allegro³™

OWNER'S MANUAL

⚠ **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.

JUNIPER®
S Y S T E M S

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Getting Started

Getting Started

The Allegro 3 Rugged Handheld™ powered by Android™ features *Bluetooth*, Wi-Fi and an alphanumeric keyboard. Standard accessories include an AC wall charger, USB micro client sync cable, hand strap, and capacitive blunt tip stylus and tether. A camera, GPS/GNSS, 4G data modem, and barcode scanner are options.

The Anatomy of the Allegro 3
Front and Back Features

1 Bumper, Top

2 Touchscreen

3 Function Keys

4 Numeric Keyboard

5 LED Indicators
 - red charging indicator
 - green notifications/
   programmable indicator, blue
   programmable indicator

6 QWERTY Keyboard

7 Microphone

8 Power Key

9 Attachment Point for Stylus Tether and other items (1 of 2)

10 Expansion Door

11 Camera (option)

12 Camera Flash and Flashlight Window (option)

13 Speaker

14 Door to Battery Compartment and Card Slots

15 Screw Holding Battery Door in Place (1 of 4 captive screws)

16 Hand Strap Attachment Points (2 on each side)

Battery Compartment and Card Slots
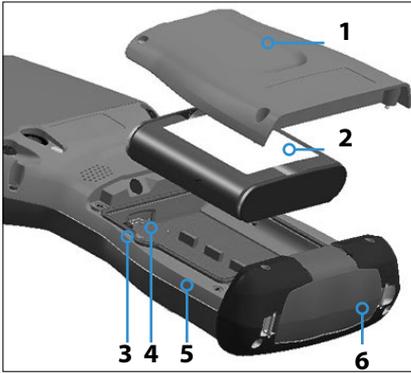
1 Battery Door, Screws
2 Battery Pack
3 Mini SIM Card Slot
4 Micro SD/SDXC Card Slot
5 Battery Compartment
6 Connector Module Protector

Connector I/O Module
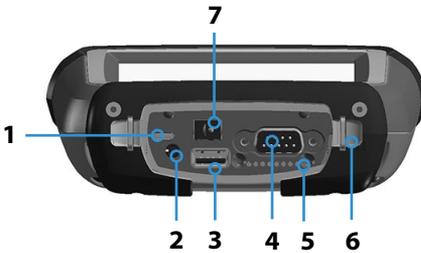
1 USB Client, Micro B
2 Audio Jack, for Microphone, Speaker, or Stereo Output, 3.5mm
3 USB Host, Full Size A
4 9-pin Serial Port, 5VDC @ 500 mA
5 Docking Pin Contacts
6 Hand strap Attachment Point
7 Power Input Jack, 12-24VDC, for Power and Battery Charging

Note: The connectors are sealed. A connector module protector is not required to prevent water ingress. It protects the connectors from exposure to excessive dust and dirt.

Perform Initial Tasks

When you receive your Allegro 3, perform the tasks outlined in this section before first use.

Install the Battery Pack, SD Card, and Mini SIM Card

The Allegro 3 uses a rechargeable Li-Ion battery pack. Install and charge the battery pack using the instructions that follow.

1. The battery compartment is accessed from the back of the handheld. Loosen the four captive screws holding the battery compartment door in place using a #1 Phillips screwdriver. Remove the door.

CAUTION: The Allegro 3 is not sealed against water and dust when the battery door is not installed.

2. If you are using a micro SD card for additional memory or a mini SIM card with the 4G LTE (optional), you can install them now before you install the battery pack, or at another time. See more details about these cards later in this manual.

3. Place the Li-Ion battery pack in the compartment. Line up the symbols on the battery pack with the symbols inside the case.

Line up the symbols on the case and the battery pack as shown

4. Replace the door and tighten the screws.

5. The red LED on the keyboard blinks when the battery pack is charging. Charge the battery pack for 4–6 hours at room temperature.

