



INFINITE PERIPHERALS
PROVIDER OF CUSTOM RECEIPT PRINTING SOLUTIONS

Linēa

**Barcode Scanner
User Manual**



Infinite Peripherals, Inc.

www.ipcprint.com

Linēa User Manual v1.04



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Technical Data

General Specifications:

Feature	Specifications
Audible Indicators	Internal piezo buzzer
Visual Indicators	2 Two-color LEDs
Mini USB Host Interface	Supports PDA devices with USB - Blackberry, Palm & Pocket PC
Serial Interface	RS232
Wireless Interface	Bluetooth® Interface (optional) - CLASS 2, 10m max, RFCOMM.
Power	Internal rechargeable Li-ION battery 3.7V / 900mAh
	Charging via USB cable (type A to mini USB), connected to PC 5V/260mA
	Necessary time to full battery charge – 4 hours
Battery Capacity	Stand-by - 6 months (150uA) “no PDA device is connected”
	Active mode - 25h (30 - 35mA)
	1D Barcode Scanning - about 7h (130mA)
	2D Barcode Scanning - over 2500 scans
Dimension	130mm (L) X 41mm (H) X 80mm (W)
Weight	Scanner Only ~ 130 grams with battery Scanner & Signature Pad ~ 155 grams with battery
Drivers & Software	Drivers & Software Development Kit (SDK) is provided
Environment	- Operating -10°C to +45°C / 10 ÷ 90 % RH;
	- Storage -25°C to +70°C / 10 ÷ 90 % RH.

Table 1

Technical Data (continue)

Barcode Scanner Specification:

Feature	Specifications
Barcode Reader	1D - Intermec Linear Image Scanner
	2D - (optional)
Barcode Types	1D & 2D Barcodes
1D Symbols	EAN/UPC, RSS, Code 39, Code 128, UCC/EAN 128, ISBN, ISBT, Interleaved, Matrix, Industrial and Standard 2 of 5, Codabar, Code 93/93i, Code 11, MSI, Plessey, Telepen, postal codes.
2D Symbols (optional)	Data Matrix, PDF417, Micro PDF 417, Maxicode, QR, Aztec, EAN.UCC composite.
Scan Rate	Up to 500 scans per second
Reliability	MTBF above 250Kh

Table 2

Signature Capture Pad Specifications:

Feature	Specifications
Input Method	Touch panel
	Coordinates , Time and Pressure data capturing
Screen Resolution	256 x 192 points

Table 3

Box Contents

Your IPC Linēa comes with the following items listed below:




Item	Part Number	Descriptions	Image
1	Linēa	Linēa Barcode Scanner	
2	-	USB-to-Mini USB charging cable	
3	-	User's manual	

Table 4

Software (Drivers & SDK):

Because of the continually evolving Driver & SDK to support new devices, the latest Drivers & SDK are distributed online and is available for download at our website indicated below. For details on using the Linēa Drivers & SDK, please refer to the SDK's documentation.

For the latest Linēa Drivers & SDK's, visit our developer web site at:

<http://www.ipcprint.com/support/default.asp>

Getting Started

The IPC Linēa allows you to scan barcode and capture signature information onto your PDA & Smartphone. Before using Linēa the battery should be properly charged. The following Quick Start guide will help to get your Linēa ready for use.

Quick Start:

Step	What to do	Purpose	Where to find more information
1	Charge the rechargeable battery pack as recommended.	The battery pack should be fully charged before use to ensure long battery life.	Charging Battery, Page 10
2	Install Linēa scanner Software.	Scanning barcodes & capturing signatures requires software to be installed onto your device.	Software is not provided by IPC. Please contact your Linēa reseller or Infinite Peripherals for recommendations on Third-Party solutions. Developers should refer to the section in this manual on "Developing Solutions".
3	Attaching USB device.	Setup Linēa to communicate with USB devices.	Attaching device, USB (Cabled) version Page 13
	Attaching Bluetooth® device.	Setup Linēa to communicate with Bluetooth® devices.	Attaching device, Bluetooth® (Wireless) version Page 13

Table 5

About Your Linēa

◆ Linēa USB (Left side)

