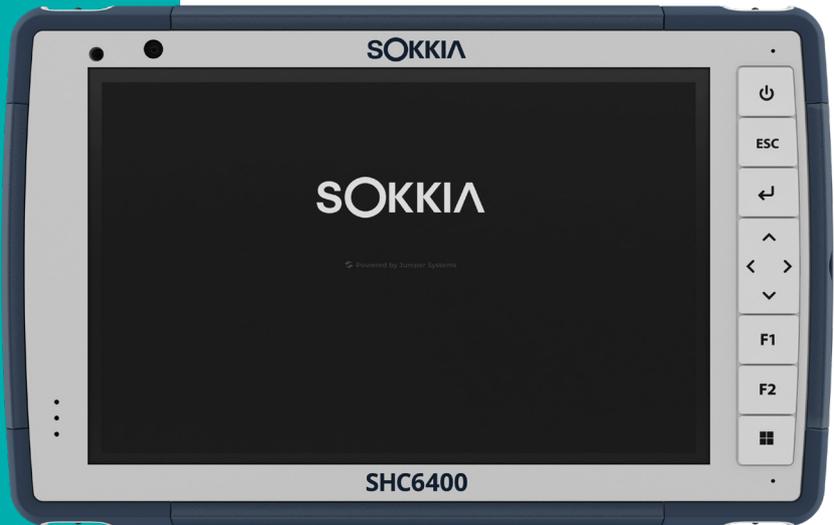
CAUTION Power off the tablet by holding the power button for 10 or 20 seconds as a last resort. Forcing the power off loses unsaved data and may corrupt active data transfers to storage.

2.16.1 Screen is Locked

If the screen is locked and requires you to press Ctrl+Alt+Del to sign in, press and hold the Windows button and then press the power button. (This button combination is the same as Ctrl+Alt+Del.)

3

Optional Features and Accessories



3. Optional Features and Accessories

This chapter discusses the optional features and accessories that can be added to the SHC6400.

3.1 Extended-Range *Bluetooth* Module

Your SHC6400 may include the optional extended-range *Bluetooth* module. The capabilities of this module surpass the range of the standard long-range *Bluetooth* module.

3.2 Battery Charger

The Battery Charger allows you to charge spare battery packs for the SHC6400. Batteries charge best at room temperature and may not charge in extreme temperatures.

Use the AC wall charger (provided with your SHC6400) to power the Battery Charger. Insert the battery pack into the charger with the battery contacts entering the charger first.

Battery Charger LED Indicator

The LED indicates the charging status:

- **Blinking**—The battery pack is charging.
- **Solid**—The battery pack is fully charged.
- **Off**—There is no power to the Battery Charger. The battery is not charging.

3.3 Grounded Stylus

The grounded stylus is a wired stylus that plugs into the power input jack on the SHC6400. This stylus works well in harsh, cold weather conditions and allows the user to wear gloves while using the touchscreen.

To install the grounded stylus:

1. Remove the connector cover from the ports.

2. Gently pull the curved rubber retainers from the holes where they are seated.



NOTE Keep the connector cover for future use.