CAUTION: Always power off the handheld before removing the battery. Failure to do so may cause loss of data or damage to the handheld.
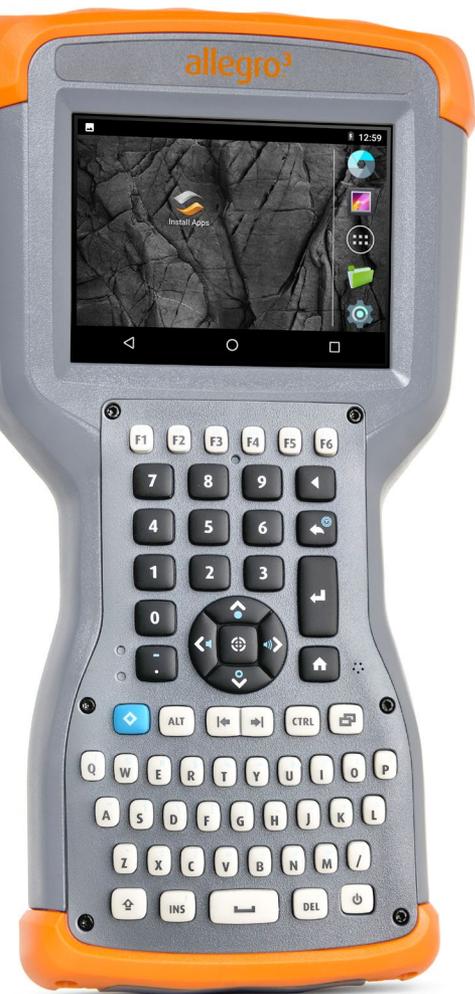
2
Standard Features

Standard Features

This chapter discusses the standard features found on all Allegro 3 models and optional features.

Turn On, Power Off or Restart

To turn the Allegro 3 on, press and release the power key. Press and briefly hold the power button to select *Power off* or *Restart*.

Operating System

This Allegro 3 is powered by the Android Open Source Project (AOSP) operating system. This project was created and is still maintained by Google, and it is at the core of every Android OS.

Installing Apps

There are several options for locating and installing apps onto your Allegro 3.

The Google Play store is a familiar way to download Android apps, but it requires Google Mobile Services (GMS), which is not available with the AOSP operating system running on the Allegro 3.

Other app stores are available, including the Amazon Appstore and APK Pure.

Some application developers host their app files on their website or provide it upon request.

APK Pure App Store

The APK Pure app store which has many of the same apps available through the Google Play store.

On the home screen of your Allegro 3 is a widget that takes you to our website where a link to APK Pure is located. You can download the app store and browse available apps.
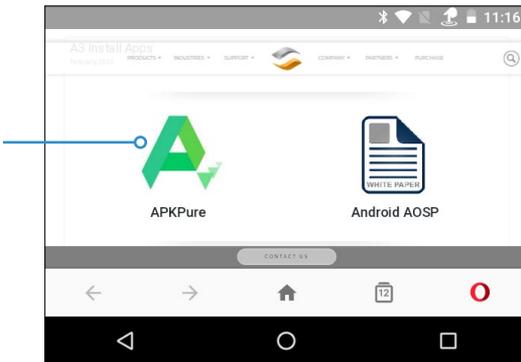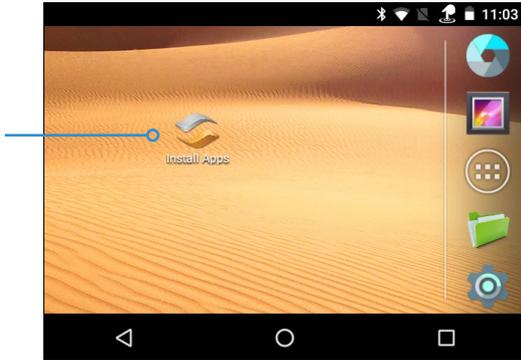
Side Loading Android Applications

Follow these steps to side load and install Android apps onto your Allegro 3:

1. Change the security setting to allow the installation of apps from unknown sources. Go to *Settings > Security > Unknown sources* and toggle this setting on.

2. Download the desired .apk app file to the device from a trusted source using one of these options:

   a. Do this directly using the browser on the device to go to the website where the app is located and downloading it.

   b. Use another computer to get the app file from the internet. Copy the file to a USB drive or SD card, remove the memory device from the computer, insert it into the device, and transfer the file to the Allegro 3.

3. Once you have downloaded the app file, use the Files app to navigate to the location of the app to install it. Tap on the desired .apk file and follow the prompts to install the app.

