IPCMobile

User Manual

Linea® Pro Rugged™

For iPhone®

Table of Contents

Safety Information

Please read the following instructions carefully before operating the device and refer to this document as needed to ensure the continued safe operation of your device.

Care and Maintenance

Follow these guidelines for care and maintenance of the Linea Pro Rugged:

- Use 70% isopropyl alcohol wipes to clean the exterior surfaces only and avoid moisture in the openings. The cloth/towel should be damp, not wet.
- Do not submerge or spray directly onto the device.
- Do not use or store the Device in a dusty or dirty area.
- Do not charge the Device if the USB connector is wet. The USB connector must be clean and dry before charging the unit.
- Keep the device and battery away from excessive heat and/or direct sunlight.
- Dispose of the battery and/or any accessories according to local regulations. Do not dispose of electronic devices in normal household waste. Improper disposal may lead to fire, explosion, or other hazards.
- Do not use, store, or transport the device where flammables or explosives are stored, such as in a gas station, oil depot, or chemical plant. Using the Device in these environments increases the risk of explosion or fire.
- Do not open the Device as this will void your warranty.

Federal Communications Commission

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

FCC Statement 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.

RF Exposure Information and Statement – This transmitter must not be in co-location or operating in conjunction with any other antenna or transmitter. This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with a minimum distance of 5 mm between the device and your body.

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Overview

The Linea Pro Rugged (LPR) for iPhone is a form-fitted, data capture device for high-performance barcode scanning. This enterprise-grade mobile device delivers fast, reliable scanning and features a hot-swappable battery for continuous mobility. With optional RFID functionality, the LPR supports HF RFID seamlessly scans barcodes and transmits the data to compatible iPhone applications. Designed for durability, the form-fitted LPR also carries an IP65 rating for protection against dust and moisture.

> **Note**: A single LPR is not compatible with all five (5) versions of iPhones. Variation in configurations is due to the device size, buttons, and components. The specific model shipped depends on your order configuration.

Features

High Performance 1D/2D Barcode Scanner – Dual scan buttons support both one-dimensional (1D) and two-dimensional (2D) barcodes, which can be read from any angle (omni-directional). The effective reading distance varies depending on the size of the barcode.

RFID Contactless Card Reader (Optional) – The built-in RFID tag/card reader offers read/write capability at 13.56 MHz. Depending on the model of your LPR, the RFID reader supports multiple RFID formats.

Swappable Battery – The 2330mAh battery is easy to replace. Battery status can be viewed within the mobile application.

Box Contents

The LPR is shipped with the following items:

- (1x) Linea Pro Rugged (model varies by configuration)
- (1x) USB Type-C™ Charging | Syncing Cable
- (1x) PSL-T616-90 Security Screw

SKU by Configuration

The specific model shipped depends on your order configuration.

PART NUMBER	DESCRIPTION
LPR-ZS2D-PH5	Linea Pro Rugged for iPhone 15, Standard Range 2D Scanner
LPR-ZS2DHF-PH5	Linea Pro Rugged for iPhone 15, Standard Range 2D Scanner, HF RFID
LPR-ZS2D-PH6	Linea Pro Rugged for iPhone 16, Standard Range 2D Scanner
LPR-ZS2DHF-PH6	Linea Pro Rugged for iPhone 16, Standard Range 2D Scanner, HF RFID
LPR-ZA2DHF-PH6	Linea Pro Rugged for iPhone 16, Advanced Range 2D Scanner, HF RFID
LPR-ZS2D-PH6E	Linea Pro Rugged for iPhone 16e and 17e, Standard Range 2D Scanner
LPR-ZS2DHF-PH6E	Linea Pro Rugged for iPhone 16e and 17e, Standard Range 2D Scanner, HF RFID
LPR-ZA2DHF-PH6E	Linea Pro Rugged for iPhone 16e and 17e, Advanced Range 2D Scanner, HF RFID
LPR-ZS2D-PH17	Linea Pro Rugged for iPhone 17, Standard Range 2D Scanner
LPR-ZS2DHF-PH17	Linea Pro Rugged for iPhone 17, Standard Range 2D Scanner, HF RFID
LPR-ZA2DHF-PH17	Linea Pro Rugged for iPhone 17, Advanced Range 2D Scanner, HF RFID
LPR-ZS2D1HF-PH17	Linea Pro Rugged for iPhone 17, Standard Range 2D Scanner, HF RFID
LPR-HL2DHFT-PH17	Linea Pro Rugged for iPhone 17, Extended Range 2D Scanner, HF RFID TOP