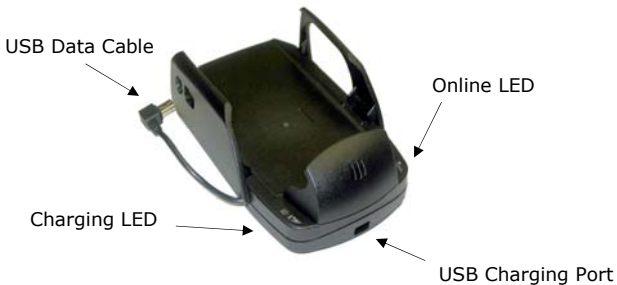


Figure 1

◆ Linēa USB (Right side)



Figure 2

About Your Linēa

◆ Linēa USB (Bottom side) Signature Capture Version Only



Figure 3

User Notes:

To use the signature capture feature, special software must be used to read and process the information. Please consult your reseller if this software is available or contact Infinite Peripherals for recommendations on compatible third party software solutions.

Charging Battery

Charging the Linēa:

The Linēa uses a Lithium Ion rechargeable battery pack. Before first use, the Linēa battery pack should be charged for at least 4 hours.

To prevent electrical damage to the Linēa and/or battery pack, please use approved USB to Mini USB cables only.

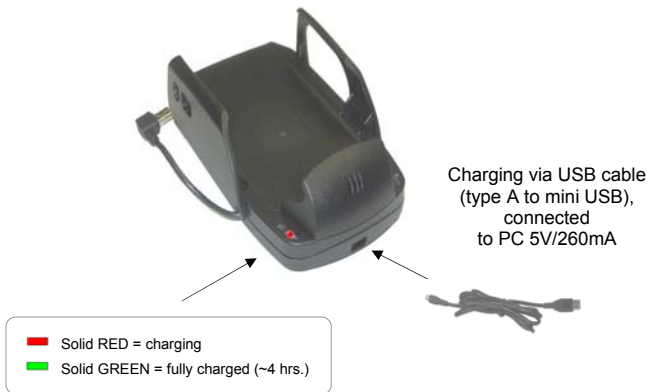
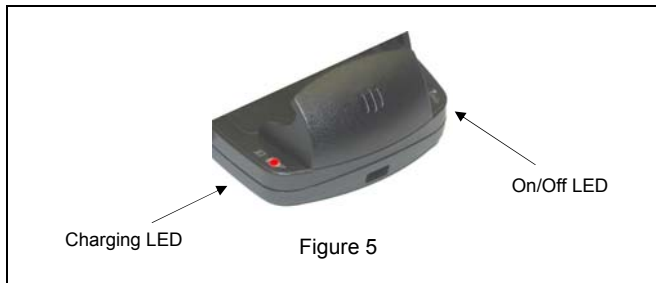


Figure 4

Status & Operating Modes

The Linēa uses LEDs to indicate various conditions of operation. Possible LED lighting indications may result from charging, active/online status, or because of low battery. The following explains these conditions and LED indication.








Printer Status		
Charging LED		Solid GREEN = Battery at full charge
		Solid RED = Battery charging
ON/OFF LED		Flashing once per second = Power ON
		Flashing twice per second = Connected
		Flashing once per second = Low battery

Table 6

Compatible Devices

The Linēa (USB) / Linēa (Bluetooth®) portable barcode scanner is designed specifically for use with most PDA & Smartphone using either USB or Bluetooth® communications.

The Linēa can be used in a variety of applications where barcode scanning or signature capture is required.

* Please visit our website for updates on our compatibility with the latest devices.

These can be found at <http://www.ipcprint.com>

Attaching Device

Two versions of Linēa designed to be used with USB & Bluetooth® devices. When using the Linēa USB version, care must be taken to ensure the USB connector and the handset connector are not accidentally damaged. The figures below show how to attach the different device to the Linēa.

◆ USB (Cabled) Version:

- Connect the Linēa mini USB cable to the handset as shown in the figure below.

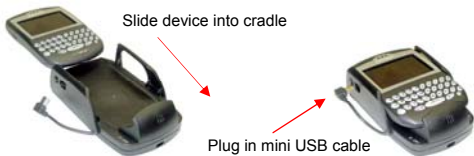


Figure 6

◆ BLUETOOTH® (Wireless) Version:

- The Linēa Bluetooth® version uses wireless technology to connect to the handset.