4. Once you have installed the desired app(s), return to *Settings > Security > Unknown sources* and toggle this setting off. This ensures the secure operation of the device by blocking the unknown installation of malicious software.

Compatibility Note: Not all Android applications are compatible with he Allegro 3. The Allegro 3 run the Android version 7.1.2 OS. Some apps might require a more recent version of the OS or features associated with GMS. These incompatibilities often manifest in the form of an error message or failure to launch.

Display and Touchscreen
To adjust display settings including the font size, brightness, sleep interval, and orientation, go to *Settings > Display*.

Touchscreen Touch Control Setting
To adjust the Touchscreen Control setting, go to *Settings > Touch Control*. Select the profile you want the screen optimized for: *Finger, Stylus,* or *Wet*. As the new profile loads, a progress bar is shown. You can try different profiles to see which one works best for the conditions the Allegro 3 is being used in.

Note: When using the Allegro 3 in wet conditions, you must use your finger or the blunt tipped stylus that is included. A hard-tipped stylus will not work. Other third party styli might work with the Allegro 3 touch profiles.

Keyboard Features

The Allegro 3 has a numeric keypad, function keys, and a QWERTY keyboard. The keys are sealed and have backlight illumination. Some keys are programmable.

Special Keys

◀	Back
↰	Back-space (Delete) Blue function: Enable or disable touchscreen
↵	Enter (return) Blue function: Select OK or X on the screen
◀	Move left Blue function: volume down
▶	Move right Blue function: volume up
⌃	Move up Blue function: brightness up
⌄	Move down Blue function: brightness down
⊕	Action
⌂	Home screen
◇	Blue command (sticky on second press)
⇤	Left tab (back)
⇥	Right tab (forward)
❒	Overview

⇧	Shift command ■ Shift, one key press ■ CAPS lock, two key presses ■ Release CAPS lock, three key presses ■ Shift + numeric key press to get special characters: 1=!, 2=@, 3=#, 4=$, 5=%, 6=^, 7=&, 8=*,9=(, 0=)
⏻	Power ■ Suspend or resume, one key press ■ Open Power Menu, press and hold

Power Management

The Allegro 3 uses a Li-Ion rechargeable battery pack. Battery life on a full charge can be 20 hours or more. This varies depending on the applications used, backlight usage, and radio usage. Batteries are prevented from being overcharged.

(!) **CAUTION:** Only use batteries designed for the Allegro 3 from an approved vendor. Use of non-approved batteries will void your product warranty.

The Li-Ion battery pack is charged most efficiently at room temperature (68°F or 20°C). The battery pack will not charge if it is too hot or too cold.

(!) **CAUTION:** The Allegro 3 is not sealed against water and dust when the battery door is not installed properly.

Removing the Battery for Long-Term Storage

To power off the Allegro 3 for long-term storage, follow these steps:

1. Press and briefly hold the power button and select Power off.
2. Take out the battery pack and store it in a cool, dry location.
3. When you are ready to power on the Allegro 3, replace the battery pack. Plug in the AC wall charger and connect it to the Allegro 3 BEFORE you power it on. Press the power button and the device starts to boot up.

How to Handle a Locked Up Unit

If the Allegro 3 is completely stuck and won't respond, hold the power key down for 2 to 3 seconds to see if the menu with the "Power off" option appears, and select that operation. If that doesn't work, hold the power key down for 10 seconds. This causes a hardware shut off. Press the power key again to power it on.

(!) CAUTION: Forcing a shut-down while the unit is running can cause damage to the device. NEVER do this to power off an Allegro 3 in normal circumstances.

LED Activity Indicators

LED activity indicators are located on the keyboard on the left side shown in the following image:

- Red LED on the bottom (associated with power adapter): *Blinking* - AC adapter is plugged in, and the battery is charging
  Solid - AC adapter is plugged in, and the battery is full (not charging)
- Green LED on the top (associated with notifications): When the operating system has something to notify you of, this LED behaves accordingly. For example, if you turn on Location, the green LED blinks periodically.
- Blue LED (in the same location as the green LED): The Blue LED is not tied to a key or a notification by default.

Data Storage Options

Flash Data Storage

The Allegro 3 has 16 GB of internal flash data storage. Go to *Settings > Storage* to see how much storage is available, and how it is being used (storing Apps or Images, for example).

