



## *User Manual*

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# Linea Pro 5



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## Legal Notice

“Made for iPod” and “Made for iPhone” mean that an electronic accessory has been designed to connect specifically to iPod or iPhone respectively, 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 iPod or iPhone or may affect wireless performance.

## Compatibility

### Made for

iPhone 5

iPhone 5S

iPhone SE

iPod touch (5<sup>th</sup> generation)

iPod touch (6<sup>th</sup> generation)

iPad, iPhone, iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. Lightning is a trademark of Apple Inc.

**FCC Notice**

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.

No changes shall be made to the equipment without the manufacturer's permission as this may void the user's authority to operate the equipment

**Exposure to Radio Frequency (RF) Signals**

The LineaPro 5, incorporating the iPhone 5/iPod Touch, has been tested and meets applicable limits for radio frequency (RF) exposure. Specific Absorption Rate (SAR) refers to the rate at which the body absorbs RF energy. The SAR limit is 1.6 watts per kilogram averaged over 1 gram of tissue.

During testing, the iPhone 5/iPod Touch devices, incorporated within the LineaPro 5, are set to their highest transmission levels and placed in positions that simulate use against the head, with no separation, and near the body, with 5mm separation. When using the incorporated iPhone 5/iPod Touch functionality, to reduce exposure to RF energy, use a hands-free option, such as the built-in speakerphone, the supplied headphones or other similar accessories. Carry the LineaPro 5 at least 5mm away from your body to ensure exposure levels remain at or below the as-tested levels.

Cases with metal parts may change the RF performance of the device, including its compliance with RF exposure guidelines, in a manner that has not been tested or certified.

The LineaPro 5 complies with the FCC safety requirements for RF exposure in accordance with FCC rule part §2.1093 and KDB447498 D01 for portable use conditions.

The LineaPro 5, incorporating the iPhone 5/iPod Touch, must not be co-located or operated in conjunction with any other antenna or transmitter.

## Linea Pro 5 Models

<b>Model</b>	<b>Description</b>
<i>Linea Pro 5 MSR</i>	<i>Linea Pro 5 with 3-Track mag-stripe reader</i>
<i>Linea Pro 5 EMSR</i>	<i>Linea Pro 5 with Secure Encrypting MSR Module</i>
<i>Linea Pro 5 MSR 1D/2D</i>	<i>Linea Pro 5 with 3-Track mag-stripe reader and 1D/2D barcode scanner</i>
<i>Linea Pro 5 EMSR 1D/2D</i>	<i>Linea Pro 5 with with Secure Encrypting MSR Module and 2D barcode reader</i>
<i>Linea Pro 5 MSR 1D/2D/BT</i>	<i>Linea Pro 5 with 3-Track mag-stripe reader, 1D/2D and Bluetooth®</i>
<i>Linea Pro 5 EMSR 1D/2D/BT</i>	<i>Linea Pro 5 with Secure Encrypting MSR Module, 1D/2D and Bluetooth®</i>
<i>Linea Pro 5 MSR 1D/2D/ BT/RFID</i>	<i>Linea Pro 5 with 3-Track mag-stripe reader, 1D/2D/Bluetooth® and RFID reader</i>
<i>Linea Pro 5 EMSR 1D/2D/ BT/RFID</i>	<i>Linea Pro 5 with Secure Encrypting MSR Module, 1D/2D/Bluetooth® and RFID reader</i>

*Table 1*

## Overview

Linea Pro 5 allows mobile workers to convert their iPhone 5 / iPod 5 handset into a powerful point-of-sale solution. The Linea Pro 5 includes optional 1D or 2D barcode scanner, 3-tracks magnetic stripe reader, RFID reader and a rechargeable battery extender in a very compact and durable protective case.