Figure 7

Scanning Barcodes

Using the Linēa:

The Linēa uses a scan engine that supports one-dimensional (1D) and two-dimensional (2D) barcode symbols. The effective reading distance of the PP-55 barcode reader is approximately 10 cm.

Scanning 1D Barcodes:

To scan a 1D barcode, activate the scanner then position the read head as close to the barcode label as possible so that the scan line crosses both ends of the barcode as shown in the figure below. Slowly pull back the unit increasing the distance between the barcode and read head until the barcode has been read by the scanner.



Figure 8

Scanning Barocdes

Scanning 2D Barcodes:

To scan a 2D barcode, activate the scanner then position the read head so that the scan line is above the barcode and crosses both ends as shown in the figure below. Slowly move the scan line over the barcode from top-to-bottom until the barcode has been read by the scanner.



Figure 9

User Notes:

To use the barcode reader feature, special software must be used to read and process the information. Please consult your reseller if this software is available or contact Infinite Peripherals for recommendations on compatible third party software solutions.

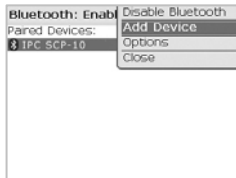
Bluetooth® Setup

Adding New Bluetooth® Device to PDA or Smartphones

The following is a brief explanation on how to [Pair] your Bluetooth® Linēa to Bluetooth® enabled PDA & Smartphones.

BlackBerry Devices:

Add Device or Pairing Bluetooth® peripherals to BlackBerry devices require the use of the device Bluetooth® manager. Image on the right shows a typical Blackberry Bluetooth® manager. When adding / pairing the Linēa, use the [0000] pairing key when prompted.



Windows Mobile Devices:

Creating a *New Partnership* or Pairing Bluetooth® peripherals to your Windows Mobile devices require the use of the device Bluetooth® manager. Image on the right shows a typical Windows Mobile Bluetooth® manager. When adding / pairing the Linēa, use the [0000] pairing key when prompted.



Palm Devices:

Add Device or Pairing Bluetooth® peripherals to your Palm devices require the use of the device Bluetooth® manager. Image on the right shows a typical Palm Bluetooth® manager. When adding / pairing the Linēa, use the [0000] pairing key when prompted.



BlackBerry Bluetooth® Setup

Adding Linēa Scanner

The following steps show how to [Pair] your Bluetooth® Linēa scanner using the BlackBerry Bluetooth® manager application.

Step 1:

Before proceeding with the pairing, be sure the Linēa scanner is turned on.

Step 2:

Open the Bluetooth® manager as shown in the figure on the right. The Bluetooth® manager is found under [Options or Tools] on your device.

Note:

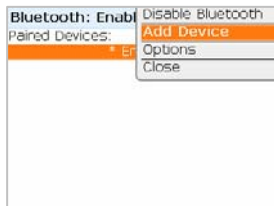
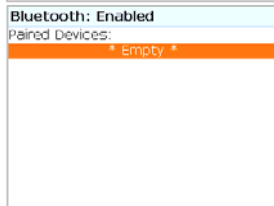
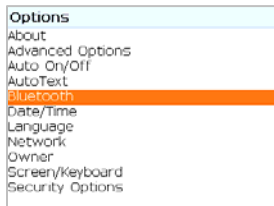
Notice that the [Paired Device] screen on the right indicates that the list of paired device is currently empty.

Step 3:

Click on the trackwheel to open the menu as shown in the figure on the right.

Highlight the [Add Device] option as shown in the figure on the right.

Click the trackwheel to select the [Add Device] option.



Pairing Linēa

Searching for Linēa Scanner

After clicking the trackwheel on the previous page, the BlackBerry Bluetooth® manager displays the [Searching for device] screen as shown in the figure below right.

Note:

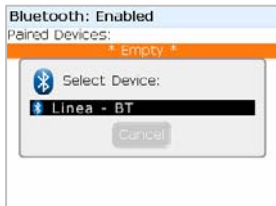
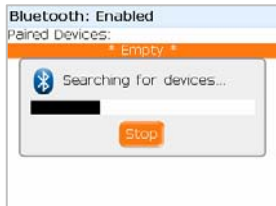
BlackBerry Manager is searching for all Bluetooth® devices. If you have more than one Bluetooth® device turned ON, you will need to locate the [Linēa-BT] from the resulting list of found devices.

