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RF-3590RT

RUGGEDIZED TABLET

QUICK REFERENCE GUIDE

HARRIS

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	WARNING - Do not crush, disassemble, reverse polarity, incinerate, or mutilate the lithium-ion battery. Do not expose to fire or temperatures above 160 °F (71 °C). The battery can rupture or explode if it becomes hot, a hissing sound is heard, or an irritating smell occurs. Move the equipment to a well-ventilated area. Failure to do so could cause personal injury or death.
	CAUTION - ACID CONTAMINATES LITHIUM-ION BATTERIES. Every effort must be made to keep lithium-ion batteries isolated from lead-acid batteries because lead-acid batteries contain sulfuric acid. DO NOT use the same tools and materials such as screwdrivers, wrenches, hydrometers, and gloves for both types of batteries. Any trace of acid or acid fumes will permanently damage lithium-ion batteries on contact.
	CAUTION - Use only battery chargers approved by Harris, and never attempt to modify the battery or charger. Doing so may result in damage to the battery, the radio, or cause personal injury to the user.
	WARNING - Do not dispose of lithium-ion batteries in uncontrolled trash.
	WARNING - A damaged lithium-ion battery that is exposed to water could cause a fire or explosion, causing personal injury. Replace batteries with cracked or damaged cases immediately.

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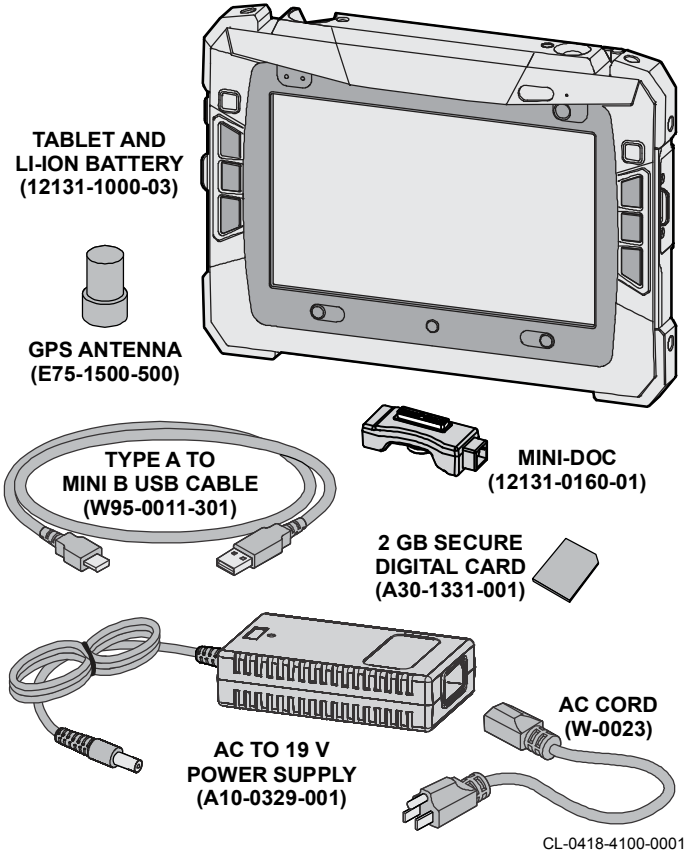
ITEMS INCLUDED

The following items are included with RF-3590RT.



INTRODUCTION

The RF-3590RT 7-inch ruggedized Android tablet providing:

- Dual core processor at 1 GHz minimum
- 2 GB Low Power Double Data Rate 2 (LPDDR2) memory
- Secure Digital (SD) card slot (Up to 64 GB non-volatile)

  NOTE: Some operating system tools do not format beyond 32 GB and a third party format tool may be required.