Product Descriptions

1. Top Cover
2. iPhone Volume Buttons
3. Scan Buttons
4. Programmable Buttons
5. USB-C Receptacle
6. USB-C Connector
7. Dock/Accessory Connector
8. Battery Cover Latch
9. Battery Cover/HF RFID Reader
10. Top Cover Security Screw
11. iPhone Power/Lock Button
12. Barcode Scan Engine
13. Lanyard Slot (16e/17e/17 models only)
14. Mute Switch/Action Button

Technical Specifications

MECHANICAL	
Compatibility	iPhone 15, 16, 16e, 17, and/or 17e (depending on SKU)
Buttons	Two Scan Buttons Two Connected Buttons with Programmable Function Access to iPhone Power/Lock Button, Volume, and Mute/Action Buttons
Dimensions (W x H x D)	84mm x 171.5mm x 28.4mm (3.31in x 6.75in x 1.12in)
Weight	181g (6.38oz)
Protection Rating	IP65, 1.2m Drop to Concrete per MIL-STD-810G
ELECTRICAL	
Audio Features	Electromagnetic buzzer
Microcontroller	Megahunt
Power Supply	DC 5V through USB type-C DC 5V through dock connector
Contactless Card Reader (Optional)	**Supports:** ISO/IEC 14443 Type- A, MIFARE, MIFARE ULTRALIGHT, MIFARE ULTRALIGHT-C, MIFARE DESFire, ISO/IEC 18000-3 mode 3, NFC, Others **Supports most cards:** ISO/IEC 14443 Type-B, ISO/IEC 15693 **Compatible with FeliCa:** JIS X 6319 – 4
1D/2D Scan Engines (Optional)	SE4750 CMOS Imager 1280 x 960 pixels SE4770 CMOS Imager 1280 x 800 pixels SE5500 CMOS Imager 2688 x 1520 pixels N6803 CMOS Imager 1920 x 800 pixels (depending on SKU and not limited to models listed above)
Supported 1D and 2D Symbols	**1D BARCODES:** JAN/UPC/EAN incl. add on, Codabar/NW-7, Code 11, Code 39, Code 93, Code 128, GS1-128 (EAN-128), GS1 DataBar (RSS), IATA, Industrial 2of5, Interleaved 2of5, ISBN-ISSN-ISMN, Matrix 2of5, MSI/Plessey, S-Code, Telepen, Tri-Optic, UK/Plessey **POSTAL CODES:** Chinese Post, Intelligent Mail Barcode, Korean Postal Authority code, POSTNET **2D CODES:** Aztec Code, Aztec Runes, Chinese Sensible code, Codablock F, Composite codes, Data Matrix (ECC200), Passport MRZ (OCR-B), Maxi Code (mode 2~5), MicroPDF417, Micro QR Code, PDF417, QR code
Battery	Rechargeable lithium-ion battery 3.6V / 2330mAh
Connectivity	USB-C connector External trigger of barcode scanner via rear side connector Pass-through sync through USB Type-C connector SAM holder (optional) Serial communication pass-through USB type-C connector
ENVIRONMENTAL	
Operating Temperature	-10°C to +45°C (14°F to 113°F)
Storage Temperature	-20°C to +50°C (-4°F to 158°F)
Relative Humidity (Non-Condensing)	5% to 90%
CERTIFICATIONS	
Regulatory	CE, FCC, RoHS, Proposition 65, TSCA

Getting Started

Before using your LPR, remove the device and any included accessories from the shipping carton and verify the contents against the packing list. Retain all the packing materials, the invoice, and the bill of lading, as these may be required if the device needs to be returned for service. Carefully inspect the packaging and contents for any signs of damage. If damage is present, do not attempt to use the device. Instead, notify your account executive or contact IPCMobile Support at **https://ipcmobile.com/support**.

Viewing Demos

Using your compatible iPhone, scan the QR code or visit IPCMobile's App Store (**https://apps.apple.com/us/developer/infinite-peripherals-inc/id398365650**) to download and install the appropriate application.

If you're using a LPR demo device, you can install the IPCSupport app.