### Features:

**Battery:** Rechargeable Li-ion Battery - 1300 mAh, charging via USB or DATECS Power Station.

### Magnetic Card Reader – 3-Track Head:

Swipe Speed: Minimum of 1.97 in/sec

MTBF: 1 million swipes

Bidirectional reading capabilities

### Barcode Scanner: Single / Multi-scan mode

1D - MTBF: 30K hours (Laser Diode & Mirror Unit 10K hours)

2D – EM3070 Image sensor 752x480 CMOS

2D – MDI-3100 Image sensor 752x480, Scan rate: Up to 60fps

2D – EA-30 Image sensor 752x480, Scan Rate: up to 60fps/120fps in 1D mode (Aimer: 650nm laser, Class 2)

### Indicators:

Visual: 4 LEDs for device battery status

Audio: Electromagnetic Buzzer

### I/O Connectors:

9-pin lightning connector

10-pin female Mini-B USB connector for charging and synchronization

## Technical Data




Processor	32-bit ARM™ Cortex™ - M3 based Microcontroller						
Magnetic Card Reader (option)	<ul style="list-style-type: none"> <li>• 3-track bi-directional reading</li> <li>• ISO 7810, 7811 and 7813</li> </ul>						
Secure Magnetic Card Reader (option)	<ul style="list-style-type: none"> <li>• PCI PTS 3.x certified</li> <li>• DUKPT and Fixed Key Management</li> <li>• 3DES-112, AES-128, AES-256 encryption algorithms</li> </ul>						
Contactless Card Reader (option)	<p>ISO/IEC 14443 Type-A/MIFARE:</p> <ul style="list-style-type: none"> <li>- MIFARE MINI</li> <li>- MIFARE CLASSIC-1K, MIFARE CLASSIC-4K</li> <li>- MIFARE ULTRALIGHT, ULTRALIGHT-C</li> <li>- MIFARE PLUS 2K/4K</li> <li>- MIFARE DESFire</li> <li>- and other</li> </ul> <p>ISO/IEC 14443 Type-B:</p> <ul style="list-style-type: none"> <li>- supports most of the cards</li> </ul> <p>ISO/IEC 15693:</p> <ul style="list-style-type: none"> <li>- supports most of the cards</li> </ul>						
Barcode Reader (option)	<table border="1"> <tr> <td>1D</td> <td>• Opticon MDL1000* - Laser Barcode Scan Engine</td> </tr> <tr> <td>2D</td> <td>• Newland EM3070* - Image Sensor 752x480 CMOS, High Performance 2D Imager Scan Engine</td> </tr> <tr> <td></td> <td>• Intermec EA-30 - Image Sensor 752x480 CMOS, High Performance 2D Imager Scan Engine</td> </tr> </table>	1D	• Opticon MDL1000* - Laser Barcode Scan Engine	2D	• Newland EM3070* - Image Sensor 752x480 CMOS, High Performance 2D Imager Scan Engine		• Intermec EA-30 - Image Sensor 752x480 CMOS, High Performance 2D Imager Scan Engine
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Supported Barcode Types	<ul style="list-style-type: none"> <li>• <b>1D* Barcode Scanner Supported Symbologies:</b> 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-ISMN-ISSN, Matrix 2of5, MSI/Plessey, S-Code, Telepen, Tri-Optic, UK/Plessey Postal code: Chinese Post, Korean Postal Authority code Composite codes, MicroPDF417, PDF417</li> <li>• <b>2D* Imager Supported Symbologies:</b> Code 128, EAN-13, EAN-8, Code 39, UPC-A, UPC-E, Codabar, Interleaved 2 of 5, ITF-6, ITF-14, ISBN, Code 93, UCC/EAN-128, GS1 Databar, Matrix 2 of 5, Code 11, Industrial 2 of 5, Standard 2 of 5, Plessey, MSI-Plessey PDF417, Data Matrix (ECC200, ECC000, 050, 080, 100, 140), QR Code</li> </ul>						
Battery	Rechargeable Li-Ion Battery 3.7V / 1300 mAh						
Connectivity	<ul style="list-style-type: none"> <li>• Apple 9 pin connector</li> <li>• Pass-through sync through mini USB</li> <li>• BT 2.0 Class 2 (option)</li> <li>- SPP - Serial Port Profile</li> </ul>						
Device compatibility	Apple iPod 5 <sup>th</sup> generation / iPod 6 <sup>th</sup> generation / iPhone 5 / iPhone 5S / iPhone SE						
Buttons	<ul style="list-style-type: none"> <li>• Scan button</li> <li>• Battery status button</li> </ul>						
LED indication	4 LEDs for battery status						
Audio indication	Electro-Magnetic Buzzer						
Certifications	CE, FCC, PCI PTS 3.x, Apple® MFi						
Weight, g	120 with battery and 2D barcode reader (without iPod 5 / iPhone 5)						
Dimensions (LxWxH), mm	142 x 69 x (22 with 1D barcode reader) / (27 with 2D barcode reader)						
Environmental	<ul style="list-style-type: none"> <li>• Operating: -10°C to +40°C / 5% to 90% RH</li> <li>• Storage: -20°C to +50°C / 5% to 90% RH</li> </ul>						
Drop Test	1.5 m, 6 faces + 4 edges on concrete						
Power Supply	<ul style="list-style-type: none"> <li>• 5V through mini USB</li> <li>• 5V through single or 5 station charger</li> </ul>						
Accessories	<ul style="list-style-type: none"> <li>• Single station charger - SC-1</li> <li>• 5 stations charger - GC-5</li> <li>• Holster</li> </ul>						