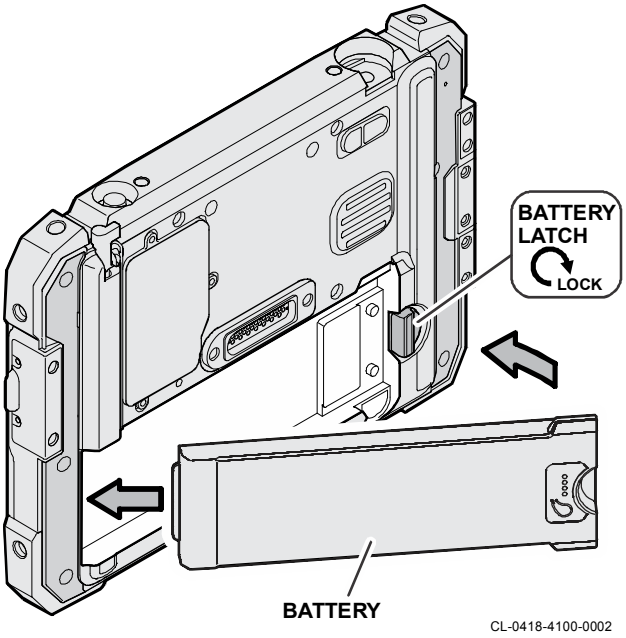
- 7-inch sunlight readable multi-touch Liquid Crystal Display (LCD) (1024 x 600)
- 20 W-Hr standard capacity Lithium-ion (Li-ION) battery
- 3G/4G Mini Peripheral Component Interconnect express (PCIe) capable cellular modem slot
- Dual Subscriber Identity Module (SIM) card support
- Bluetooth 3.0
- 802.11n
- Commercial Global Positioning System (GPS) receiver
- Internal speaker, front/rear microphones, headsets, handsets
- Accelerometer, inclinometer, digital compass, barometric pressure, temperature, gyroscope, proximity/ambient light
- Front and rear facing cameras (2 Mp / 8Mp)
- Navigation, dual optical trackpads
- USB 2.0 host and On-The-Go (OTG)
- High Definition Multimedia Interface (HDMI)
- Rear Ancillary Transceiver Module connector
- Docking Cradle Connector
- 8-36 VDC Power Input
- 10/100 Ethernet
- RS-232

For further help or information, check out the Harris Premier customer service website at https://premier.harris.com/rfcomm/ or contact our Product Service department at:

E-mail: rfcsrvc@harris.com
Telephone: 585-242-3561 (toll-free: 866-264-8040)
Fax: 585-242-4483

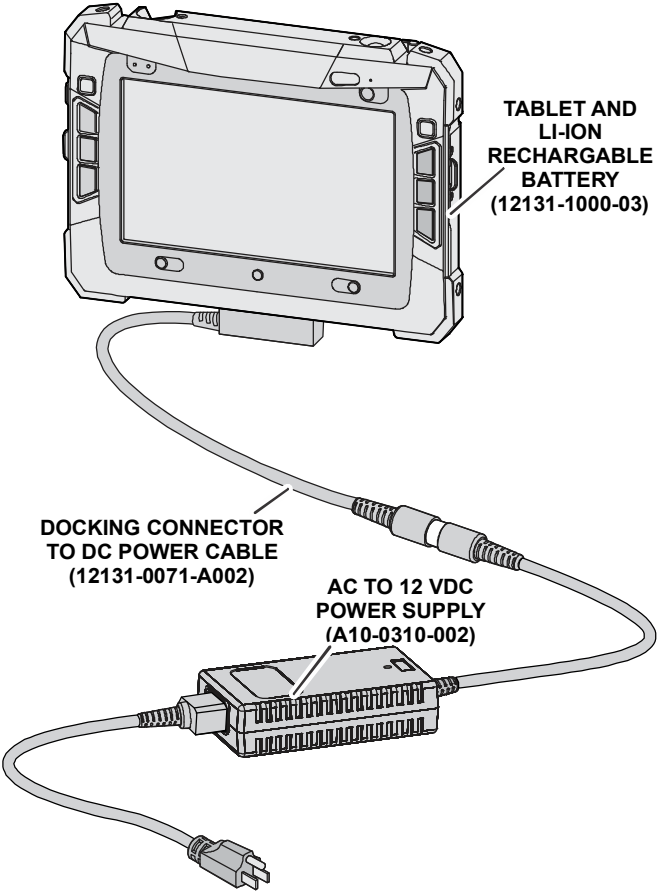
BATTERY INSTALLATION

Place battery into tablet. Turn knob clockwise to lock.