3. Insert the new connector cover.

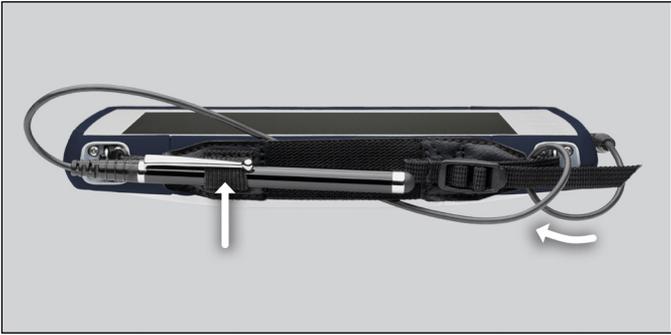


4. Insert the stylus connector into the power input jack.



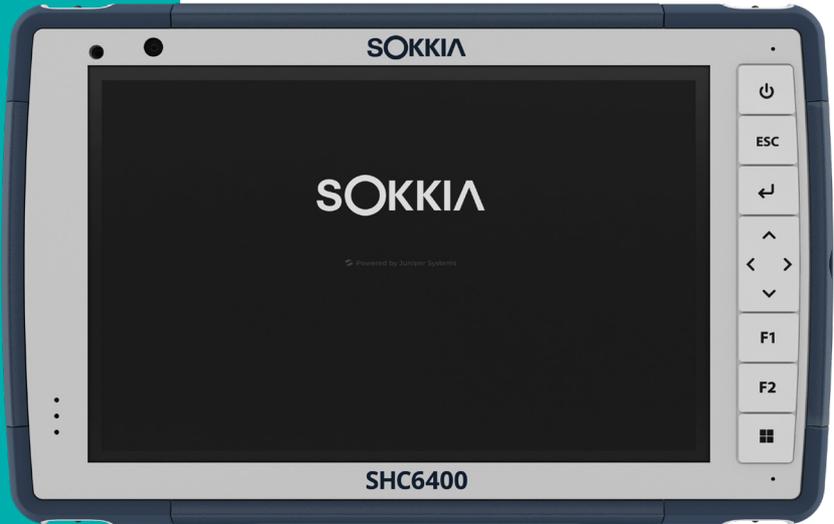
5. Loop the stylus cable around the hand strap to keep it from pulling out of the power input jack during use.

6. Place the stylus in the holder on the hand strap when not in use.



4

Storage, Maintenance, and Recycling



4. Storage, Maintenance, and Recycling

Follow the instructions in this chapter to properly maintain and recycle the SHC6400.

4.1 Store the SHC6400 and Battery Pack

When the tablet is not being charged and is in sleep mode, the tablet draws a small amount of power. This power draw maintains 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 sleep mode.

If the SHC6400 battery reaches a very low charge, the tablet 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.

4.1.1 Store the SHC6400 for More than a Month

To store the tablet for more than a month, see [Long-Term Storage on page 27](#).

4.2 Protect the Touchscreen

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



NOTE Replace the screen protector as recommended.

4.3 Clean the SHC6400

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 SHC6400.



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 voiding the warranty.



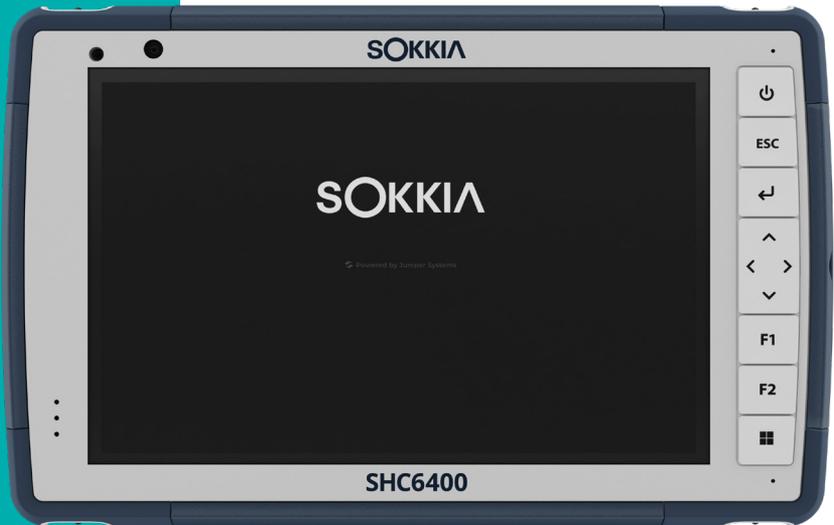
CAUTION Exposure to some cleaning solutions may damage your device, including automotive brake cleaner, isopropyl alcohol, carburetor cleaner, and similar solutions. If you are uncertain about the strength or effect of a cleaner, apply a small amount to a less visible location as a test. If you notice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

4.4 Recycle the SHC6400 and Batteries

When the SHC6400 and Li-ion battery packs for your SHC6400 reach the end of their service life, do not dispose of them in municipal waste. Always dispose of waste equipment at 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

Sokkia Corporation USA (“SC”) warrants that the SHC6400 field computer and 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 SHC6400 and desktop PC programs, user documentation, and any accessories.

