



iRUGGY G8 Mobile Tablet

User Manual

Version 1.0

March 2017

Copyright

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Manual Version 1.0

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Safety

Regulatory Information

Caution: Only use approved and UL Listed accessories, battery packs and battery chargers. Do NOT attempt to charge damp/wet mobile computers or batteries. All components must be dry before connecting to an external power source.

Power Supply

Use only the approved power supply shipped with the unit. Use of alternative power supply will invalidate any approval given to this device and may be dangerous.

Warning for Use of Wireless Devices

Please observe all warning notices with regard to the usage of wireless devices.

Potentially Hazardous Atmospheres

You are reminded of the need to observe restrictions on the use of radio devices in fuel depots, chemical plants etc. and areas where the air contains chemicals or particles (such as grain, dust, or metal powders) and any other area where you would normally be advised to turn off your vehicle engine.

Safety in Aircraft

Switch off your wireless device whenever you are instructed to do so by airport or airline staff.

Pacemakers

Pacemaker manufacturers recommended that a minimum of 15cm (6 inches) be maintained between a handheld wireless device and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with independent research and recommendations by Wireless Technology Research.

Persons with Pacemakers

Persons with Pacemakers should ALWAYS keep the device more than 15cm (6 inches) from their pacemaker when turned ON and hence they should not carry the device in a breast pocket. They should use the ear furthest from the pacemaker to minimize the potential for interference. If you have any reason to suspect that interference is taking place, turn OFF your device.

Hearing Aids

The wireless device may interfere with some hearing aids. In the event of interference you may want to consult your hearing aid supplier to discuss solutions.

Other Medical Devices

Please consult your physician or the manufacturer of the medical device, to determine if the operation of your wireless product may interfere with the medical device.

FCC/EU RF Exposure Guidelines

FCC Statement

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.

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.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 0 centimeters between the radiator and your body.

Caution!

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

CE Marking and European Economic Area

The use of 2.4GHz RLAN's, for use through the EEA, have the following restrictions:

Maximum radiated transmit power of 100 mW EIRP in the frequency range
2.400 -2.4835 GHz
In France, outside usage is restricted to 2.4 - 2.454 GHz.
Italy requires a user license for outside usage.

Bluetooth® Wireless Technology for use through the EEA has the following restrictions:

- Maximum radiated transmit power of 100mW EIRP in the frequency range 2.400 -2.4835 GHz.
- In France, outside usage is restricted to 10mW EIRP.
- Italy requires a user license for outside usage.

Battery Information

Our rechargeable battery packs are designed and constructed to the highest standards within the industry. However, there are limitations to how long a battery can operate or be stored before needing replacement. Many factors affect the actual life cycle of a battery pack, such as heat, cold, harsh environmental conditions and severe drops. When batteries are stored over six (6) months, some irreversible deterioration in overall battery quality may occur. Store batteries discharged in a dry, cool place, removed from the equipment to prevent loss of capacity, rusting of metallic parts and electrolyte leakage. When storing batteries for one year or longer, they should be charged and discharged at least once a year. If an electrolyte leakage is observed, avoid any contact with affected area and properly dispose of the battery. Batteries must be charged within the 0° to +35°C (32° to 95° F) ambient temperature range. Replace the battery when a significant loss of run time is detected.



Battery Caution

There is a risk of explosion if the battery is replaced by an incorrect type. Dispose of used battery according to the local disposal instructions.



Waste Electrical and Electronic Equipment (WEEE)

For EU Customers: All products at the end of their life must be returned to the reseller for recycling.

Revision Table

Version	Date	Changes
1.0	March 2017	Initial release

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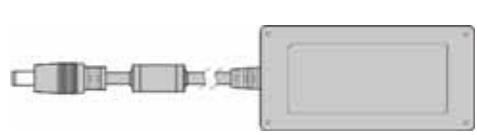
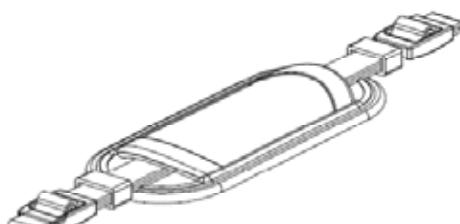
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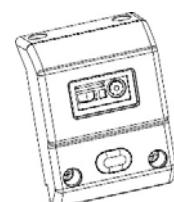
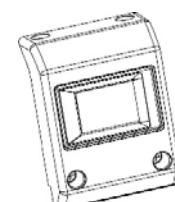
1 Unpacking the unit

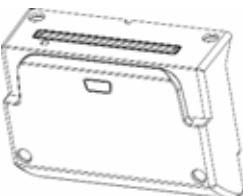
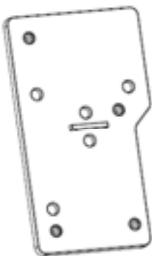
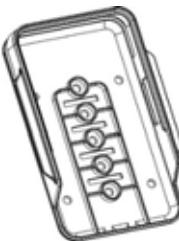
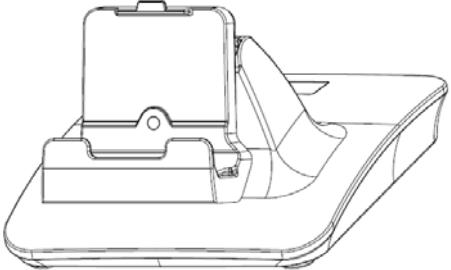
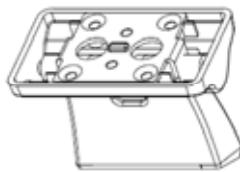
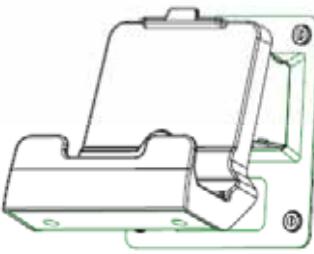
The following items may be shipped with each unit.