> **Note**: IPCSupport is a demo application that allows users to manage device settings, download firmware, test features, and more.

Developing Applications

For non-development options, visit the **IPCMobile SDK Access and Non-Development Options Guide** and refer to the **Ready To Use – AppStore Options** section on Page 2.

To develop applications for the LPR, you will need to integrate with the IPCMobile Software Development Kit (SDK). The SDK includes guides and sample code and can be downloaded from our website.

To Access the SDK:

1. Visit the **IPCMobile Development Portal** and register using a username or email address.
2. After registration, wait for your account to be approved.
3. Once approved, go to the **Docs & Downloads** page and select **QuantumSDK**.
4. Download the SDK for your development environment:
   - **QuantumSDK for Xcode**
   - **QuantumSDK MAUI for Visual Studio**
5. After downloading, unzip the file. Open the integration guides and sample projects to begin development.
6. Consult the appropriate integration guide in the SDK folder. To ensure your application is compatible with the LPR, follow all steps provided.

   For more information, visit the **SDK Help Center**. You can also contact IPCMobile Support for additional assistance.

Assembling the LPR

Follow the steps shown in Figure 1 to assemble the LPR.

> **Important:** Do not apply screen protectors or rear asset tags/labels to the iPhone, as they may interfere with assembly or device performance.

1. Remove the LPR top cover.
2. Slide the iPhone carefully onto the LPR's USB-C connector.
3. Replace the top cover and secure it using the provided security screw.

FIGURE 1: Installing an iPhone with the LPR

Charging the Battery

Fully charge the lithium-polymer battery before first use. A full charge takes approximately 4 hours and 30 minutes using a 5V/2.4A (minimum) power supply.

> **Note:** The LPR can also be charged by placing the device on a compatible charging station (sold separately).

To preserve battery life, the LPR automatically powers down after a period of inactivity. Default time settings can be adjusted via the SDK or by contacting IPCMobile Support:

- **Idle Time:** 5400 seconds (90 minutes)
- **Disconnected Time:** 30 seconds

To Charge the LPR Battery:

1. Use an Apple-approved adapter or the PS-USBC-45W-PD3.0 from IPCMobile.
2. After attaching the iPhone to the LPR, connect the USB-C cable to the LPR's USB-C Receptacle (see Figure 2).
3. Check charge status via your compatible iPhone app.

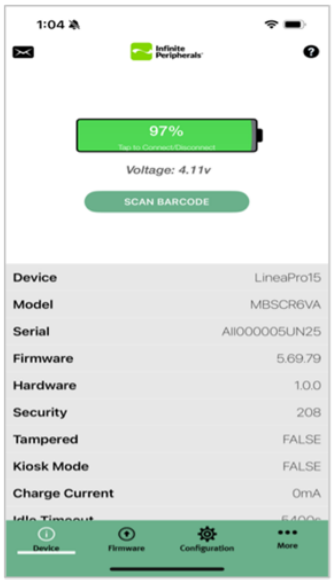
FIGURE 2: Charging the LPR with the USB Type-C Cable

Verifying the Battery Status

Reading the LPR battery status requires an LPR-compatible application. If a compatible application is unavailable, download the IPCSupport demo application from the Apple Store (see Viewing Demos section on Page 8).

1. Press and hold one of the LPR scan buttons to wake the device. A single beep indicates the LPR is now ready.
2. Open an application compatible with the LPR or the IPCSupport demo application.
3. After a few seconds, the LPR will connect to the application and update its screen and connection status to the LPR.
4. Verify the state of charge of the LPR battery (see Figure 3).

FIGURE 3: App Screen with Battery Status



Enabling Battery Sharing & Backup Charging

The swappable LPR battery provides additional power to the iPhone and the Linea Pro Rugged, which can be charged simultaneously. The LPR's internal battery can charge the iPhone by enabling the **Backup Charge** feature via the SDK or by contacting **IPCMobile Support**.