\* Specifications subject to change without notice.

**Table 2**

## Box Contents

Your Linea Pro 5 comes with the following items listed below:

Item	Part Number	Descriptions	Image
1	Linea Pro 5	Linea Pro 5 / Scanner	
2	USB A to mini USB B	USB Sync cable	
3	Linea Pro 5 User Manual	User's manual	

*\*Bulk Shipments may ship without cables and manuals in each box.*

*Table 3*



## Getting Started

The Linea Pro 5 allows you to scan barcode and capture Magnetic Strip information onto your iPod 5 or iPhone 5. Before using your Linea Pro 5 the battery should be properly charged. The following Quick Start guide will help to get your Linea Pro 5 ready for use.

### Quick Start:

Step	What to do	Purpose	Where to find more information
1	Fully charge your Linea Pro 5 as recommended.	The battery pack should be fully charged before use to ensure long battery life.	Charging Battery, Page 13.
2	Install Software.	Barcode Scanning & Card Reading requires software to be installed onto your iPod 5 / iPhone 5	Please contact your distributor
3	Attach device to Linea Pro 5	Connecting your Linea Pro 5 and iPod 5 / iPhone 5	Attaching device, Page 11.

*Table 4*

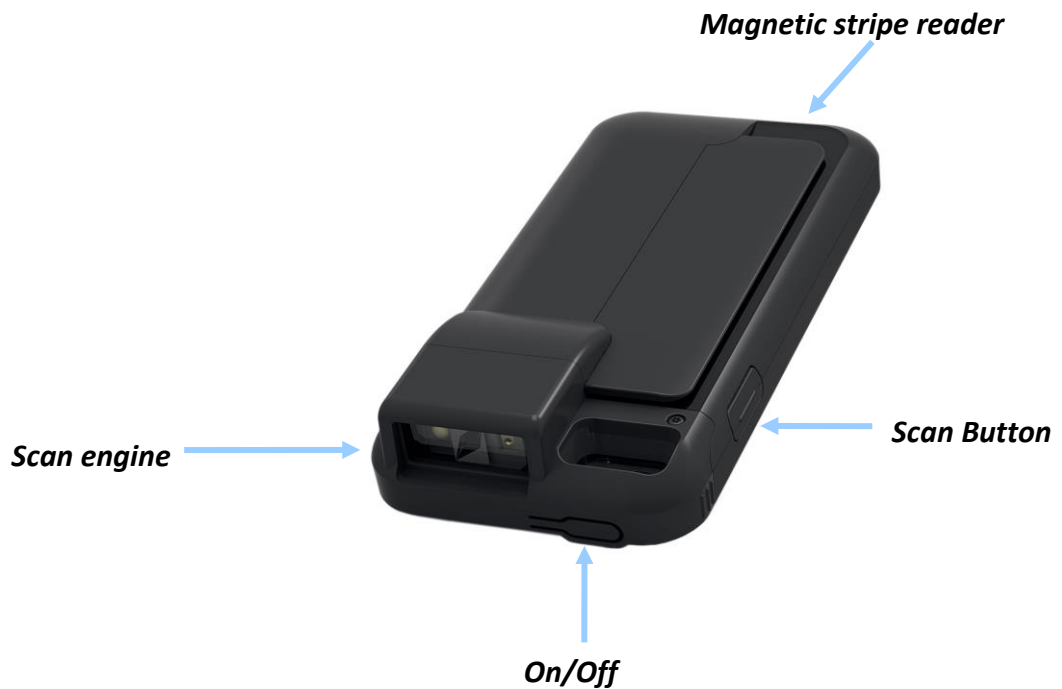
## Buttons overview

### *Front side view*





**Back side view**



**Linea Pro 5 versions for iPod5 and iPhone5**



## Attaching device

**Step 1** – Remove the “back cover”



**Step 2** – Slide the iPod 5 or iPhone 5 into Linea Pro 5. (Please, before attaching the device, check the compatibility version of the Linea Pro 5 - for iPod 5 or iPhone 5 (page 10), and then connect it with the correct Linea Pro 5).



Slide in until iPod 5 or iPhone 5 is connected to the lightning 9-pin connector.

**Step 3** – Return the “back cover”



## **Operation modes**

- Active mode -      While iPod 5 or iPhone 5 is inserted.  
                          While the Linea Pro 5 application is active.
- Sleep mode -      While iPod 5 or iPhone 5 is removed (after ~10sec).  
                          When iPod 5 or iPhone 5 On/Off button is pressed (after ~10sec).  
                          When iPod 5 or iPhone 5 “Auto-Lock” function is activated (after ~10sec).

## Charging Battery

The Linea Pro 5 uses a 1300mAh Lithium-Ion rechargeable battery pack. Before first use, the battery pack should be charged for at least (4) hours. Linea Pro 5 can be charged via USB port or DATECS Power Station. When the Linea Pro 5 charging is started, automatically starts the charging of the inserted inside the cradle iPod 5 or iPhone 5.