AC POWER/CHARGING (EARLY VERSIONS)

For early versions, connect AC power to charge Li-ION battery as shown.



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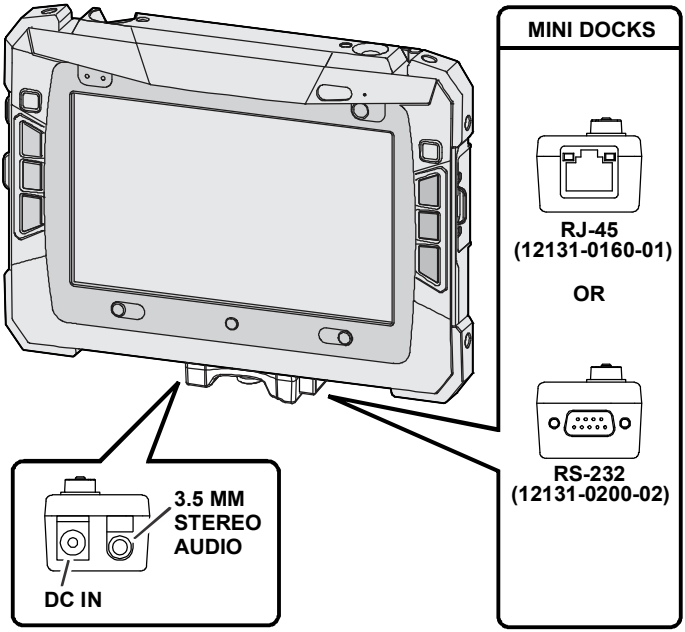
MINI-DOCK CONNECTIONS

The supplied 12131-0160-01 mini-dock provides connection of 19 VDC power, 3.5 mm stereo audio output, and RJ-45 Ethernet via the docking connector on the bottom of the tablet. The 12 VDC power can be provided from the supplied A10-0329-001 AC to 12 V Power Supply or other source. The 12131-0200-02 and 12131-0220-02 can be purchased if RS-232 or USB 2 connection is desired over RJ-45 Ethernet.



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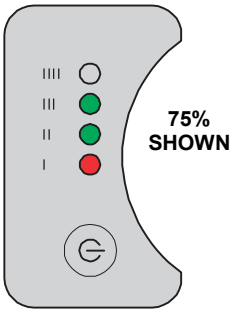
BATTERY CHARGE LEDS

Press button to display battery charge Light Emitting Diodes (LEDs). Charge level indicated by number of LEDs displayed. Symbol next to LED shows charge level:

- 25% - one red
- 50% - one red, one green
- 75% - one red, two green
- 100% - one red, three green



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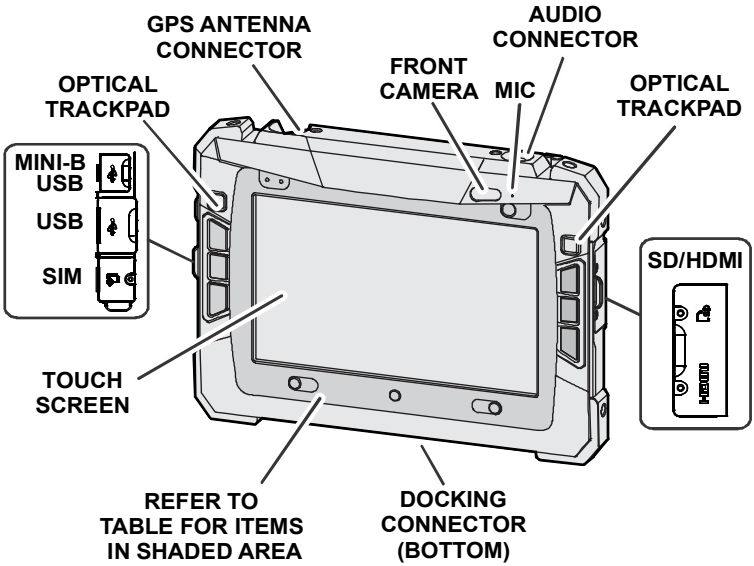
CONROLS, INDICATORS, CONNECTORS