SD Card Slot

Additional storage can be added with an SD/SDXC card. The SD card slot is located in the battery compartment.

⚠ **CAUTION:** Always power off the handheld before removing the battery. Failure to do so may cause loss of data or damage to the handheld.

1. Power off the handheld by holding the power button until the Power Button menu appears and selecting Power Off. Ensure that your unit is not plugged in to external power.
2. Loosen the screws to the battery compartment, and remove the door. The hand strap remains attached.

⚠ **CAUTION:** The Allegro 3 is not sealed against water and dust when the battery door is not installed properly.

3. Remove the battery pack.
4. An image on the battery compartment label shows the correct location and orientation for the SD card (slot on the right). Push the card into the slot to insert it.

5. Replace the battery pack, and attach the battery door.
6. Power up the handheld.

Bluetooth® **Wireless Communication**

To create a partnership between the Allegro 3 and another device with *Bluetooth* technology, follow these steps:

1. Turn both devices on.
2. Place them within at least 100 feet (30 meters) of each other.
3. Make *Bluetooth* discoverable on both devices. *Bluetooth* on the Allegro 3 is off by default. To activate it, go to *Settings > Bluetooth*. You can also pull down the Quick Settings Tray and tap the *Bluetooth* symbol to turn it on. Tap the word *Bluetooth* underneath the symbol. A list of discoverable devices is shown. Tap *MORE SETTINGS* to go to the settings screen.

4. In the *Bluetooth* settings screen, a list of all *Bluetooth* devices within range is shown. Tap on the name of the device in the list you would like to pair with. A *Bluetooth* pairing request box is shown. If prompted, enter the PIN or pass code of the device you want to pair with. You should now be paired with the device.

Note: If Bluetooth *is on and the Allegro 3 enters sleep mode,* Bluetooth *turns off to save battery power. The connection is resumed once it powers back on.*

Wi-Fi Wireless Networking

To use Wi-Fi, you need to be in range of a Wi-Fi access point to make a connection. To set up Wi-Fi, follow these steps:

1. Go to *Settings* > *Wi-Fi* and tap *Off* in the upper left hand corner to toggle it on. You can also pull down the Quick Settings Tray and tap the *Wi-Fi* symbol to turn it on. Tap the word *Wi-Fi* underneath the symbol. A list of discoverable devices is shown. Tap *MORE SETTINGS* to go to the settings screen.

2. The Allegro 3 automatically starts scanning the area for available Wi-Fi networks. A list is shown. Select the network you want to use and enter the network password (for locked networks). The Allegro 3 remembers the Wi-Fi network connections created.

3. Wi-Fi can be turned off and on and settings can be managed from *Settings* > *Wi-Fi* screen. Tap the network you selected to view information like *Link speed*. Tap and hold to view other options like Modify network.

3
Optional Features

Optional Features

This chapter discusses the optional features for that can be included with the Allegro 3 Rugged Handheld (base and Geo models).

4G Data Modem

The 4G data modem is an option for Allegro 3 Geo models, adding Wide Area Network data modem capability.

Install the SIM Card

To insert or remove a card, follow these steps:

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

1. Power off the handheld by holding the power button until the Power Button menu appears and selecting Power Off. Ensure that your unit is not plugged in to external power.

2. The mini SIM card slot is located in the battery compartment. Loosen the screws to the door and remove it.

(!) **CAUTION:** Do not use a micro SIM adapter. The adapter can get stuck and damage the slot.

3. Remove the battery pack.

(!) **CAUTION:** The Allegro 3 is not sealed against water and dust when the battery door is not installed.

4. An image on the battery compartment label shows the correct location and orientation for the mini SIM card. Pull out the SIM card tray. Place the card onto the tray and push the tray in until it catches.

To remove the SIM card, pull the tray open and remove the card. Push the empty tray in until it catches.

5. Replace the battery pack, and attach the battery door.
6. Power on the Allegro 3.
7. You can now access the Internet. Open Internet Explorer to test your setup.

To remove the SIM card, gently pull it out with tweezers or a piece of tape.

GPS/GNSS

Allegro 3 Geo models provide position information using an integrated GPS/GNSS receiver. Access the receiver by selecting *Settings > Location* and turning it on. Settings can be viewed and edited to suit your needs.