1.1 Standard items

	
Tablet	AC Adapter
	
Standard Hand Strap	Quick Start Guide

1.2 Accessories

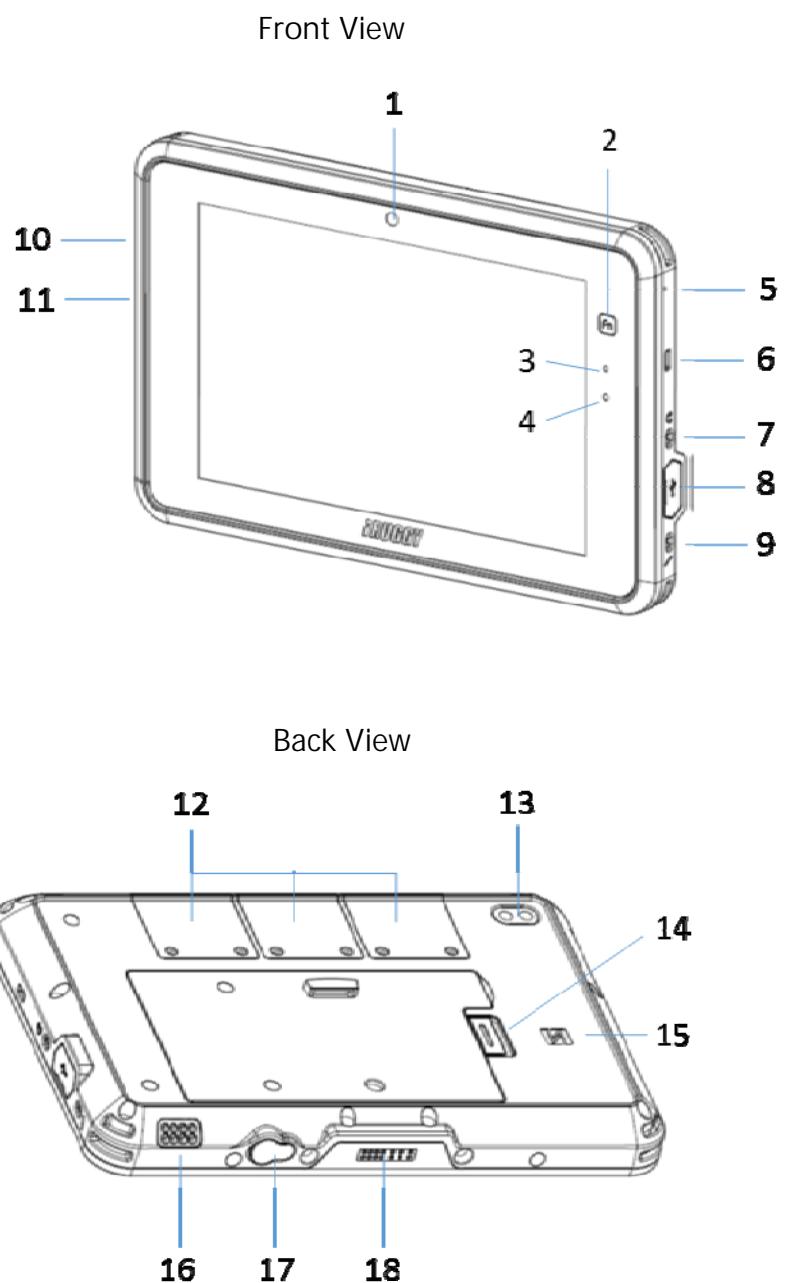
	
1D/2D Scanner ADD-f(x) Module	Fingerprint Reader ADD-f(x) Module

	
HF RFID ADD-f(x) Module	Smart Card Reader / MSR ADD-f(x) Module
	
mPOS Integration Bracket Mounting Plate	Ingenico iCMP mPOS Integration Bracket
	
POS Docking Station	POS Dock mPOS Bracket Mount
	
POS Dock Customer Display	VESA Charging Dock

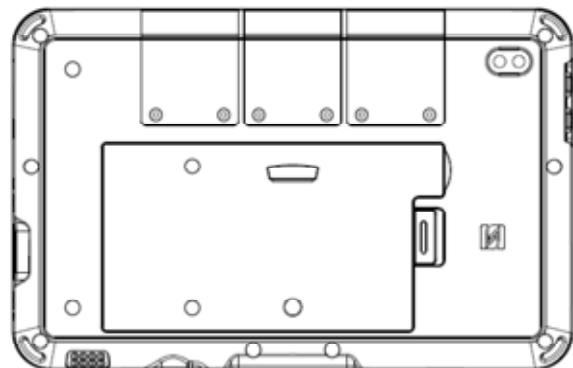
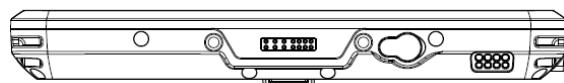
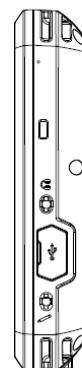
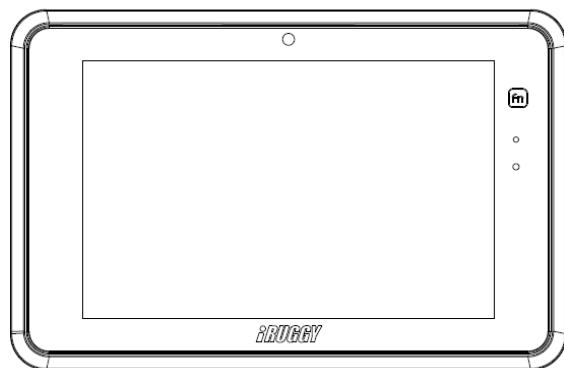
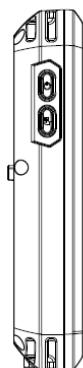
2 Hardware Overview

2.1 Features

1	2MP webcam
2	Programmable capacitive function key
3	Battery status indicator
4	Ambient light sensor
5	Microphone
6	Kensington lock slot
7	Audio jack
8	Access cover for micro USB (OTG) slot
9	Stylus port
10	Power On/Off button
11	in4Touch™ touch mode control button
12	ADD-f(x) module bays (3)
13	5MP camera with LED illumination
14	Battery release latch
15	Location of internal NFC reader
16	Speaker
17	DC-in
18	Docking connector



2.2 System Overview



2.3 Specifications

Touch Display	8.0" (800 x 1280 resolution) projected capacitive multi-touch display User-selectable touch mode for Hand, Glove, Stylus or Rain Programmable capacitive function key on front-bezel
Processor	Intel® Quad-Core CPU 2.56GHz
Operating systems	Windows® 10 IoT Enterprise for Small Tablets Android™ 7.0
Memory / Storage¹	4GB memory / 64GB storage (Android Model: 32GB storage) microSDXC socket for expansion
Camera	8MP autofocus rear camera with LED flash 2MP front-facing camera
Expansion I/O ports	Micro USB 2.0 (supports OTG) Additional peripheral I/O available through optional POS Docking Station
Audio	1W speaker Audio jack Microphone
Communications	WLAN 802.11 ac Bluetooth 4.0 + LE (class 2) NFC contactless card reader LTE data ² and dedicated GPS (factory option)
Power Supply	3.7V 8000 mAh battery, hotswappable* with up to 8 hours per charge ³ DC-in, with external AC adapter (Output 5V DV, 4A, Input 100-240VAC, 50/60Hz) for charging
Environmental	IP65 rated protection from liquid and dust ingress Designed to MIL-STD-810G 1.2M drop specification Operating temperature: -10°C ~ 50°C (14°F ~ 122°F); max. 35°C (95°F) when charging battery Storage temperature: -20°C ~ 70°C (-4°F ~ 158°F) Humidity: 90% RH non-condensing
Dimensions (W x H x D)	234 x 151.8 x 26 mm (9.2" x 5.9" x 1.0")
Weight (with Battery)⁴	850 g (1.87 lbs)
ADD-f(x) modules⁵	1D/2D optical barcode scanner Fingerprint readers LF, HF, UHF RFID readers Smart card reader (EMV Level 1 and 2 certified) and 3 track encrypted MSR Rear mounting bracket for mPOS devices LAN and COM I/O module
Optional accessories⁵	POS docking station (1 x LAN, 3 x USB 2.0, 1 x COM, 1x CD VESA charging mount Vehicle charging mount 2mm precision tip stylus