5.1.2 Ninety Day Warranty

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

- User replaceable battery packs
- Media containing SHC6400 and desktop computer programs
- User documentation
- Accessories

5.1.3 Warranty Exclusions

This warranty shall not apply if:

- the product has been set up improperly or has been improperly installed or calibrated,
- the product is operated in a manner that is not in accordance with the user documentation,
- the product is used for a purpose other than for which it was designed,
- the product has been used in environmental conditions outside of those specified for the product,
- 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 SC or under direct supervision of SC),
- the defect or malfunction results from misuse or accident,
- the serial number on the product has been tampered with or removed, or
- 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 SC will not assume and hereby expressly disclaims any further warranties, whether express 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. SC specifically makes no warranties as to the suitability of its products for any particular application. SC 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.

SC shall not be responsible for software, firmware, information, or memory data contained in, stored on, or integrated with any products returned to SC 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 SC within the specified warranty period, after evaluation by a technician at a certified repair center, SC will, at its option, repair the defect or replace the defective part or product. Replacement products may be new or reconditioned. SC 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 SC shall be limited to the repair or replacement of the product. SC 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 SC 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 California, U.S.A. and excludes the United Nations Convention on Contracts for the International Sale of Goods. The courts of California shall have exclusive personal jurisdiction in case of any disputes arising out of or in connection with this warranty.

5.1.7 Warranty Repairs

To obtain warranty repair or service on the the SHC6400 field computer, submit a repair order on our website at <https://us.sokkia.com/sokkia-care> or contact an authorized repair center within the applicable warranty period. Products returned for a repair or service without proper authorization may acquire an additional handling fee and/or delay in the repair. The customer is responsible to prepay all shipping costs when sending equipment to a repair center. The repair center will return the repaired equipment by the same method it was received with costs of shipping prepaid.

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

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://us.sokkia.com/sokkia-care>.

5.3 Repairs, Upgrades, and Evaluations



CAUTION Do not attempt to repair the SHC6400 yourself. This action voids the warranty.

Information about repairs, upgrades, and evaluations is located on our website at <https://us.sokkia.com/sokkia-care>. 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 [2.6 Power Management on page 23](#).

- 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 SHC6400

You might be asked to provide additional information about your SHC6400 when you contact a repair center. To view information like the operating system edition, OS build and serial number, open Device Settings. For additional information, open Settings and select **System > About**.

6

Regulatory and Licensing



6. Regulatory and Licensing

6.1 Product Warnings

Follow the warnings listed below to use the SHC6400 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.



WARNING

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 AC wall charger into an electrical outlet that is easily accessible at all times.

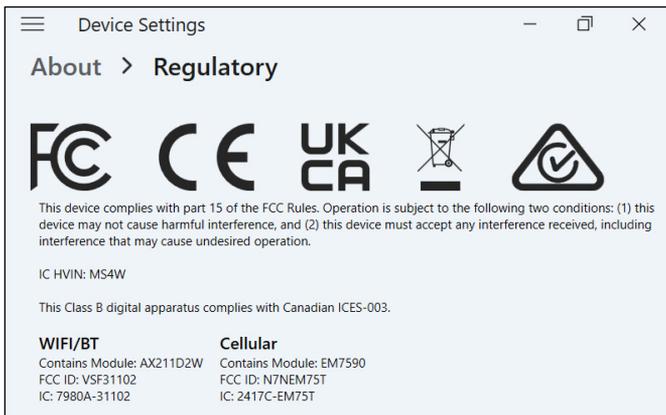
- Do not place anything on the AC wall charger cord or any of the other cables. Arrange them so that no one may accidentally step on or trip over them.
- Do not pull on a cord or cable. When unplugging the AC wall charger from the electrical outlet, pull on the plug, not the cord.
- The AC wall charger must be approved by Sokkia, have an output rating of 12 V DC and a minimum 2.5 A, and be certified or listed by a nationally recognized testing laboratory. The AC wall charger provided with the SHC6400 meets these criteria. Using any other external power source can damage your product and void your warranty.

6.1.3 Installation Warning

The SHC6400 is not intended for outdoor installation.

6.2 Regulatory Information

To access the regulatory information for the SHC6400, go to **Device Settings > About > Regulatory**.



6.3 Certifications and Standards

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.