Camera

A 5MP camera is available for taking photos and videos. Select the Camera app to manage features and use the camera.

The camera and flash are located on the back of the Allegro 3. The flash can also be used as a flashlight.

If you have a Geo model, you can record the GNSS location with photos and videos. Go to camera settings and turn *Save location* on.

Barcode Scanner

Allegro 3 models with a barcode scanner allow you to read 1D and 2D barcodes and easily import barcode data into apps running on the Allegro 3.

Quick Start – Easily Scan a Barcode Now

You can scan a barcode as a test using the Barcode Connector app.

1. Open the Barcode Connector app.
2. Find a barcode to scan (samples below):

Code 39

123456789

QR Code

3. Aim the scanner at the barcode along the red beam. Press SCAN on the screen.
4. When the scanner decodes the barcode, the data is placed on the Barcode Connector screen.

Barcode Connector must be running in the background when you are using the scanner with other apps.

You can configure a button to use for scanning in the Barcode Connector app under *Menu > User > Scan Button*.

A
Storage, Maintenance and Recycling

Storage, Maintenance, and Recycling

Follow the instructions in this chapter to properly maintain and recycle the Allegro 3.

Storing the Allegro 3 and Battery Pack

Storing the Allegro 3 for More than Two Weeks

To store the handheld for two weeks or more, complete the following steps:

1. Charge the battery pack 30 to 50 percent.
2. Close all running programs, and turn off the handheld.

CAUTION: Always perform Power Off before removing battery. Failure to do so may cause loss of data or damage to handheld.

3. Remove the battery pack.
4. Place the battery pack in a dry location.

Cleaning the Allegro 3

Touchscreen

Suspend the Allegro 3. Apply warm water or a mild cleaning solution to a micro fiber cloth and gently wipe off the touchscreen.

CAUTION: Do not use soft bristle brushes or harsh cleaning solutions on the touchscreen.

Rinse the touchscreen with water and dry it with a micro fiber cloth.

Case, Bumpers, and Connector Module

Make sure the battery door is securely installed. Use warm water, a mild cleaning solution, and a soft bristle brush to clean the case, bumpers, and connector module.

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 any visual change becomes apparent, promptly rinse and wash with a known mild cleaning solution.

Recycling the Allegro 3 and Batteries

When the Allegro 3 reaches the end of its life, it 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 collection point for the recycling of waste electrical and electronic equipment. If you cannot find a location, contact Juniper Systems for information about disposal.

The Li-Ion battery packs for your Allegro 3 are recyclable. Avoid placing them in the trash or municipal waste system. To find the nearest battery recycling center in the USA, one option is to contact the Rechargeable Battery Recycling Corporation at 1-877-723-1297.
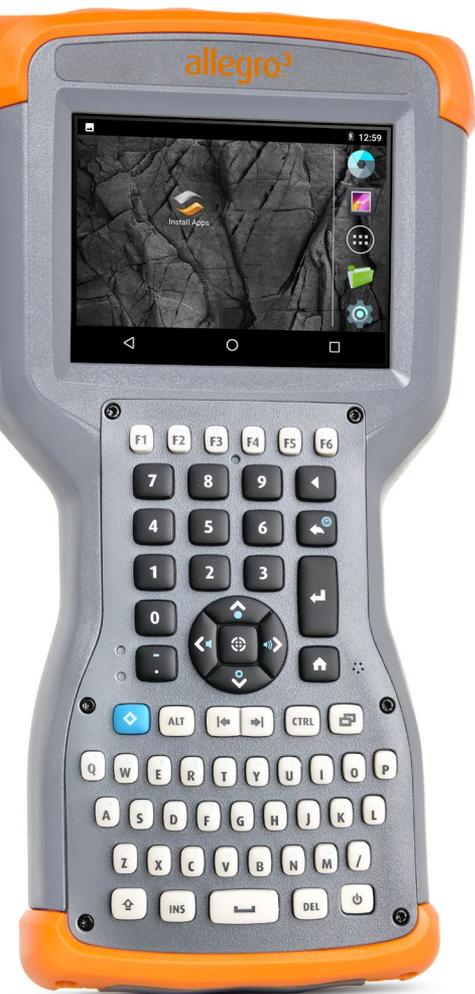
B

Warranty and Repair Information

Limited Product Warranty

Juniper Systems, Inc. ("JS") warrants that the Allegro 3 Rugged Handheld shall be free from defects in materials and workmanship, under normal intended use, for a period of 24 months from the date of shipment.