¹ 1GB=1 billion bytes; actual formatted capacity will be less

² Subject to service provider's broadband subscription and coverage area; additional charges may apply

³ Standard configuration tested using PCMark® 8 battery life benchmark. Results may be used for product comparison and may vary under different situations

Including hardware configuration, software, operating conditions, power management settings and other factors. Battery life will decrease with time and use

⁴ Weight shown represents base configuration with battery, excluding any optional accessories

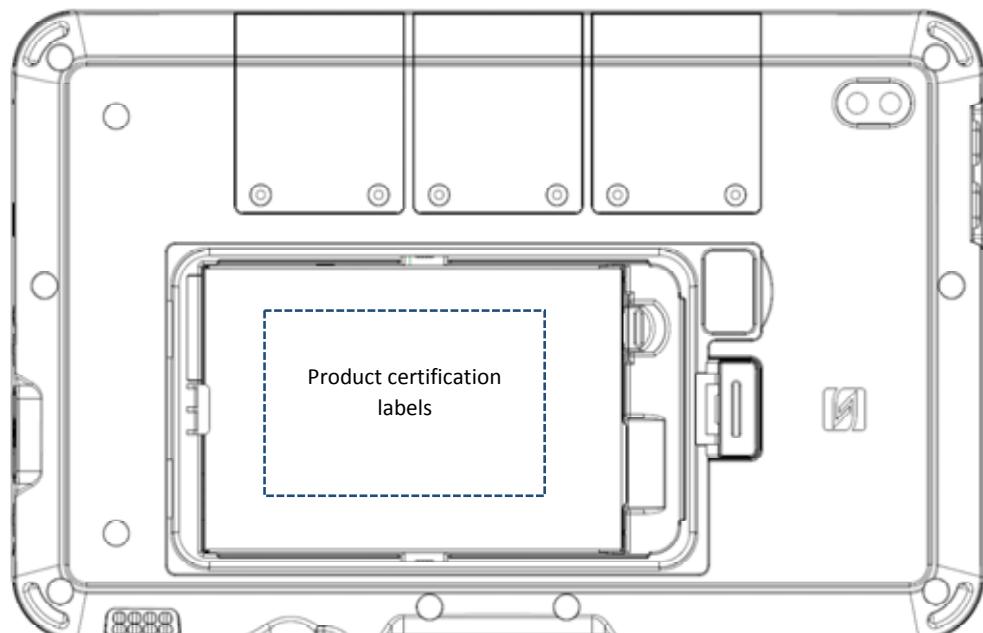
⁵ Accessories may vary depending on your configuration. Accessories are sold separately

*Hotswappable feature is only available with LTE data communication and dedicated GPS option.

3 Product Labelling

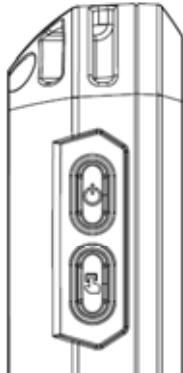
Safety certification and other compliance labels may be found on the inside of the battery compartment, along with product serial number and Windows license sticker. See section on *Removing the Battery* for instructions on removing the battery module to view this information.

All tablets are labelled with a unique serial number. This number is important in tracking units through production and shipment and may be required for servicing the product under the warranty.



4 Basic Operation

4.1 Power On/Off Button



4.1.1 Turning on the Unit

Press and hold the power button 2 seconds on to turn on the system. You will feel a vibration the moment the system powers on. **NOTE:** The tablet must be docked, plugged into AC or battery charged before turning on the unit for the first time.

4.1.2 Turning off the Unit

The unit should be shut down normally via the operating system. To manually power off the unit, press and hold the power button 5 seconds.

4.1.3 Turning off the Display Backlight

System settings can be used to turn off the backlight automatically for power savings when the system is idle. When the unit is powered on, pressing the power button momentarily will turn off and on the backlight unless these settings are changed.

4.2 in4Touch™ Touch Mode Control Button

Press and hold the in4Touch button to cycle through graphic icons displayed on screen representing each of 4 supported touch operation modes. Once the graphic icon is highlighted, release the button to activate the touch mode represented by that icon.



Hand Supports normal touch operation using a bare finger.



Glove Enables touch operation when the user is wearing gloves.



Stylus Restricts input to stylus, ignoring finger or palm contact. Must be used with the G8 stylus connected to the stylus port on the tablet.



Rain Supports touch operation using bare finger while reducing interference from random drops of liquid on the screen.

4.3 Adjusting Screen Brightness

Windows display settings allow screen brightness to be set manually or adjusted automatically for power savings or for comfort under different lighting conditions. There are 4 manual settings: 100%, 75%, 50% and 25%. Factory default setting for the display is fixed at 100% brightness.

An ambient light sensor located on the front of the display may be used to sense and reduce the brightness level for comfort in low light environments. This feature is disabled at the factory but can be enabled through system software settings.

4.4 Adjusting System Volume

Volume levels on the integrated speaker and devices connected through the audio jack must be set manually through Windows or Android system software settings.

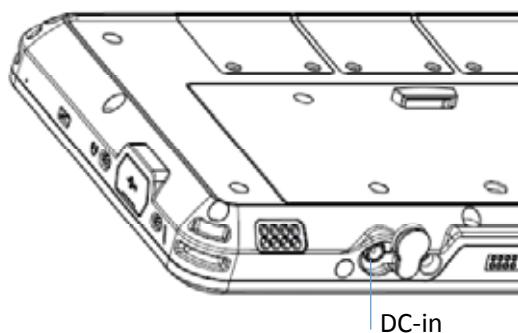
4.5 Programmable Function Key

The capacitive button on the top right of the tablet display is activated by touch. For Windows and Android models, this button is pre-programmed in the factory as Windows or Home key, but the button may be re-programmed by the user to open applications or access specific functions. For information on re-programming this key, contact your iRuggy Systems authorized distributor or reseller.