Locations of controls, indicators, and connectors are shown in the following views.

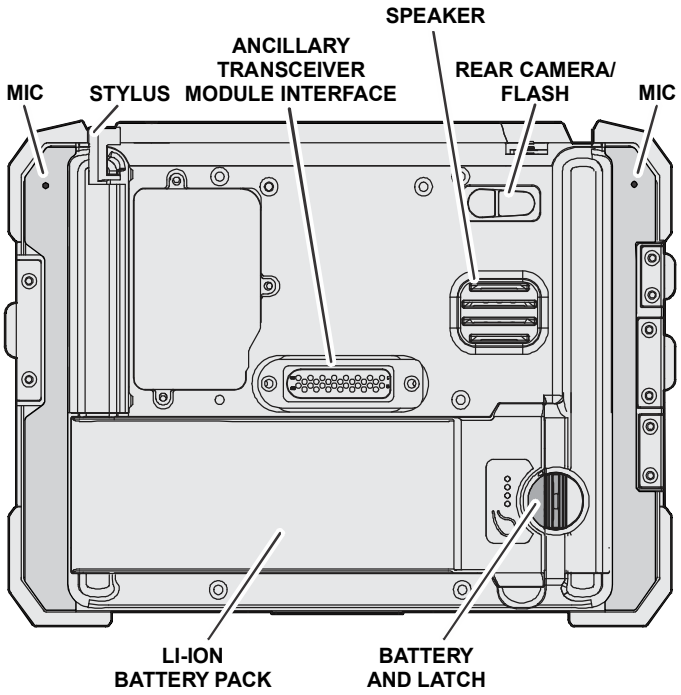
Front/Side Locations

Refer to LEDS, KEYS, AND ICONS for descriptions of the LEDs, keys, and screen icons. Navigation and displays are located on the front, access to the memory, USB, SIM, and HDMI are located on the sides. Docking connector is located at the bottom.



Rear Locations

The speaker, rear camera, battery, and auxiliary connector are located at the rear of the tablet. The Ancillary Transceiver Module (ATM) interface is used for connection to a radio or cellular module.



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LEDS, KEYS, AND ICONS

Refer to Table 1 for descriptions of the LEDs and keys. Refer to Table 2 for touch screen icons.

Table 1. LEDs and Keys

Key	Description
	Recent Applications- Provides quick access to recently used applications.
	Home - Goes to home screen.
	Back - Backs out or returns to previous.
	Status LEDs Tablet powered off • Both green - charging complete • Alternating flashing amber - battery below 90% • Alternating flashing red - battery below ability to boot tablet • Flashing red - charge fault
	Z-All - Not active.
	Power - Used to power tablet on or off (presses > 1 second) or enter/exit sleep (presses < 1 second).
	Legacy - Only available for applications designed for Android 2.3 or earlier.
	Covert - Not active.

Table 2. Touch Screen Icons

Key	Description
	Google - Opens Google search. This only works if internet connection is present.
	Apps - Access all applications installed on the tablet.
	Add - Add application to one of the five screens. Center screen is the home screen accessed by the home icon or key.
	Back - Backs out or returns to previous.
	Home - Goes to home screen.
	Recent Applications - Provides quick access to recently used applications.
	Audio - Provides audio level settings.
	Battery/Clock - Provide time and battery status.