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:

- battery packs,
- media containing the Allegro 3 programs,
- desktop computer programs,
- user documentation, and
- accessories.

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.

This warranty is exclusive and JS 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. 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.

Remedy
In the event a defect in materials or workmanship is discovered and reported to JS within the specified warranty period, 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.

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.

Warranty Repairs

To obtain warranty repair or service on the Allegro 3, submit a repair order on at *https://junipersys.com/support/ allegro-3/my-product* or contact an authorized repair center within the applicable warranty period. Products returned for 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.

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.

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
- Repair turnaround within 10 working days of receipt unless special circumstances exist
- Shipping costs to return device to customer

Extended Warranties

The Allegro 3 can be warranted up to 5 years (including the standard warranty period) through the purchase of an extended warranty.

Extended warranties apply only to the Allegro 3, not battery packs, media containing the Allegro 3 programs, desktop computer programs, user documentation, and accessories. Parts that are excessively worn are not covered under all

warranty plans. These may include, but are not limited to, the keyboard elastomer and switch matrix, hand straps, touchscreens, and connector modules.

Warranty Information
Warranty information for the Allegro 3 Rugged Handheld is located at *https://junipersys.com/support/allegro-3/my-product*. You can evaluate and order warranty extensions, check warranty status, and view warranty terms and conditions.

Repairing the Allegro 3
(!) **CAUTION:** Do not attempt to repair the Allegro 3 yourself. This action voids the warranty.

Information about repairs, upgrades, and evaluations is located on our website at *https://junipersys.com/support/allegro-3*. 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:

- Product serial number (inside the battery compartment; also found in System Information screen as described on the following page)
- Your name
- 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)

System Information for your Allegro 3
When you contact a repair center, you need some unique system ID information for your Allegro 3 (serial number, model number, etc.). Go to *Settings > About this device*. Information about software, hardware, the battery, the network and radio, regulatory information, and legal information can be viewed.
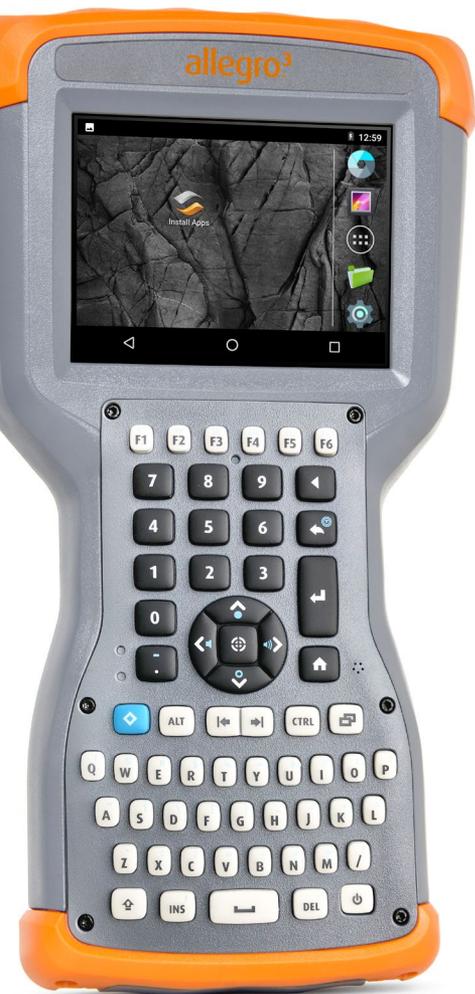
C
Warnings and Regulatory Information

Product Warnings

Follow the warnings listed below to use the AG3 (Allegro 3) and accessories safely.

Battery Warnings

⚠️ **WARNING!** This device is for professional use only.

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.

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.

Use only wall chargers intended for the Allegro 3. Using any other external power source can damage your product and void your warranty.

Certifications and Standards

FCC - 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:

1. The device may not cause harmful interference.
2. 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 Handheld 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.

This device must not be co-located or operating in conjunction with any other antenna or transmitter.

This cell modem is compliant with FCC regulations when operated within the temperature range of -30°C to +50°C. Do not operate the cell modem outside of this temperature range.