6.3.1 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 restreint 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.

6.3.2 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.

6.3.3 CE Marking (European Union)



Products bearing the CE marking comply with the EU Directive 2014/53/EU.

Declaration of Conformity

The EU Declaration of Conformity is available at: <https://us.sokkia.com/sokkia-care>

6.3.4 Restricted Materials Conformity

The SHC6400 conforms to the following restricted materials regulations:

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

6.4 Licensing Information



NOTE You must accept the enclosed software License and Warranty terms. See www.microsoft.com/userterms.

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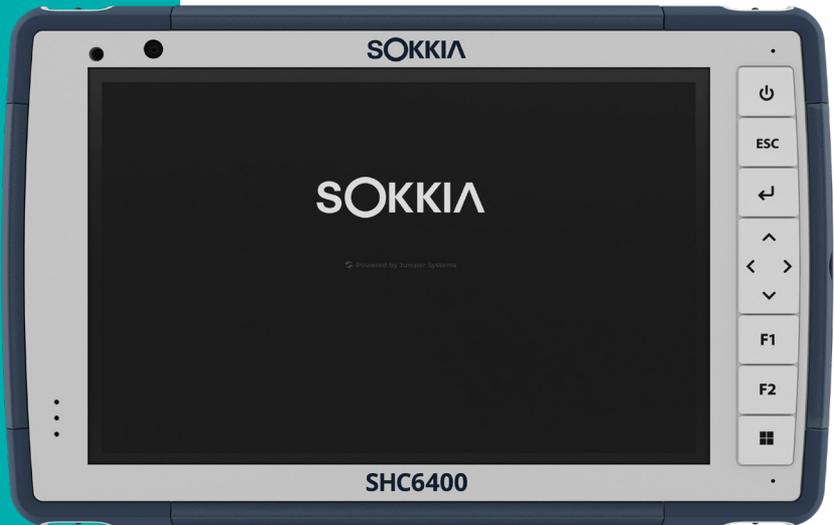
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Windows 11 Pro is automatically updated, which is always enabled. Additional requirements may apply over time for updates. The operating system software and updates use significant storage space; user’s storage capacity will be less. For additional information, see www.microsoft.com/en-us/windows/windows-11-specifications. Updates require high-speed internet and Microsoft account. Set up may require significant download; ISP fees apply.

Cortana is available in select countries; experience may vary by device.

7

SHC6400 Specifications



7. SHC6400 Specifications



NOTE Specifications are subject to change without notice.

FEATURE	SPECIFICATION
Operating System	<ul style="list-style-type: none"> ▪ Microsoft® Windows 11 Pro ▪ English, French, German, Spanish, Brazilian Portuguese, Japanese, and Dutch are built in; other languages are available for download
Processor	<ul style="list-style-type: none"> ▪ Intel® Processor N200
Memory	<ul style="list-style-type: none"> ▪ 16 GB LPDDR5 RAM
Primary Data Storage	<ul style="list-style-type: none"> ▪ 128 GB or 256 GB SSD (model specific)
Micro SD Card Slot	<ul style="list-style-type: none"> ▪ Micro SD slot, user accessible
Physical Features	<ul style="list-style-type: none"> ▪ Dimensions, standard: 5.4 in wide x 8.48 in long x 1.36 in thick (137 mm x 215 mm x 35 mm) ▪ Weight: 1.5 to 2.0 lb (680-907 g) depending on battery configuration and internal options installed ▪ Durable, chemical- and shock-resistant design ▪ Easy-to-grip, impact-absorbing, over molded bumpers ▪ Three mounting points on the back are size #4-40 UNC with a maximum depth of 3/16 in (4.76 mm)
Display	<ul style="list-style-type: none"> ▪ Active viewing area: 7 in (178 mm) ▪ WXGA 800 x 1280 pixel resolution ▪ Backlit LCD ▪ Brightness: 800 cd/m² ▪ Outdoor viewable ▪ Portrait or landscape orientation
Touchscreen	<ul style="list-style-type: none"> ▪ Capacitive multi-touch interface for use with gloves or fine hard-tip stylus in dry or wet conditions ▪ Dragontrail™ HW cover glass for impact and scratch resistance ▪ Touchscreen profile options