TOUCH SCREEN TIPS

Depending on viewing angle, location on screen, and touch method (finger or stylus), it may appear that the wrong items were selected. This is especially true on earlier RF-3590RT units when two items are above and below each other as shown below.

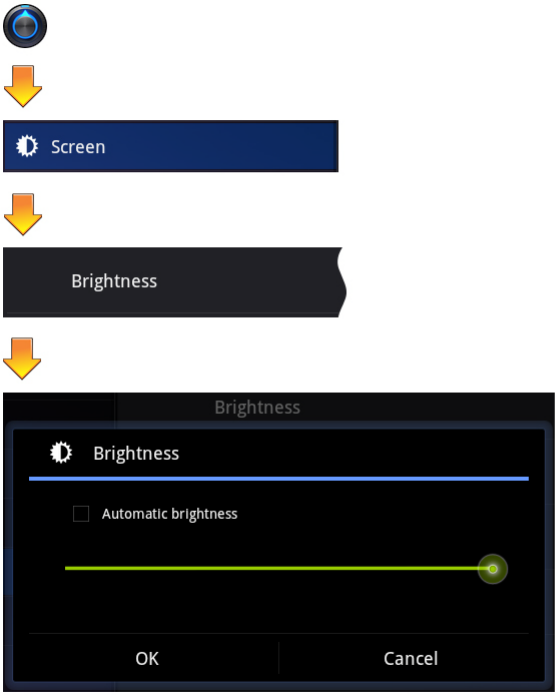
To reduce selection errors, you may need to touch your selection at slightly higher or lower points.

COMMON SETTINGS

Common settings such as brightness, backlight, Ethernet, USB, and audio settings are described here.

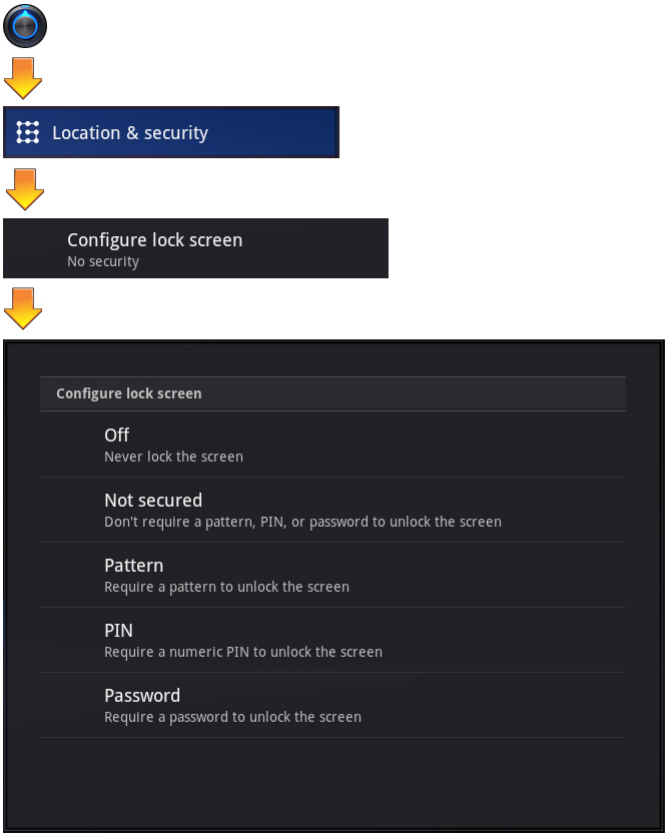
Brightness

Set LCD brightness using **Settings** > **Screen** > **Brightness**. Adjust slider for desired brightness.