Canadian Compliance
This device complies with ISED 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.

2. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Industry 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.

Radio Frequency Safety
This device has been evaluated for use in close proximity to the body. Use only accessories approved by Juniper Systems. The use of third party accessories may not comply with FCC and international RF exposure requirements. To comply with FCC and other national RF exposure requirements do not co-locate this device with other transmitters.

This device operates in compliance with the FCC radio frequency exposure limits for an uncontrolled environment. Users must follow instructions provided in the user documentation to satisfy compliance with FCC radio frequency exposure requirements.

There cannot be any alteration to the authorized antenna system.

CE Marking (European Union)
CE compliance of this device is valid only if powered with/by a CE-marked wall charger provided by the manufacturer. Cables connecting to the USB host port must use a ferrite core/bead on the cable. The ferrite core must be placed on the cable near the end that connects to the Allegro 3.

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

Restricted Materials Conformity

The Allegro 3 conforms to the following restricted materials regulations:

- Proposition 65
- Canada Prohibition

D
Specifications

Allegro 3 Rugged Handheld Specifications

FEATURE	SPECIFICATION
Operating System	■ Android™ 7.1 AOSP by Google ■ English, French, German, Spanish, Brazilian Portuguese, (see complete list)
Processor	■ 1.2GHz Quad Core ARM Cortex A9 i.MX6
Memory	■ 2 GB RAM
Primary Data Storage	■ 16 GB flash storage
Micro SD/SDXC Card Slot	■ Micro SD/SDXC card slot, user accessible
Physical Features	■ Dimensions, standard: 5,4" wide x 10.2" long x 1.6" thick (138 mm x 255 mm x 40 mm) ■ Weight, with battery: -Base - 2.01 lb. (910 g) -Geo - 2.09 lb. (946 g) -Geo Barcode - 2.22 lb. (1006 g) -Geo Cell - 2.15 lb. (972 g) ■ Durable hardened plastic, shock-resistant design ■ Chemical resistance ■ Easy to grip ergonomic form factor ■ Impact-absorbing bumpers ■ Comfortable, wide hand strap ■ OEM customizable expansion area
Display	■ Active viewing area: 4.2" (107 mm) color WVGA LCD TFT ■ 640 x 480 pixel resolution ■ LCD backlight ■ Outdoor viewable ■ Landscape orientation

FEATURE	SPECIFICATION
Touchscreen	■ Capacitive touch interface ■ Chemically-strengthened glass ■ Scratch-resistant ■ Touch control options (finger, stylus, wet)
Keyboard	■ Alphanumeric QWERTY keyboard ■ Modifier keys ■ Programmable keys and LEDs ■ Backlight ■ On-screen keyboard option
Batteries	■ Rechargeable Li-Ion battery pack, 3.6VDC 12000mAh, 43.2Whr ■ Run time of up to 20 hours ■ Full charge takes about 5 hours ■ Built-in battery intelligence ■ User-replaceable, field rechargeable
Connector I/O Module	■ RS-232C 9-pin D-sub connector, +5VDC @ 500 mA available on ring in pin 9 via software configuration ■ USB Host (Full A) ■ USB Client (Micro B) ■ 12-24VDC jack for power input and battery charging ■ 3.5mm audio jack, supports speaker/microphone or stereo output (pin detect) ■ Docking contacts for charging ■ Connector protector ■ OEM configurable/customizable
Wireless Connectivity	■ *Bluetooth*® wireless technology 4.2 BR/BDR/BLE "Smart Ready," Class 1.5, range greater than 100 feet (30 m) ■ Wi-Fi 802.11b/g/n in the 2.4GHz band ■ 4G LTE CAT-4/3G-fallback ■ LTE frequency bands: NA 2, 4, 5, 12, EU 1, 3, 7, 8, 20, 28, and AU 1, 3, 5, 7, 8, 28