**WARNING:** To prevent electrical damage to the Linea Pro 5 and/or battery pack, please use approved USB to Mini USB cables only!

Linea Pro 5 has 4 battery status LEDs. The battery level status can be checked by pressing the status button or can be viewed from the application.



## **Battery status level of the Linea Pro 5**



*LED1 is lighting – battery level is under or equal to 3,6V.*



*LED1 and LED2 are lighting – battery level is between 3,6V and 3,7V.*



*LED1, LED2 and LED3 are lighting – battery level is between 3,7V and 3,9V.*



*LED1, LED2, LED3 and LED4 are lighting – battery level is between 3,9V and 4,2V.*

While the device is charged, depending on the battery level, one of the LEDs is blinking.

When the device is fully charged all 4 LEDs are continuously lighting.

### **Charging Modes**

- Enable pass-through sync (enable sync between iPod 5/iPhone 5 and PC with charge)



## Barcode Scanning

### *Using the 1D barcode scanner:*

The Linea Pro 5 1D uses a scan engine that supports one-dimensional (1D) barcode symbols. The effective reading distance of the barcode reader varies depending on the barcode size.

#### **Scanning 1D Barcodes:**

To scan a 1D barcode, first activate the scanner. Then position the scanning head as close as possible to the barcode label so that the scan line crosses both ends of the barcode as shown on the figure below.

Slowly pull back the unit, while increasing the distance between the barcode and scanning head, until the barcode has been read by the scanner.



Linea Pro 5 supports different types of scan:

- Single Scan
- Multi Scan

## **Using the 2D barcode scanner:**

The Linea Pro 5 2D uses a scan engines that supports one-dimensional (1D) and two-dimensional (2D) barcode symbols. The effective reading distance of the barcode reader varies depending on the barcode size.

### **Scanning 2D Barcodes:**

To scan a 2D barcode first activate the scanner. Then position the scanning head to the center of the barcode by aiming with the red laser beam and the illumination box is over the outer edges of the barcode, as shown in the figure below.

Slowly pull back the unit, while increasing the distance between the barcode and the scanning head, until the barcode has been read by the scanner.