FEATURE	SPECIFICATION
Keyboard	<ul style="list-style-type: none"> ▪ Programmable keys ▪ LED backlit keys
Batteries	<ul style="list-style-type: none"> ▪ Rechargeable Li-ion battery pack, 7.2 V DC 6 Ah, 43.2 WHr ▪ Charging time 4 to 6 hours ▪ Built-in battery intelligence ▪ User-replaceable ▪ Internal 21.6 Whr battery provides an additional 50% of runtime and hot-swap capability; not user replaceable or accessible ▪ Run time of 15 hours or more
Ports	<ul style="list-style-type: none"> ▪ Power input jack: 10.8–21.25 V, 12 V nominal, minimum 2.5 A ▪ USB-A: 1x USB 3 SuperSpeed ▪ USB-C: 1x USB 3 SuperSpeed, 9 V–20 V, minimum 27 W
Wireless Connectivity	<ul style="list-style-type: none"> ▪ <i>Bluetooth</i>[®] wireless technology 5.3 (BR, EDR, BLE, class 1.5) ▪ Wi-Fi 4, 5, 6, 6E (802.11 a/b/g/n/ac/ax, FIPS 140-2) ▪ 4G LTE multi-carrier capable
Audio	<ul style="list-style-type: none"> ▪ Mono speaker, loud and clear ▪ Microphone, low noise
LED Activity Indicators	<ul style="list-style-type: none"> ▪ Red: power applied/charging status ▪ Amber light: camera is in use ▪ Green: system is booting/resuming from sleep ▪ Blue: programmable
Standard Sensors	<ul style="list-style-type: none"> ▪ Ambient light sensor ▪ Compass ▪ Accelerometer ▪ Gyroscope
Security Features	<ul style="list-style-type: none"> ▪ Firmware TPM (Trusted Platform Module) v2.0

FEATURE	SPECIFICATION
Temperature Specifications	<ul style="list-style-type: none"> ▪ Operating temperature: -4 °F to 122 °F (-20 °C to 50 °C). ▪ Storage temperature: -22 °F to 158 °F (-30 °C to 70 °C) ▪ Battery charging temperature: 32 °F to 122 °F (0 °C to 50 °C)
Shock Resistance	<ul style="list-style-type: none"> ▪ Withstands multiple 4 foot drops to concrete
Environmental Ratings and Standards	<ul style="list-style-type: none"> ▪ IP68 rating (IEC 60529-01) ▪ 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 °F to 70 °C) ▪ Certified to MIL-STD-810H test procedures: Method 501.7 High Temperature Method 502.7 Low Temperature Method 514.8 Vibration Method 516.8 Procedure IV Drop ▪ Designed to meet MIL-STD-810H test procedures: Method 500.6 Low Pressure (altitude) Method 503.7 Temperature Shock Method 506.5 Rain Method 507.7 Humidity Method 510.7 Sand and Dust
Certifications and Standards	<ul style="list-style-type: none"> ▪ FCC Class B ▪ CE Marking ▪ Industry Canada ▪ Australia (ACMA) ▪ <i>Bluetooth</i>[®] SIG qualification ▪ IP68 water resistant and dust proof ▪ Designed to MIL-STD-810H ▪ RoHS 2 compliant ▪ SHC6400 is certified on AT&T networks

FEATURE	SPECIFICATION
Warranties	<ul style="list-style-type: none"> ▪ 24 months for SHC6400 ▪ 90 days for accessories ▪ Extended service and maintenance plans
Configurations	<p>All models and features for the SHC6400 are configured for United States/Canada, European Union, or Australia.</p> <ul style="list-style-type: none"> ▪ Standard features: 128 GB or 256 GB SSD (model specific), 16 GB RAM, Wi-Fi, GNSS receiver with integrated antenna, long-range <i>Bluetooth</i> wireless technology, rear and front cameras, 4G LTE cell modem, internal battery, and hot-swappable battery ▪ Optional features: Extended-range <i>Bluetooth</i> wireless module
Cameras	<ul style="list-style-type: none"> ▪ 13 MP rear camera with auto focus and flash ▪ 5 MP front camera
GPS/GNSS	<ul style="list-style-type: none"> ▪ L1/L5 dual frequency ▪ Typical accuracy:* 2 m RMS under open sky 5 m RMS under canopy ▪ Quectel receiver ▪ Integrated antenna ▪ Integrated real-time SBAS (WAAS, EGNOS, MSAS, GAGAN) ▪ RAW data capture for post-processing ▪ 1 PPS timing signal available on expansion interface 100 ns accuracy

*Accuracy is subject to observation conditions, multipath environment, number of satellites in view, satellite geometry, and ionospheric activity.

