Infinite Peripherals®

USER MANUAL

Imperea

For iPhone® 6s / 7 / 8 / SE

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Legal Notice

"Made for iPhone" (MFi) means that an electronic accessory has been designed to connect specifically to the iPhone and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with an iPhone may affect wireless performance.

Compatible Devices

iOS Compatibility

- iPhone 6s
- iPhone 7
- iPhone 8
- iPhone SE

Trademarks

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Overview

Imperea is a durable, camera-based scanning device for your iOS device. As a high-speed scanning device with IP67 rating for dust and moisture protection to withstand industrial conditions, Imperea includes a smart battery and intuitive SDK for software integration.

Features

Camera-Based Barcode Scanner
Camera scanning SDK enables your iOS device to scan any barcode even if poorly printed or curved.

Supports 1D/2D, 2D, 2D stacked, and 2D matrix barcode symbols

Battery
User swappable, rechargeable battery with 2100mAh capacity. Supports wireless charging.

Single Charging Station / Wireless Technology
The smart battery uses wireless technology that charges both the Imperea battery and iOS device simultaneously.

Battery Status
Four LEDs for the fuel gauge next to the battery status button on the back of Imperea.

Accessories

Visit our website at https://ipcmobile.com or contact your Infinite Peripherals account representative for additional information about our current and future product accessories.

Technical Specifications

Physical Dimensions

Compatibility
iPhone 6s / 7 / 8

Buttons
Three user-configured blue buttons in the application for features such as push-to-talk, camera, and messaging

Battery status button

All existing iOS device buttons are accessible

Dimensions (L x W x H)
160mm x 76.6mm x 18.6mm (6.3” x 3.01” x 0.73”)

Weight
155.129g (5.472 oz.) without iOS device

Audio/Visual
Apple iPhone speakers and microphone
Front and back camera

Connectivity

Barcode Scanner
Camera-based scanning enables your iOS device to scan all barcodes in all environments

Reads 1D/2D, 2D stacked, GS1, and 2D matrix barcodes

Power Adapter
Custom power adapter included with single station wireless charger
18W QC3.0, 5V 2.0A, 9V 2.0A, 12V 1.5A

Input Voltage
5 volts (5W output)
12 volts (10W output)

Battery
User-replaceable, rechargeable Lithium-Polymer battery

3.7V, 2100mAH, 3.7 supporting wireless charging

Smart battery with real-time charging status and battery health for better battery management

LED Indicators
Four programmable LEDs on back of unit illuminate when battery status button is pressed
Battery status colors: Blue, Green, Red, Amber

Accessories
Single station wireless charger

Certificates

- CE, FCC UL, MFi, ROHS, UN38.3 for battery
- Drop test MIL-STD-810 (4-ft to concrete)
- IP67 rating

Environment

Temperature
Operation: 0°C to +40°C (32°F to 104°F)
Storage: -20°C to +65°C (-4°F to 149°F)

Relative Humidity
Operation and Storage: 5%-90%

Box Contents

- Before using your Imperea, remove the unit and any included accessories from the shipping cartoon and verify the contents against the packing list.
- Retain all packing materials, invoice, and bill of lading. These may be required to return the device for servicing later, or to process a claim with the shipping carrier.
- Carefully inspect the contents inside of the packaging for any signs of damage. If there are signs of damage, do not attempt to use the unit. Notify your account executive or contact technical support at https://ipcmobile.com/devices.
- Ensure the battery is fully charged prior to initial use.

Imperea (1)

Single Station Charger (1)

Note:
Box contents and SKUs vary based on your order configuration.
Your Imperea and case includes one single-station charger with a power adapter. The battery is inside.