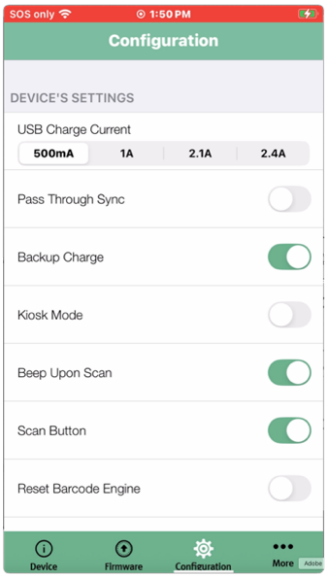
Charging the iPhone using the LPR battery will require a charge-enabled application that incorporates the LPR SDK.

Open the **IPCSupport** application, go to the **Device Settings**, and enable the **Backup Charge** feature (see Figure 4).

Once enabled, notice that the iPhone battery indicator should now show charging when the device is plugged in. Battery sharing will remain turned on and continue to charge the iPhone until **Backup Charge** is turned off or the LPR battery is depleted.

> **Note:** During backup charging, the iPhone draws 500mAh from the LPR battery. Backup charging stops automatically when the LPR battery voltage drops below 3.8V or reaches 20% state of charge (SOC).

FIGURE 4: App Screen Showing Device Settings with Backup Charge Enabled

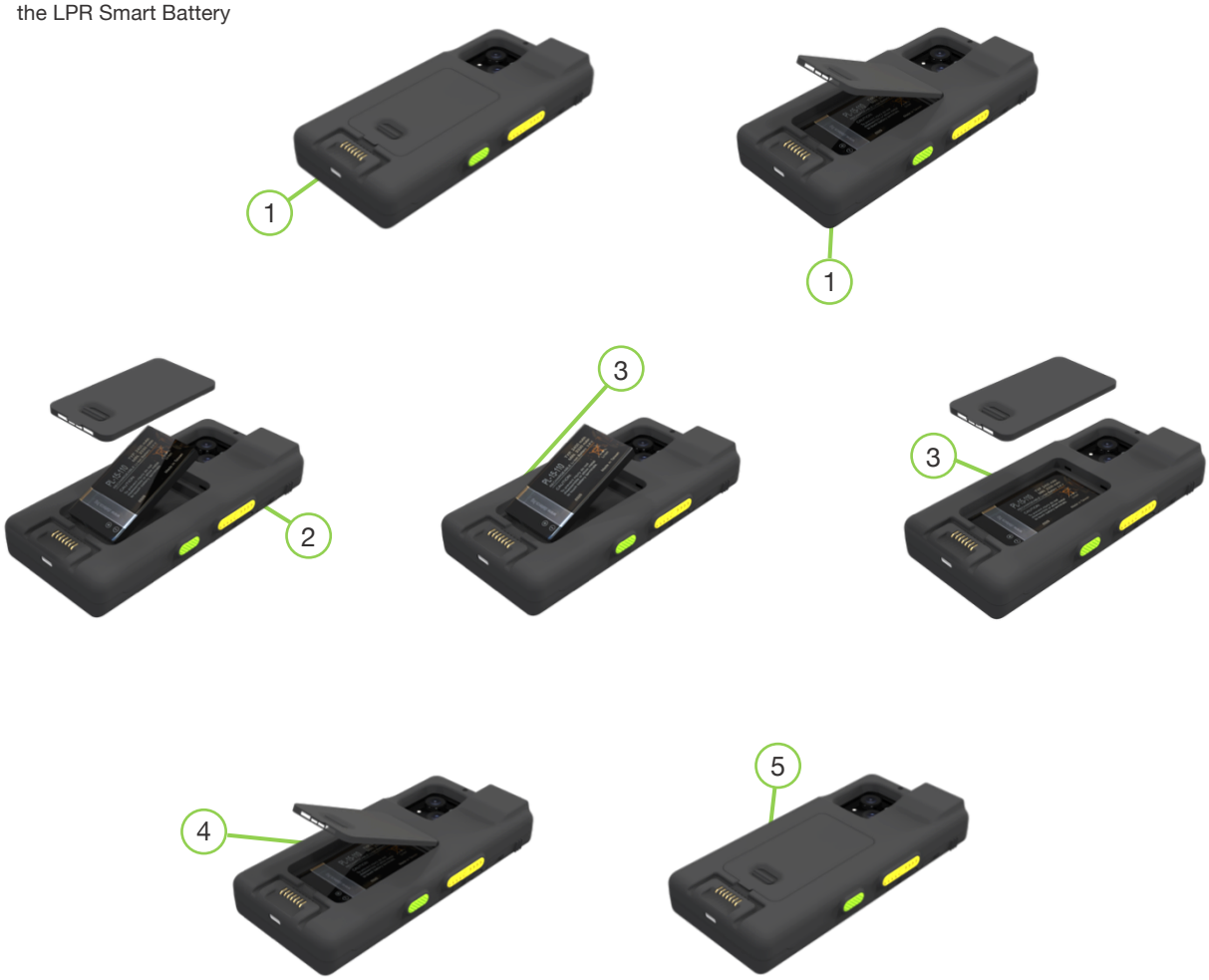


Replacing the Battery

When replacement is needed, use only an original LPR battery. Replacement LPR batteries (LP7-DTB-2330-ITP) are available for purchase from IPCMobile.

1. Unlock the battery cover by pushing the lever forward with your fingertips, then gently lift the battery cover.
2. Remove the old battery by lifting it from the top (the end without the silver band) to avoid damaging the contact pads on the opposite end.
3. Insert the new battery by aligning the bottom end with the contact pads first. Then press down lightly to seat the battery.
4. To apply the battery cover, align the clips in the correct position before pressing down to close the cover.
5. Once the cover is fully closed, slide the lever back into the locked position.

FIGURE 5: How to Replace the LPR Smart Battery



Using Pass-Through Sync

Automatically keep your data up to date and matched across all connected devices using the LPR passthrough sync feature.

> **Note:** Once enabled, passthrough sync will remain turned on, and connecting to the host will allow data to be synced.

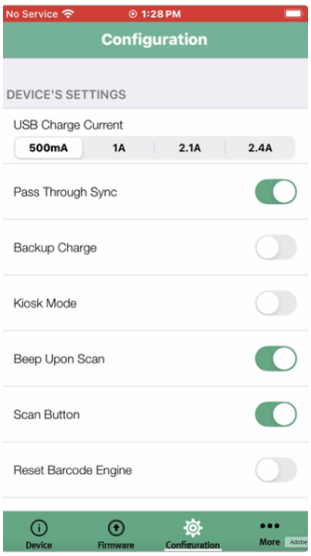