FEATURE	SPECIFICATION
4G LTE Data Modem	<ul style="list-style-type: none"> ▪ Sierra Wireless EM7590 Global ▪ Certified with Verizon, AT&T Network Ready, and PTCRB ▪ 4G LTE Advanced Pro Cat-13 with 3G fallback ▪ Supports nano SIM card only. Nano SIM card slot inside battery compartment with card detect feature. ▪ Does not support voice calls or SMS. ▪ Supports 3G (DC-HSPA+, HSPA+, HSPA, UMTS) and FirstNet B14. <p>For more details, see 4G LTE Data Modem - Additional Information on page 62.</p>
Standard Accessories	<ul style="list-style-type: none"> ▪ Removable Li-ion battery ▪ Adjustable hand strap ▪ AC wall charger with international plug kit <ul style="list-style-type: none"> - Input: 100-240 V AC, 50/60 Hz, 0.8 A - Output: 12 V DC, 2.5 A ▪ Capacitive fine hard-tip stylus with tether ▪ Quick Start Guide ▪ User Manual: Available in English, French, German, Spanish, Brazilian Portuguese, and Dutch ▪ Two-year warranty on SHC6400

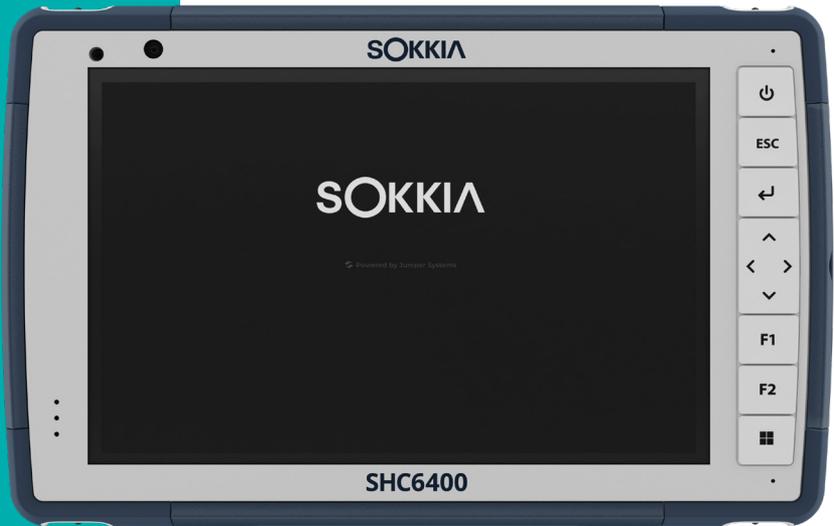
FEATURE	SPECIFICATION
Optional Accessories	<ul style="list-style-type: none"> ▪ Vehicle charger cable, 12 V vehicle power port, 6 ft (1.83 m) ▪ Battery charger ▪ Non-powered vehicle mounting dock ▪ Vehicle dock/pole mount, dock attachment ▪ Adjustable shoulder strap ▪ Travel charger ▪ Travel charger assembly ▪ Serial cable ▪ Holster carrying case ▪ Flip cover fitted case ▪ Hard carrying case ▪ Soft carrying case ▪ Removable Li-ion battery pack ▪ Four-point harness ▪ Micro SD card ▪ Screen protector (anti-glare, ultra-clear, or polarized)

4G LTE Data Modem - Additional Information

MODE	MODEL/REGION	FREQUENCY BANDS
LTE	Global	1–5, 7, 8, 12–14, 18–20, 25, 26, 28, 29, 32, 38–41, 66, 71
WCDMA/HSPA	Global	1, 2, 4, 5, 6, 8, 9, 19
FirstNet	North America	14

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