Getting Started

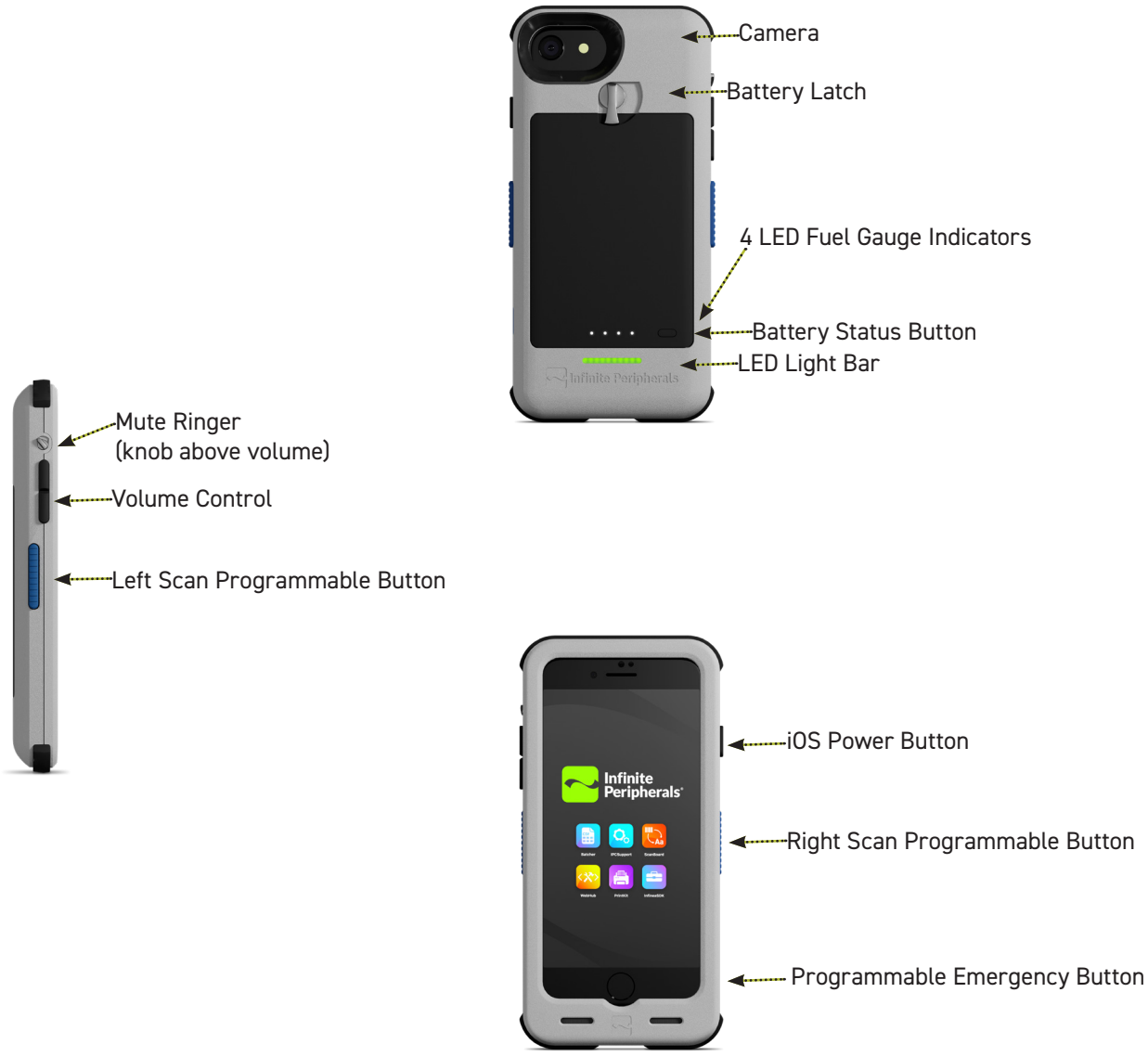
The following helps you get the Imperea ready for use:

What to do	Section
Connect Imperea with your iOS device	Assemble Your Imperea
Remove your iOS device from Imperea	Disassemble Your iOS Device from Imperea
Fully charge battery before first use	Charge Imperea with a Single Charger
Software required to run Imperea with an iOS device	Developing Applications
Operating the Imperea	Using Your Imperea

Note:
The barcode scanning feature requires the installation of software. Contact your Infinite Peripherals account representative for available software via our SDK.

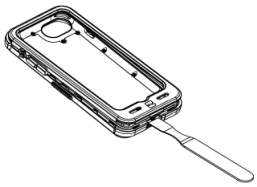
Product Description

The following illustrates Imperea's primary external functionality and buttons.