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Audio	■ Speaker ■ Microphone, low noise ■ 3.5mm audio jack, supports stereo headset and microphone at the same time (speaker disable)
LED Activity Indicators	■ Red: power applied/charging status ■ Green: notification, application programmable ■ Blue: application programmable
Temperature Specifications	■ Operating Temperature: –22° to 140° F (–30° to 60° C). *Note: Bluetooth® wireless technology is rated to –4° to 122° F (–20° to 50° C).* ■ Storage Temperature: –22° to 158° F (–30° to 70° C) ■ Battery Charging Temperature: 32° to 104° F (0° to 40° C) ■ Maximum Temperature for Switching the Power Supply: 104° F (40° C)
Shock Resistance	■ Withstands multiple 4 foot drops to concrete
Environmental Ratings and Standards	■ IP68 rating, waterproof and dustproof (1.4m for 2 hours) ■ MIL-STD810G test procedures: - Method 500.5 Low Pressure(Altitude) - Method 501.5 High Temperature - Method 502.5 Low Temperature - Method 503.5 Temperature Shock - Method 506.5 Rain - Method 507.5 Humidity - Method 510.5 Sand and Dust - Method 512.5 Immersion - Method 514.6 Vibration - Method 516.6 Shock
Warranties	■ 24 months for Allegro 3 ■ 90 days for accessories ■ Extended service and maintenance plans

FEATURE	SPECIFICATION
Software Included	- Calculator - Calendar - Camera - Clock - Contacts - Downloads - Email - Files - Gallery - Music - Opera Web Browser - Search - Settings - Sound Recorder *Note: Software on individual units may vary from this list.*
Configurations	- Base with Wi-Fi, *Bluetooth*, 2GB RAM, 16GB storage, with or without camera (base expansions include cell options and barcode) - Geo models with base features, with or without camera (base expansions include cell options, barcode, and GNSS external antenna)
Camera	5MP resolution - Autofocus - Video capture - JPEG image format - The date, time and GPS position are embedded in the metadata - Flash and flashlight
4G Data Modem (Geo model option)	4G LTE with 3G HSPA+ fallback - Does not support voice calls or SMS - PTCRB certified - Supports mini-SIM card only

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GPS/GNSS (Geo models)	■ High-sensitivity GPS, GLONASS, Galileo, BeiDou, QZSS, SBAS receiver ■ Accuracy: SBAS 2 meters, autonomous 5 meters ■ User settings for enhanced performance under canopy ■ Integrated real-time SBAS capability, support for WAAS, MSAS, EGNOS ■ File format NMEA-0183 version 4.0 out; default strings: RMC, GSA, VTG, GSV, ZDA, GGA, GLL, TXT ■ 72 GNSS tracking channels ■ Concurrent GNSS constellation resolution ■ GNSS Stream Application
Barcode 1D/2D Scanner (Geo models)	■ Sensor Resolution: 1280 x 800 ■ Field of View: Horizontal 42°, vertical 28° ■ Reading Angles: Skew & pitch ±60°, roll 360° ■ Read Range: 1" to 24" depending on code type, size, and density ■ Aiming dot: Visible with low light illumination ■ Symbologies: All common 1D, 2D (PDF417, MicroPDF417, Composite, RSS, TLC-39, Data matrix, QR code, Micro QR code, Aztec, MaxiCode, Postal codes, etc.) ■ Trigger Buttons: Programmable ■ Barcode Connector™ Utility: Wedge and configuration ■ Power: 1.49 W active, 0.54 W standby, 8 mW sleep; by default device returns to sleep after 1 second of inactivity

FEATURE	SPECIFICATION
Certifications and Standards	■ FCC Class B ■ CE Marking (applicable EMC, R&TTE, and LVD directives) ■ Industry Canada ■ EN60950/EN62368 Safety ■ *Bluetooth* SIG qualification ■ USB client ■ IP68 waterproof and dustproof ■ Designed to MIL-STD 810G
Standard Accessories	■ Li-Ion battery ■ Hand strap (pre-installed) ■ USB micro client sync cable ■ AC wall charger with international plug kit - Input: 100-240VAC, 50/60Hz, 0.5A - Output: 12VDC, 1.67A ■ Capacitive stylus and tether ■ Screwdriver ■ Quick Start Guide ■ Owner's Manual available on our website
Optional Accessories	■ Shoulder strap ■ Serial cable ■ Vehicle charging adaptor ■ Holster case ■ Flip cover fitted case ■ 8GB micro SDHC memory card ■ Premium screen protectors ■ Hands-free harnesses *See your sales associate for more details on optional accessories.*

Note: Specifications are subject to change without notice.

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