To Enable Pass-Through Sync via the SDK

- Enabling passthrough syncing requires using an application that incorporates the LPR SDK. Enable **Pass Through Sync** (see Figure 6) using the IPCSupport demo application. Once enabled, connect the LPR to the host computer using a USB-C to USB-C cable.

To Enable Pass-Through Sync Manually

- To enable passthrough sync manually, press and hold down the scan button while connecting the LPR to the host computer using a USB-C to USB-C cable.

FIGURE 6: App Screen Showing Device Settings with Pass Through Sync Enabled



Operating Your LPR

Using the LPR requires a compatible application installed on your device (see Getting Started section).

1. **Power On:** Press and hold a scan button. A single beep indicates the device is ready.
2. **Auto-Timeout:** The LPR turns off after 30 seconds of inactivity to save battery. Press any scan button to wake it.
3. **Connect to App:** Open your compatible business application or the IPCSupport demo app.
4. **Verify Status:** After a few seconds, the LPR will automatically connect. The application screen will update to display the LPR connection status.
5. **Support**: If the LPR fails to connect, visit **https://ipcmobile.com/support** to contact the IPCMobile Support Team.

Scanning Barcodes

The LPR scan engine supports both 1D and 2D barcodes and offers the following scanning modes:

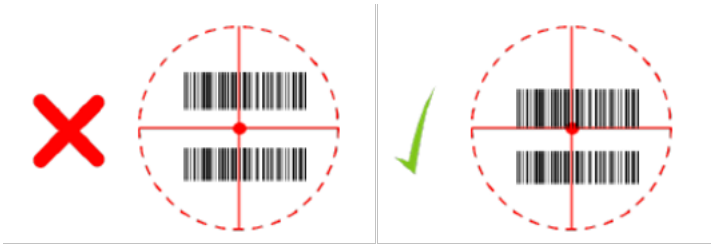
- Single Scan
- Multi Scan
- Motion Detect
- Multi Scan without duplicates

Scanning Range: 15-20 cm (5.9-7.9 in)

To Scan a Barcode with the LPR:

1. Ensure a scan-enabled application is installed on your device (*See the Developing Applications section*).
2. Position the LPR in front of the barcode and use the pointer to center the scanner (see Figure 7). The illumination pattern enhances visibility in bright conditions.
3. Press and hold a scan button until the device beeps. Barcode decoding should occur instantly.