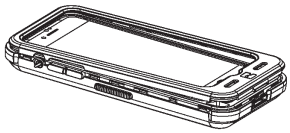


Assemble Your Imperea

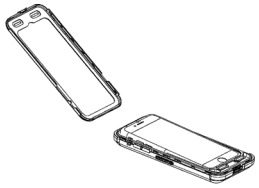
1. Remove the Imperea from the box, and then twist the ply tool carefully inside the bottom notch.



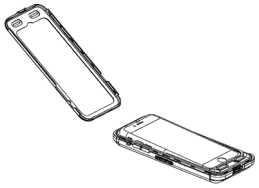
2. Release the snap fittings on the bottom of the cover.



3. After the cover is loose, pull the remaining snap fittings with the coin along the top cover.



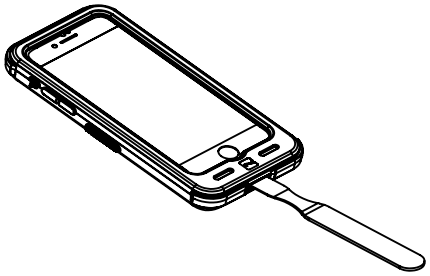
4. Place the unit on a flat surface, and then slide the iPhone downwards towards the Lightning™ connector.



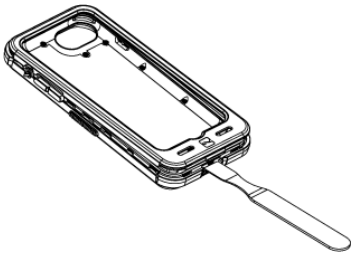
5. Once the iPhone is engaged with the Lightning™ connector, gently press the iPhone onto the unit.
6. Ensure the iPhone is seated property and flush with the rubber seals.
7. Place the front cover onto the unit with the snaps fully engaged.

Dissemble Your iOS Device from Imperea

1. Remove the Imperea from the box, and then insert the ply tool horizontally into the bottom notch.



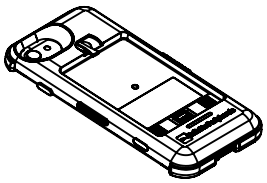
2. Press and twist the ply tool gently along the metal inside the bottom notch to release the snap fittings on the bottom of the cover.



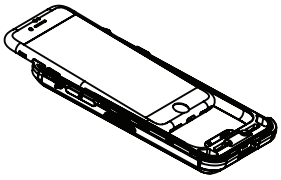
3. Once the bottom part of the cover is loose, pull carefully the remaining snap fittings along the top cover.

4. With the top cover removed, locate the camera opening on the back side of the Imperea.

5. Through the camera opening, press on the iPhone gently to release it from the rubber enclosure.



6. Once the top is released, slide the iPhone upwards, removing it from the Lightning™ connector.
7. Snap the top cover gently into place for safekeeping.



Charge with Single Charging Station

IMPORTANT
For the single charging station to function properly, you **must** use the power adapter provided. The fast charger requires a minimum of 10 watts capacity to function.

1. Plug the USB-A end of the charging cable into the provided adapter. The top LED flashes green.

   Note:
   To prevent damage to the unit, do not plug the cable into a USB port on a computer or other adapter.

2. Place the unit on a single station charger, lining up the bump on the base of the charger with the bottom notch on the Imperea.

3. Ensure the unit is centered on the charger, and then wait to hear the charging beep, which signals wireless charging is begun.

4. The LED light on the single charging station blinks green when the unit is being charged.

Battery Status

To check the battery status, open the application on your iOS device and view the data. Your iOS device must be connected to the Imperea before you can check the battery status.

Note:
When the status is above 20%, set the automated charge functionality to automatically charge the iOS battery.

Developing Applications

Software is not provided with your Imperea. Please contact your reseller or Infinite Peripherals for Third Party software solutions. Integrating the Imperea into your iOS application requires the use of the Infinite Peripherals Universal Software Developers Kit (SDK).

The SDK incorporates an API specifically for developing applications to use Imperea functionality.

For additional details on using the Infinite Peripheral Universal SDK, please refer to the appropriate SDK documentation. For the latest Infinite Peripheral Universal SDK, please visit our developer portal at:

https://developer.ipcmobile.com

Programmable Options

Configure these optional settings via the SDK.

Charging Current

Charging current may be set to 500mA (default) or 1000mA.