4.6 Charging the Battery

The G8 Mobile Tablet is equipped with an interchangeable 8000mAH battery module supporting up to 8 hours per charge depending on usage.

4.6.1 Charging via Cable to AC Adapter



The battery may be charged by connecting the supplied AC power adaptor directly to the DC-in connector located on the bottom of the tablet. Push the protective rubber seal aside and plug the cable directly into the connector. Then plug the adaptor directly into the AC outlet.

4.6.2 Battery Level Indicator on Tablet

A battery level indicator LED on the front of the tablet signals charge status:

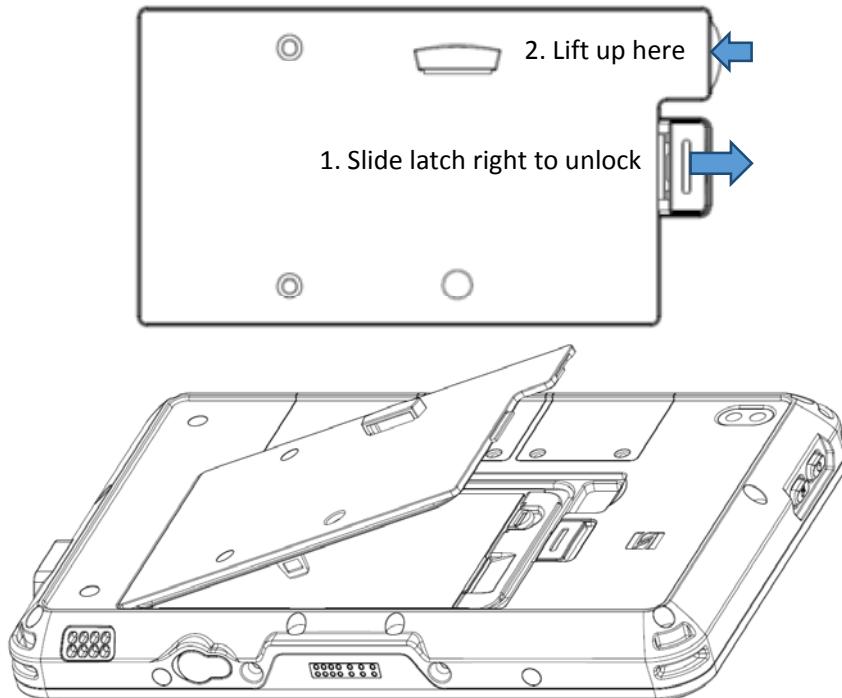
GREEN	Battery charge level is 90% or higher (Tablet is plugged in or placed in dock)
ORANGE	Battery is charging (Tablet is plugged in or placed in dock)
RED/Flashing	Battery level below 15%
RED	Battery level below 10%

4.7 Replacing the Battery

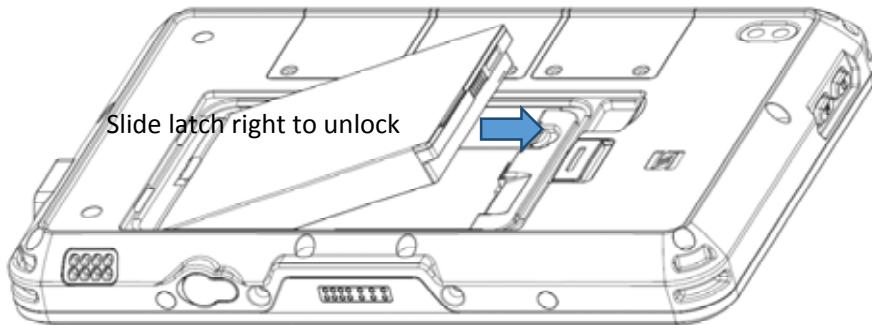
4.7.1 Removing the Battery

Unless the tablet is equipped with a bridge battery supplied on 3G models, always power down the system first. Unplug the AC cable if connected directly to the DC-in port on the tablet. Place the tablet face down on a flat surface. Next, slide the latch down as shown to unlock and release the battery module so it can be lifted out of the unit.

If the system is equipped with the bridge battery, the system will automatically enter Connect Standby Mode and screen backlight will turn off. The front battery level indicator LED will flash and system will beep every 3 seconds for the first 3 minutes. After 3 minutes, the LED will flash and beep will sound every half second. System will automatically shut down at 4 minutes.



The main battery module may be removed by releasing the latch and lifting up the access cover as shown above.



Next slide the latch holding the main battery module in place and lift out the battery at an angle as shown above.

4.7.2 Installing the Battery

Angle the battery module so that the left side with exposed connector pins is inserted first into the battery compartment. The press into place and slide the latch upward to lock the battery module into position.

5 Installation and Setup

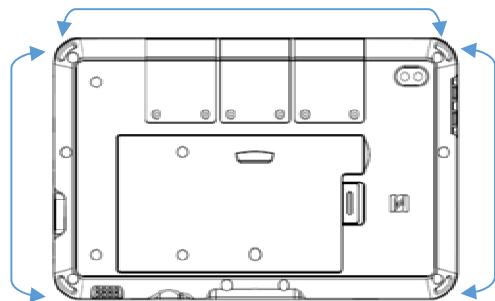
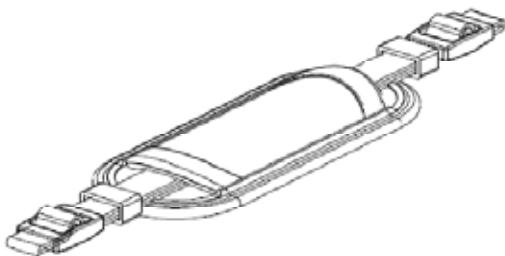
5.1 System Software

System is factory-installed with the supported Windows or Android operating system and required drivers for all device options, whether or not device is installed on the unit when shipped. No additional software or device drivers must be installed to begin using the system.

On initial bootup of a system loaded with Windows, the Windows activation screen will show and prompt the user through the activation process.

See section on *Software Configuration* for more information on drivers supplied with the system.