FIGURE 7: Illumination Box Showing Proper Barcode Reading / Aiming



Assigning Programmable Buttons

The four (4) programmable buttons are internally connected and make up two logical pairs of programmable buttons. In other words, the buttons indicated by green arrows make up the 1st programmable pair, while the buttons indicated by the blue arrow make up the 2nd pair of programmable buttons.

Note: Button-pair assignment requires an application that integrates the LPR SDK and button assignment command options.

Using a Contactless Card Reader

The contactless card reader antenna is located on the back of the LPR. To read or write data, position the contactless card or tag directly over the area indicated by the RFID symbol.

Note: A list of supported contactless card standards is under Technical Specifications on Page 7.

To Read RFID Media:

1. Ensure an RFID-enabled application is installed on your device (*see the Developing Applications section*.)
2. Launch the application and follow any on-screen prompts.
3. Place or tap the RFID media on the RFID symbol located on the back of the LPR (see Figure 8).
4. The application should display the data retrieved from the RFID media.

FIGURE 8: RFID Reader Area

Troubleshooting Guide

PROBLEM	CAUSE	SOLUTION
Scanner does not power on	• Battery level is too low • Faulty scan engine	• Recharge battery • Contact IPCSupport
RFID reader does not power on	• Battery level is too low • Faulty RFID reader	• Recharge battery • Contact IPCSupport
Data or partial data not returned after scanning	• Unreadable barcode or RFID tag	• Test with another barcode or RFID tag • Contact IPCSupport

Troubleshooting Using IPCSupport

1. **To Install the App**

   Download *IPCSupport* from the App Store: https://apps.apple.com/us/app/ipcsupport/id1015160712, then open the app and follow the on-screen steps.

2. **To Activate the LPR**

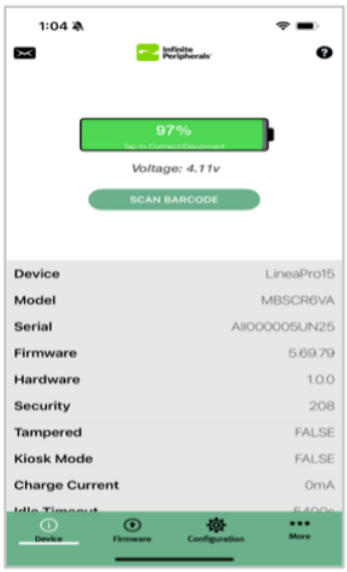
   If the LPR is off or in low-power mode, press and hold either scan button until the device beeps to wake it up.

3. **To Connect and Troubleshoot**

   IPCSupport will connect to the LPR and display device info (battery level, serial number, etc.) to begin troubleshooting. IPCSupport can be used to test device functionality and diagnose any issues with the LPR.

Refer to the user guide inside the IPCSupport application for additional steps. If the connection fails, contact **IPCMobile Support**.

Note: IPCSupport can be used to test device functionality and diagnose any issues with the LPR.



Additional Information

For further assistance, scan the QR code or visit https://ipcmobile.com/support. In the IPCSupport Portal, users can get access to our comprehensive knowledge base, download resources, open a support ticket, manage returns and exchanges, subscribe to alerts, and more.

Warranty

IPCMobile does not warrant, and is not responsible for, any damage to the Linea Pro Rugged ("Product") as a result of liquid or solid particle intrusion into the Product or damage caused by dropping the Product. If a material or workmanship defect arises with regard to any IPCMobile product, and a valid claim is received within the Warranty Period, IPCMobile (at IPCMobile's sole discretion) will (1) repair the Product using new or refurbished parts, or (2) 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.

For more information about how to extend product warranty and to register your device, visit https://ipcmobile.com/warranty-services.

Product Repairs and Exchanges

Users must create an account or log in to an existing account to gain access to our service center.

To Request an RMA:

1. Create a user account in the RMA Support Portal at http://ipcmobile.com/support/rma/
2. Log in 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 to us using the address provided on the Support Ticket.

Contact IPCMobile

Reach out to your IPCMobile account representative or visit our website at https://ipcmobile.com to learn more about our full list of available products, accessories, and services.

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