Set Charging

The Imperea can charge the iPhone using its internal battery by enabling the “setCharging” setting. When the Imperea battery is above 20%, it will then start to charge the iOS device battery.

Enable Scan Button

Select the Enable Scan button in the SDK.

Scan Mode

Imperea supports the following scan modes:

Single Scan
Scanning a single barcode by pressing and releasing either Scan button.

Multi Scan
Scanning multiple barcodes by pressing and holding either Scan button.

Motion-Detect
Scanner is activated automatically when barcode is placed near the barcode engine.

Multi-Scan without Duplicates
Scanning multiple barcodes without duplicates.

Pass-Through Sync

When enabled and the USB Type-A cable is plugged in, the iOS device is synced with a Windows computer or an Apple MacOS.

When syncing is required, enable the Pass-Through Sync setting in the SDK. When this setting is disabled and the USB cable is plugged in, the Imperea only charges, but does not scan.

To use the scanner again, the USB Type-A cable must be removed.

Idle Time

Default setting: 5400 seconds (90 minutes).

Using Your Imperea

These steps enable a back-up charge for your iOS device.

1. Remove the tape on the battery contacts before first use.
2. Press the Battery Status button to turn on Imperea.

Note
If the battery indicator on the upper right-hand corner of the iPhone screen is not green with a lightning bolt, press and hold the Battery Status button on the back for 5 seconds.

Scan Barcodes

1. Point the camera on the back of Imperea at the barcode.
2. Press the Scan button (left or right programmable button).

Servicing the Imperea

Replacing the Battery

The 2100mAh battery in the Imperea can be removed and recharged. Wireless charging is available using the custom wireless charging pad and 5V, 3A power adapter.

Note:
Replace the battery only with a new, original battery.

1. On the back on the Imperea, slide the battery cover latch to one side, and then pull up the battery cover.
2. Remove the old battery by pulling it up carefully.
3. Insert the side of the new battery with the contacting pads, and then press it down gently.
4. Before closing the battery cover, press the battery cover latch down, and then press the battery cover in place.
5. Slide the latch to lock the battery cover.

Troubleshooting

Issue	Possible Cause
Imperea does not scan barcode	• Battery is too low. • Software is not powering on the unit.
Data/partial data not returned during scanning	• Unreadable barcode. • Battery is too low. • Faulty scan engine. • Software decoding incorrectly.
Unable to perform multi-scanning	• Multi-scan not enabled. • Multi-scan not supported by software.
Unable to scan specific barcodes	• Barcode type not enabled. • Barcode type not supported. • Refer to Technical Specifications for additional information.

Note:
If problems persist with your Imperea, contact a Mobility Expert at https://ipcmobile.com/devices/imperea

Warranty

Infinite Peripherals does not warrant, and is not responsible for, any damage to the Imperea (“Product”) or the assembled iOS device as a result of liquid or solid particle intrusion into the Product, or damaged caused by dropping the Product with the assembled iOS device. If a material or workmanship defect arises with regard to any Infinite Peripherals product, and a valid claim is received within the Warranty Period, Infinite Peripherals (at our sole discretion) will repair the Product using new or refurbished parts, or replace the Product with a new or refurbished Product.

For purposes of this limited warranty, “refurbished” means a product or part that has been substantially returned to its original specifications. In the event of a defect, these are your exclusive remedies.

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Product Returns and Servicing

Use the link in step 1 to create an account and gain access to our Knowledge Base and online support services. Through our online support center, you’ll be able to download files, open a Support Ticket, manage your RMAs, view your account Profile and subscribe to Alerts.

To request a RMA

1. Create a user account in the RMA Support Portal at **http://ipcmobile.com/support/rma/**
2. Login to your user account, and then click Create RMA Request.
3. Read the instructions provided and complete the online request form.
4. Note the assigned RMA number and write it clearly on your shipping carton.
5. Ship your equipment back to us using the address provided.

Symbols

Symbol	Description
	Refer to the instructions before using this product
	Manufacturer
	Manufacture Date
	Caution
	Serial Number
	Part Number
	Waste Electrical and Electric Equipment
	Complies with part 15 of the FCC rules

Federal Communications Commission

Federal Communications Commission (FCC) Statement

15.21
You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)
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.

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.

FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.