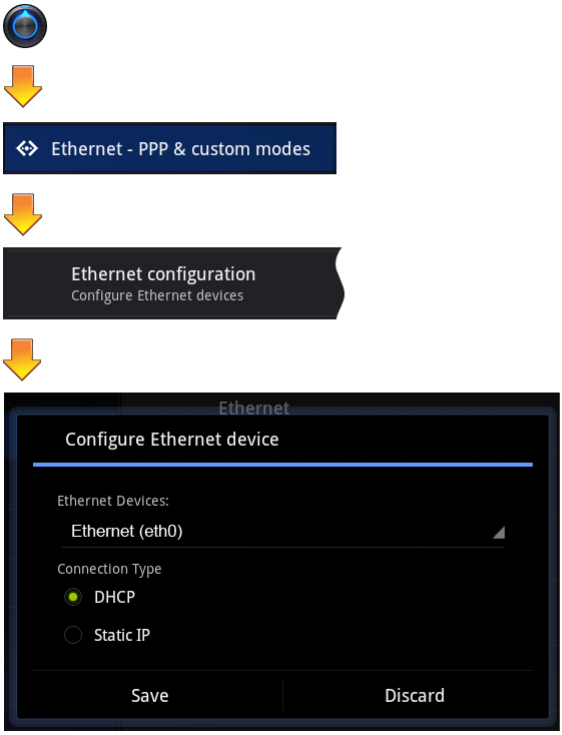
Password Pattern or Pin

Set password or pin using **Settings** > **Location & security** > **Pattern** (or **PIN**). Set pattern or pin.



Ethernet Setting Menu

Dynamic Host Configuration Protocol (DHCP) is most commonly used. Set ethernet using **Settings** > **Ethernet & custom modes** > **Ethernet configuration**.



USB OTG Settings Menu

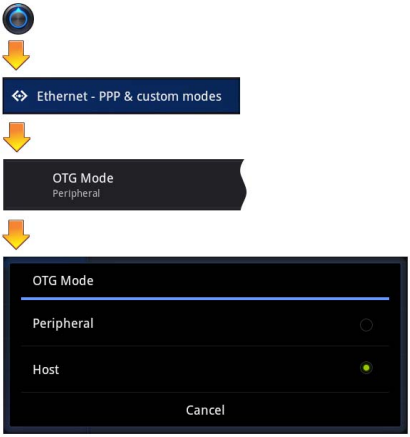
Set USB On-The-Go (OTG) using the settings menu:

a. **Settings** > **Ethernet & custom modes** > **OTG Mode** > **Peripheral** - Tablet appears as drive on radio or computer. Also set USB Mass Storage on PC.

NOTE: Setting OTG Mode to Peripheral will disable (cut off) communications with all USB/Ethernet devices connected to the tablet. This includes connectivity to the 4G modem and devices connected to the 12131-0200-01 Mini- Doc via the PPP interface.

b. **Settings** > **Ethernet & custom modes** > **OTG Mode** > **Host** - Radio or thumb drive appears as drive on tablet:

- For Harris Radio connected to USB Type A connector.
- For USB 2.0 accessories such as keyboard or mouse connected to USB Type A connector.

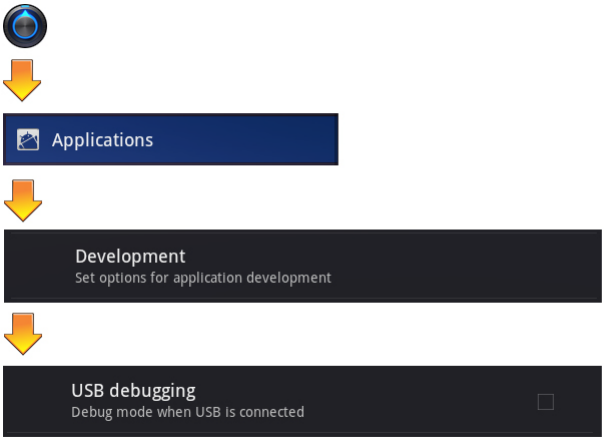


USB Mass Storage on PC

Set USB to mass storage so the RF-3590RT appears as drive on a PC:

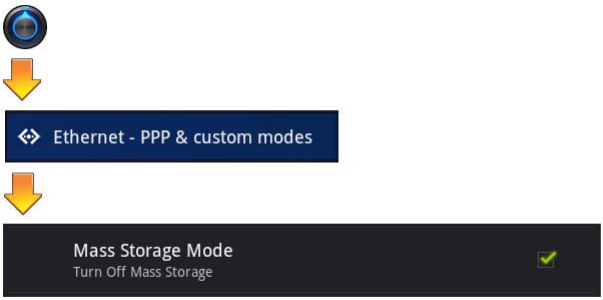
a. **Settings** > **Applications** > **Development** > **USB Debugging (Not Checked)**

When USB Debugging is enabled, PC access to the internal and external Secure Digital (SD) card via the USB OTG is unavailable.



b. **Settings** > **Ethernet & custom modes** > **OTG Mode** > **Peripheral (Checked)** - Refer to USB OTG Settings Menu.

c. **Settings** > **Ethernet & custom modes** > **Mass Storage Mode (Checked)** - Uses Media Transfer Protocol (MTP) for file transfer with PC connected to USB Mini B port.



Your RF-3590RT should now appear as a drive (Harris TDU) on a PC as shown:

Audio

Set audio levels using the following:

INSTALLING APPLICATIONS OUTSIDE OF PLAY STORE

An application can be installed without the use of Play Store:

a. Place Android application on SD card or USB thumb drive and insert into RF-3590RT (USB Mass Storage on PC).

b. Enable RF-3590RT to allow installation of non-Market applications.

c. Tap on Harris Application Manager ( ).

d. Navigate to directory where file is located:
   - External SD Card - /mnt/ext_sdcard
   - External Mass Storage - /mnt/usb_mass_storage
   - Android Download Directory - /mnt/sdcard/Download (This is the default download directory using the default Android browser.)
   - Internal SD Card - /mnt/sdcard

e. Tap on the .apk file.

f. Select **Install** from choices.

g. Accept application's access notifications.

Common applications include:

- Astro - http://www.appbrain.com/app/astro-file-manager/com.metago.astro
- Adobe Reader - http://get.adobe.com/reader/otherversions/
- MX Video Player - https://sites.google.com/site/mxvpen/download (NEON version)
- AndFTP - http://www.lysesoft.com/products/andftp/
- AndroIRC
- AndroSensor
- Battery Notifier
- GPS Test
- Terminal Emulator

CLEANING THE TOUCH SCREEN

CAUTION

Do not use glass cleaner to clean the touch screen or damage may occur.

Use a quality micro-fiber cloth to clean the screen. Moisten the cloth with water for stubborn spots.

FCC Regulations

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device 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

Changes or modifications not expressly approved by the party responsible for compliance could void the user‘s authority to operate the equipment.

RF Exposure Information (SAR)

This device is compliance with SAR for general population /uncontrolled exposure limits in ANSI/IEEE C95.1-1999 and had been tested in accordance with the measurement methods and procedures specified in OET Bulletin 65 Supplement C.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device was tested for operations with the device contacted directly to the human body to the back side of the EUT. To maintain compliance with FCC RF exposure compliance requirements, avoid direct contact to the transmitted antenna during transmitting.

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Tel: 585-244-5830. Fax: 585-242-4755 **www.harris.com**

IC Regulations

This device complies with Industry Canada license-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.

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."

This Class B digital apparatus complies with Canadian ICES-003

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada

The device could automatically discontinue transmission in case of absence of information to transmit, or operational failure. Note that this is not intended to prohibit transmission of control or signaling information or the use of repetitive codes where required by the technology..

The County Code Selection feature is disabled for products marketed in the US/Canada. For product available in the USA/ Canada markets, only channel 1~11 can be operated. Selection of other channels is not possible.

Important Note

IC Radiation Exposure Statement

This EUT is compliance with SAR for general population/uncontrolled exposure limits in IC RSS-102 and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528.

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