Linea Pro 5 supports different types of scan:

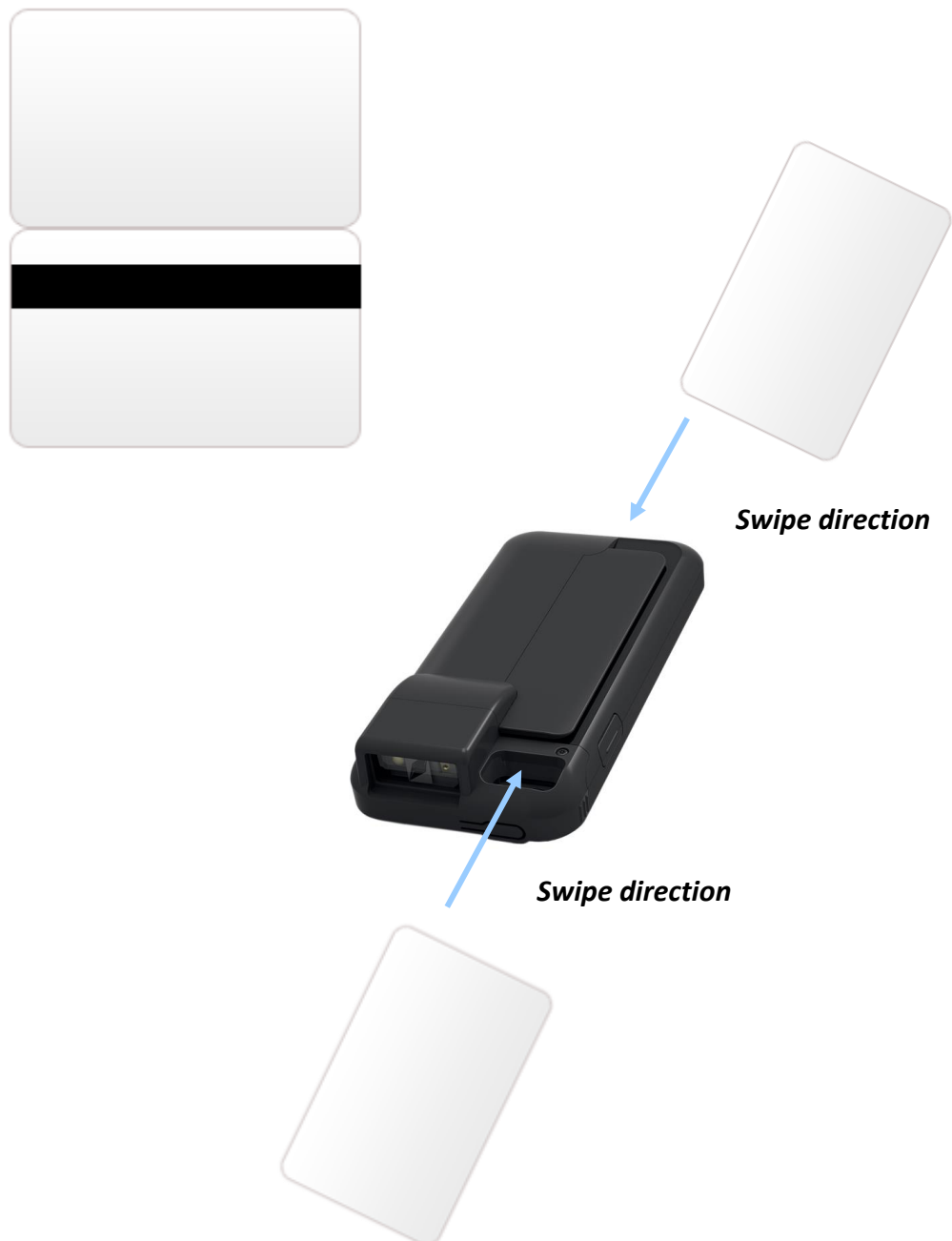
- Single Scan
- Multi Scan

## Magnetic Card Reading

### Reading Magnetic Stripes:

The Linea Pro 5 has a built-in magnetic card reader. The card reader incorporates a (3) track magnetic read head, requiring a single swipe to read field data from all three tracks.

The magnetic reading head faces up, towards the top of the bottom cover of the cradle. When swiping the card into the reader, the magnetic stripe must be facing down, as shown in the figure below. Keep the edge of the card flat on the inner base of the reader to ensure that the magnetic stripe passes over the reading head evenly.



## Contactless Card Reading

In order to use the RFID card reading function, special software must be used. Please contact your distributor in order to get the latest demo application and SDK.

Place the card on the shown spot and press the reading RFID card button on the application. The data will be sent from the LineaPro 5 RFID reader to the Apple Device.