5.2 Attaching the Hand Strap

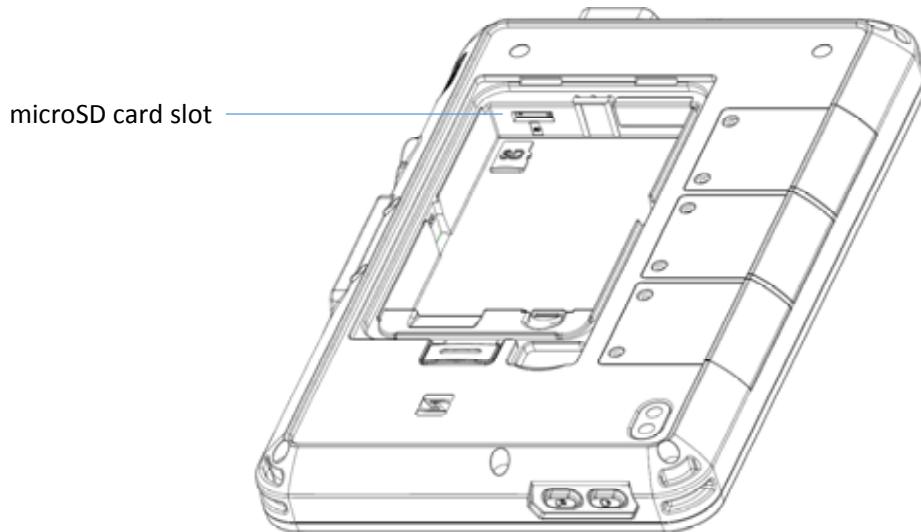


Use of the standard hand strap shipped with the tablet is optional. Depending on the situation, the user may attach the hand strap between anchor points across the top or either side of the tablet. To attach the strap to the tablet, thread both ends of the strap into an anchor point, fold back and tighten in the plastic buckle. Any excess can be tucked into the sleeve handle at the center of the strap.

5.3 Installing a 3G or microSD Card

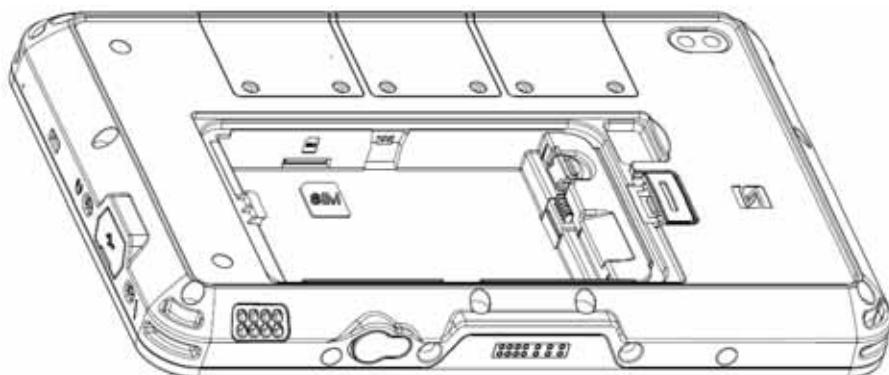
The user may install a user-supplied SDXC or compatible microSD card on the unit to load or save files, or expand working data storage capacity. On select tablet models with support for 3G data communication, a separate slot is available for installing a user-supplied 3G Micro SIM card.

Slots is located inside the main battery compartment. To install either type of card, first power down the system. Remove the main battery and locate the correct slot as shown below.



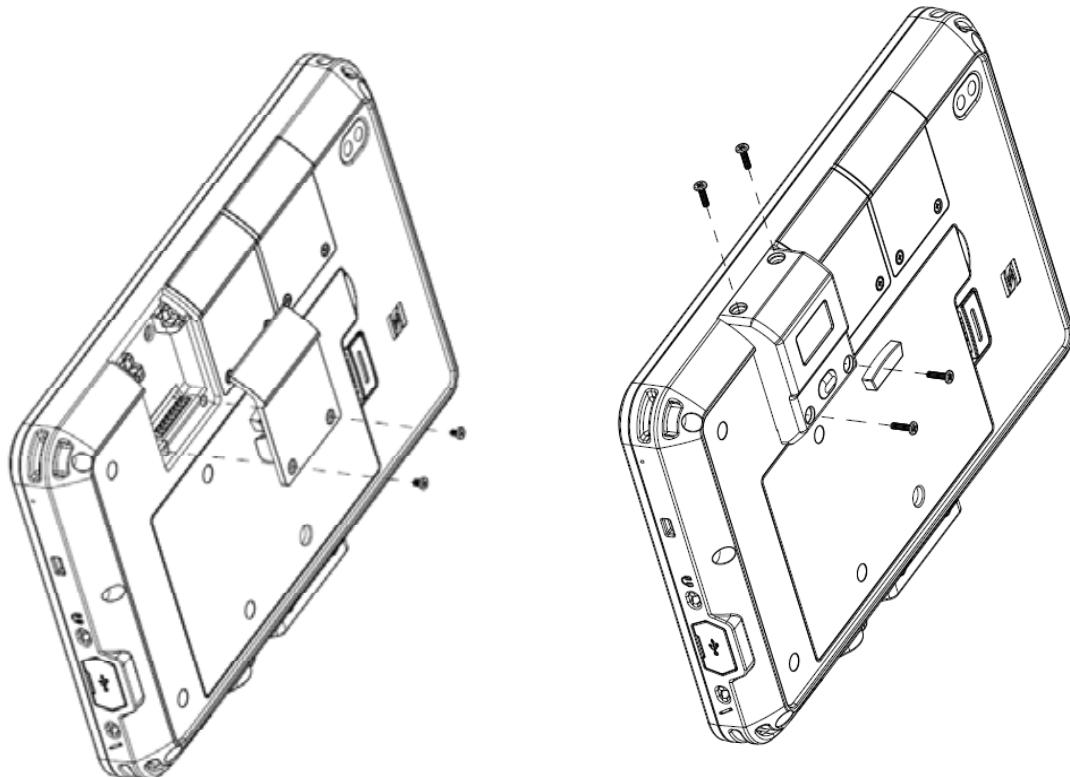
3G SIM slot

Orient either card so that the gold contact edge faces down towards the front of the tablet. Slide the card in until it clicks in place. To remove the card, press the outer edge to click and release the card.



5.4 Installing ADD-f(x)TM Modules

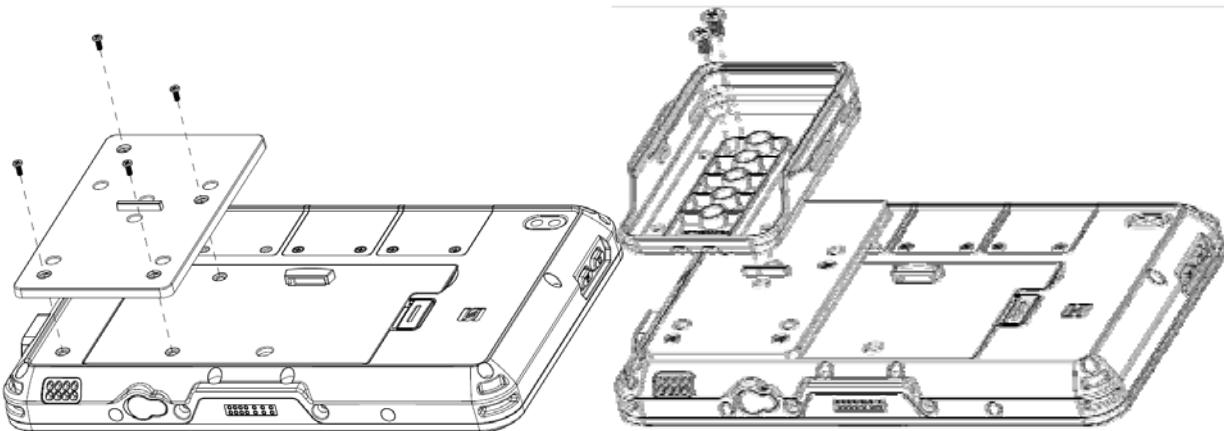
Optional ADD-f(x) modules are available to expand tablet functionality. To install any module, first power down the system. Locate the three universal expansion bays on the top, back side of the tablet. Depending on the number and size of the modules selected, one or all three bays may be used to install 1, 2 or up to 3 ADD-f(x) modules.



Remove the two screws and lift off the plastic cover covering each bay. This cover may be saved or discarded. Slide the module in place and fasten in place with the four screws provided.

5.5 Attaching an mPOS Integration Bracket

Custom brackets are available for on-tablet integration of third-party mobile point-of-sale (mPOS) payment devices, such as the Ingenico iCMP mobile payment device.



To attach the bracket, place the tablet face down. Position the metal universal mounting plate over the battery module as shown and attach with the four screws provided (you may need to first remove and discard cosmetic rubber covers placed over the screw holes).

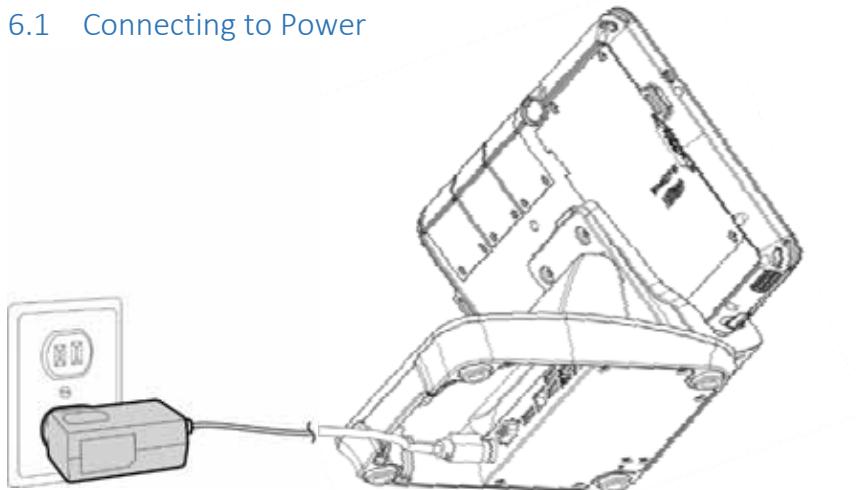
Use another set of two screws provided to attach the device-specific bracket to the mounting plate.

The mPOS device may slide into the bracket from the top or bottom, depending on design. Charging port will remain accessible to allow connection of a charging cable (supplied by the vendor) without removing the device from the tablet.

6 Using the G8 POS Docking Station

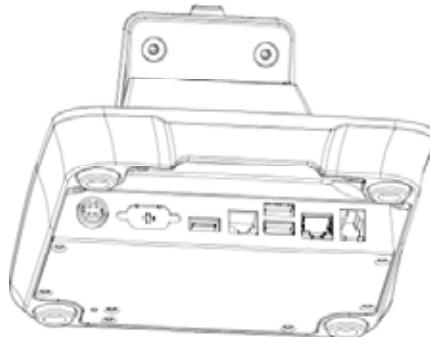
An optional countertop mount is available to allow the G8 tablet to be operated at different angles while docked for charging, LAN communication and connection with peripherals. The docking station also supports optional mounting of a customer display or third-party payment terminal.

6.1 Connecting to Power



Before the docking station can be used to charge the tablet or connect to peripherals, the dock must be connected to AC power via the 19V/65W AC adaptor shipped with the POS Dock. Locate the DC-in connector on the dock and plug in the power cable from the AC adaptor.

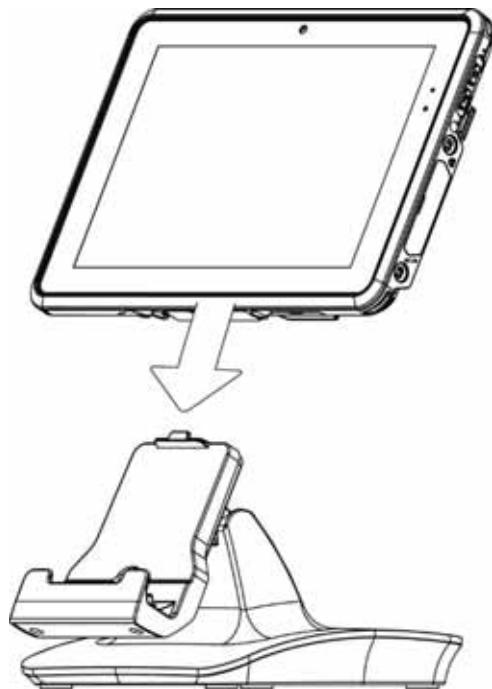
6.2 Connecting to Network and Peripherals



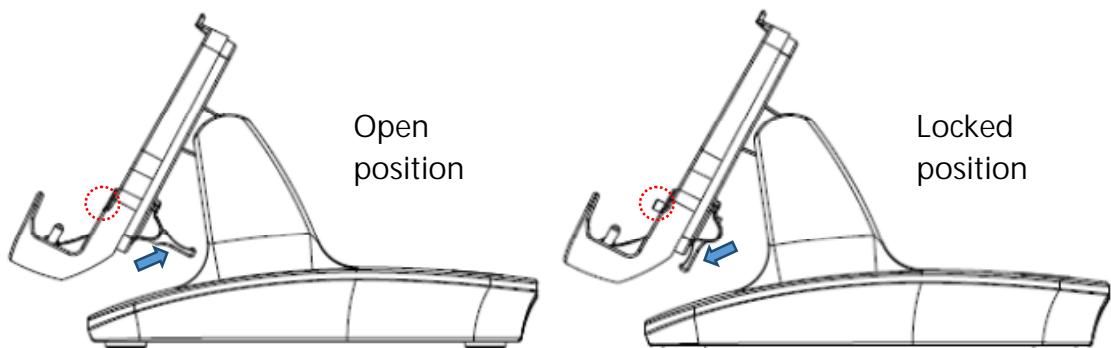
Disconnect the power cable from the docking station. Plug network or peripheral cables into available ports located in the base:

- RJ45 10/100 Ethernet LAN
- Cash drawer port, 12V or 24V selectable through jumper settings (default 24V)
- One RJ48 RS-232 port, 0V, 5V or 12V selectable through jumper settings (default 0V)
- Three 5V USB 2.0 ports

6.3 Placing the Tablet in the Dock



The tablet may be placed on the dock powered on or off. When positioning the tablet on the dock, take care to locate the extension on the back center of the tablet and make sure this slides over the tab on the mount.

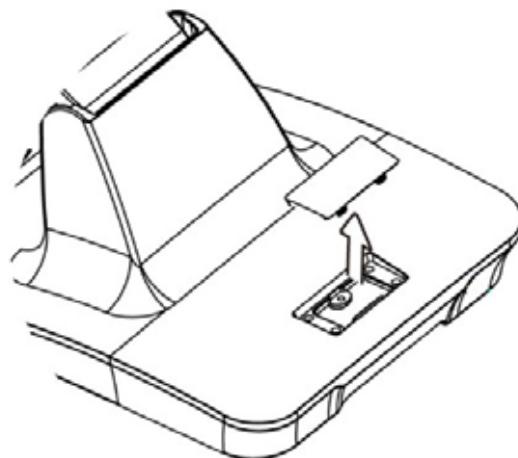


There is a latching mechanism to secure the tablet in the dock, accessed on the back of the mount. Before placing the tablet in the dock, check to make sure the latch is in the open position.

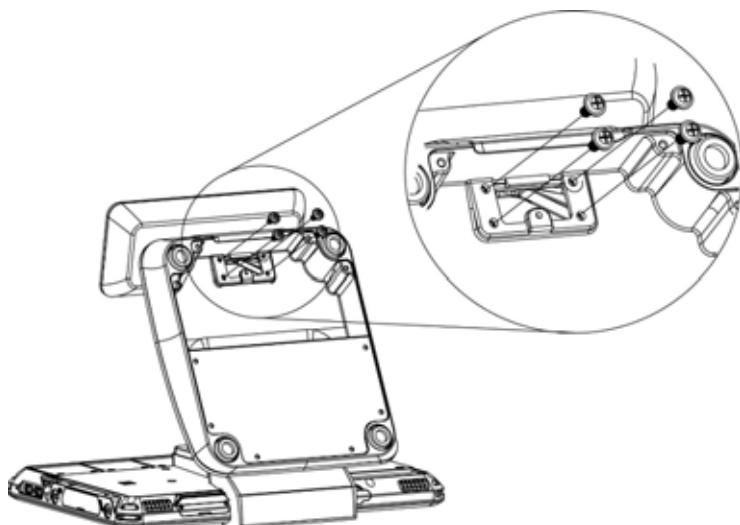
When removing the tablet from the dock, you may encounter some resistance as there is a strong magnet which helps serve to keep the electrical contact points tightly aligned during operation.

6.4 Installing the Customer Display

An optional 2 line x 20 graphic LCD customer display may be mounted on the back of the docking station. Contact your iRuggy Systems or authorized sales representative for a copy of the separate user guide and OPOS driver for the customer display option.



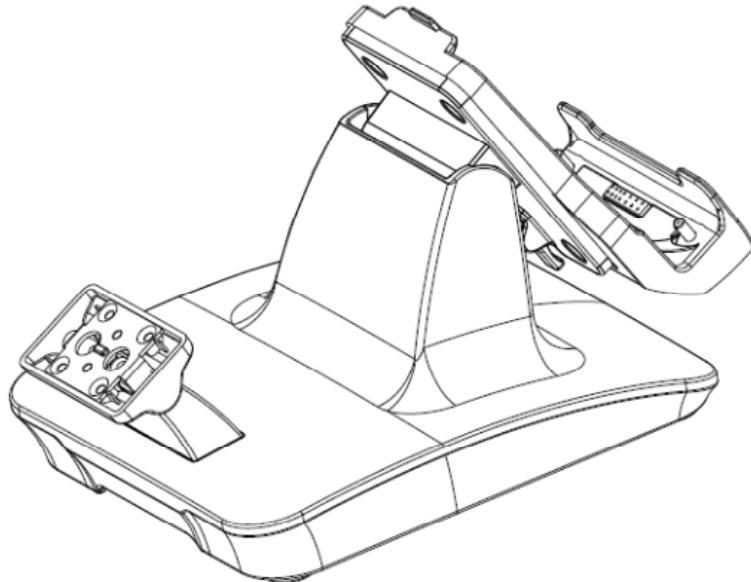
To install the customer display, remove the single screw securing a cover over the rear mount area and discard.



Thread the customer display cable through the opening and fasten the display mount into place with the four screws provided. Connect the host end of the cable to any of the available USB ports.

6.5 Installing a third-party payment device

An optional mounting post is available to attach a third-party payment device on the back of the docking station. The post is compatible with device-specific mPOS brackets supplied by iRuggy Systems.



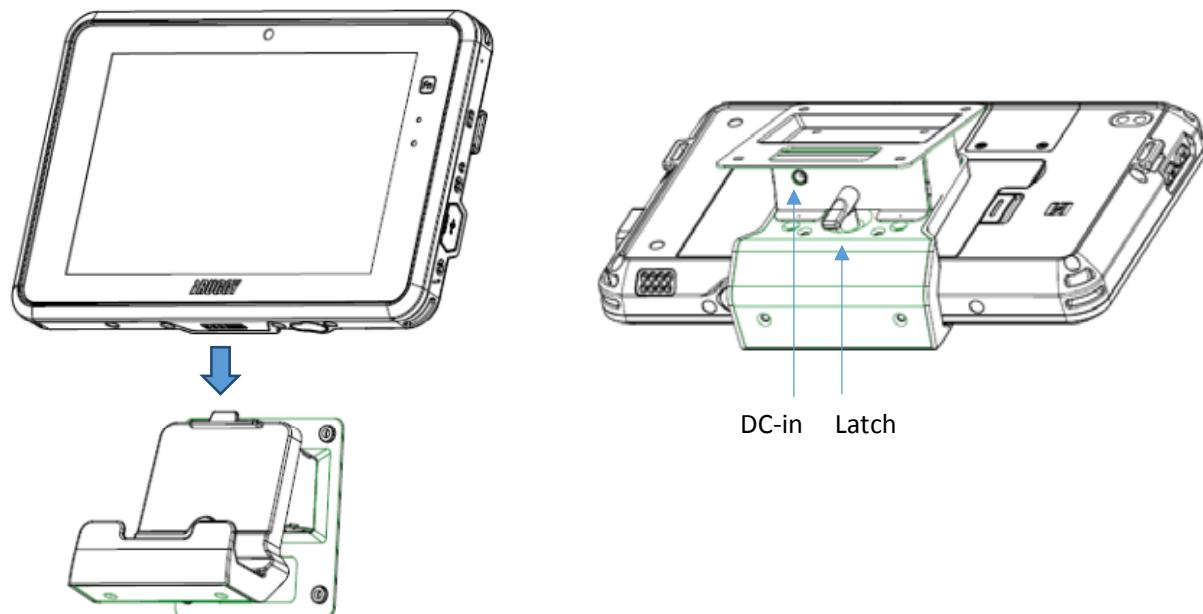
To install the device mount, remove the screw and discard the blanking cover over the rear mount access. Attach the post to the base with the four screws provided before attaching the iRuggy Systems mPOS bracket.

7 Using the G8 VESA Charging Dock

An optional fixed position mount is available to operate the tablet while charging. This mount features a 75 x 75 mm VESA hole pattern for attaching the mount to any VESA compatible wall or post bracket. The AC adapter shipped with the tablet may then be plugged directly into the DC-in connector on the charging dock.

The tablet may be placed on the dock powered on or off. When positioning the tablet on the dock, take care to locate the extension on the back center of the tablet and make sure this slides over the tab on the mount.

The VESA Charging Dock includes a latching mechanism to hold the tablet securely in position, similar to the POS Docking Station. See illustration in Section 6.3 for details on engaging and disengaging the latch.

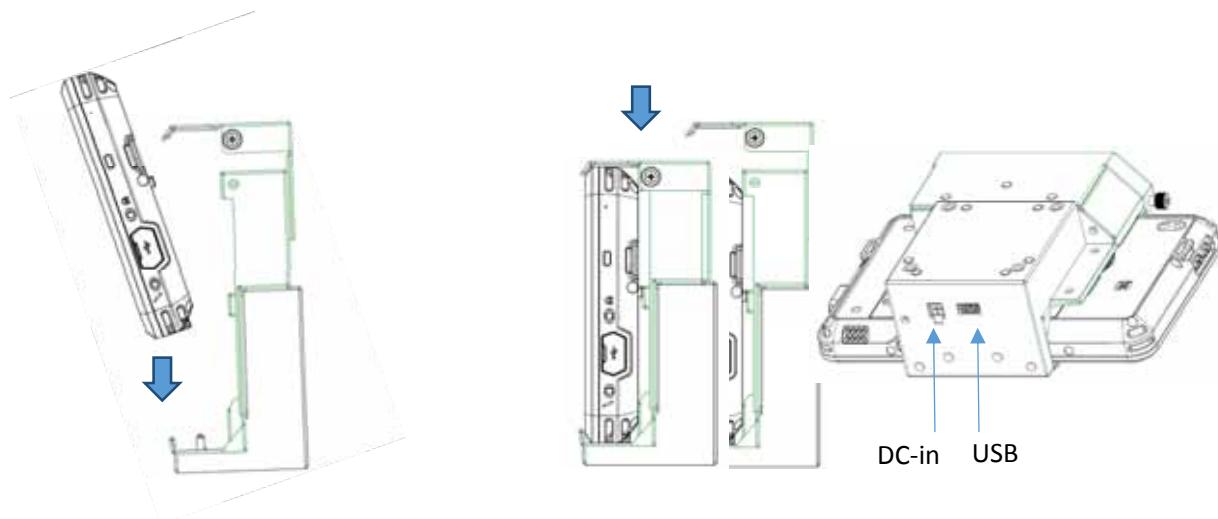


8 Using the G8 Vehicle Mount

An optional vehicle mount is available to secure the tablet onto a vehicle specific bracket. This mount features a 75 x 75 mm VESA hole pattern. A cigarette lighter adapter shipped with the vehicle mount is plugged into the mount and standard cigarette lighter outlet to keep the tablet charged. The vehicle mount also features a 5V PC USB port to connect USB peripherals.

The tablet may be placed on the dock powered on or off. When positioning the tablet on the dock, take care to locate the extension on the back center of the tablet and make sure this slides over the tab on the mount.

When in the mount, the tablet may be operated normally. Both front and rear cameras and side I/O remain accessible to the user.



To place the tablet in the mount, first raise the top arm of the mount. Angle the unit from the bottom as shown. Slide the arm down and secure.

9 Software Configuration

All Windows or Android software and device drivers required to operate the tablet with any standard or optional features or accessories are pre-installed at the factory. There is no need to download and install additional driver software, even for ADD-f(x) accessories shipped separately.

Contact your iRuggy Systems authorized distributor or reseller for technical information required for software integration or specific device configuration.

- 1D/2D Scanner ADD-f(x) module: See Appendix A for supported bar code symbologies
- HF RFID ADD-f(x) module: Following tags may be read at maximum range 25-30 mm:
 - Mifare_UltraLight
 - Mifare_One(S50)
 - Mifare_One(S70)
 - Mifare_Pro(X)
 - Mifare_DESFire
- Integrated NFC reader tags supported:
 - NXP Mifare Ultralight
 - NXP DESFire
 - Sony FeliCa
 - Broadcom Topaz

Appendix A: Supported Bar Code Symbologies

Below bar codes types are supported by the optional 1D/2D scanner ADD-f(x) module:

- Aztec Code
- Codabar
- Codablock F
- Code 11
- Code 32(PARAF)
- Code 128
- Code 2 of 5
- Code 39
- Code 93
- Data Matrix
- EAN/JAN-13
- EAN/JAN 8
- EAN-UCC Composite Codes
- EAN-UCC Emulation
- IATA Code 2 of 5
- Interleaved 2 of 5
- Matrix 2 of 5
- MaxiCode
- MicroPDF417
- MSI, PDF417
- QR Code
- GS1 DataBar
- TCIF Linked Code 39
- UPC-A
- UPC E
- RSS Expanded
- RSS Limited
- RSS-14
- Chinese Sensible (Han Xin) code
- Codablock A
- UPC-A/EAN-13 with Extended Coupon Code
- Coupon GS1
- GS1codebar