Step 4:

When searching has completed, the [Select Device] message in the figure on the right will be displayed. If you have more than one Bluetooth® device turned ON, use the trackwheel to highlight the [Linēa-BT] as shown.

Step 5:

Now click [Enter] after highlighting the Linēa – BT device.



Pairing Linēa

Entering Passkey

Step 6:

After selecting the Linēa scanner, the screen in the figure on the right will be displayed.

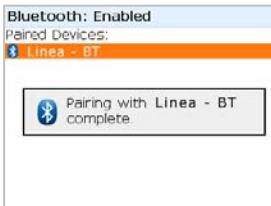
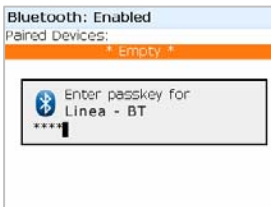
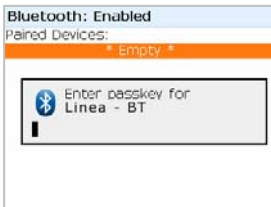
This screen prompts you to enter the [PassKey]. The passkey is the Bluetooth® pairing key for the signature capture pad which is [0000].

Enter the passkey now and press [Enter].

After entering the pairing passkey, click on the enter key to finalized the pairing of the Linēa scanner.

Note:

The Bluetooth® manager paired device list now shows the Linēa scanner as a paired device.



Un-Pairing Linēa

Clear Last Paired Device

The Linēa Bluetooth version is designed to remember the last paired device. This eliminates the need to reenter the passkey every time the Linēa establishes a Bluetooth connection with the device.

The table below provides information on using power button functions.

Power/Scan Button Functions		
Function	Beeps	Description
Power ON	N/A	While Linēa is OFF, press and release.
Clear Device	1 Beep	While Linēa is OFF, press and hold for 1-beep to clear last paired device.
Power OFF	2 Beep	While Linēa is OFF, press and hold for 2-beep to turn off Linēa.
	N/A	While Linēa is ON, press and hold for ~5 seconds to turn off Linēa.

Table 7

Replacing Battery

To replace the battery in the Linēa barcode scanner follow the steps below.

Steps:

1. Turn over the Linēa as shown in the figure below.

Figure 10



2. Push and slide the battery cover as showed in the figure below.

Figure 11



3. Lift the battery and unplug the battery connector as shown in the figure below. Take care when removing the connector as to not damage the wires. Reverse Steps 1-3 to install the new battery pack.

Figure 12



Resetting Linēa

To reset the Linēa barcode scanner follow the steps below.

Steps:

1. Turn over the Linēa as shown in the figure below.

Figure 13



2. Inset reset tool “can use paper clip” into reset hole and push gently until switch is depressed.

Figure 14



Developing Solutions

Integrating the Linēa into your wireless solution requires the use of the Linēa Driver & SDK. The SDK incorporates API specific to developing application using the signature capture capability of the Linēa.

The table below shows the SDKs currently available for PDA & Smartphone devices.

Devices	Language	IDE
BlackBerry	Java	RIM BlackBerry Java JDE 4.1 and higher
Windows Mobile	-	visit our developer web site for updates
Palm / Palm One	-	visit our developer web site for updates

Table 8

For details on using the Linēa Drivers & SDK, please refer to the SDK's documentation.

For the latest Linēa Drivers & SDK's, visit our developer web site at:

<http://www.ipcprint.com/support/default.asp>

Troubleshooting

Signature Capture

If you're having problems capturing signatures refer to the table below for possible causes.

Item	Problem	Possible Cause
1	Signature data will not display on device.	Bluetooth® Version * Device Bluetooth® radio not on. * Linēa not paired with device. * Linēa battery low. * Linēa driver not installed on device.
		USB Version * Linēa battery low. * Linēa driver not installed on device.
2	Signature pad will not connect to device.	Bluetooth® Version * Device Bluetooth® radio not on. * Linēa not paired with device. * Linēa battery low. * Linēa driver not installed on device.
		USB Version * Linēa battery low. * Linēa driver not installed on device.
3	Flashing once per second = Low battery	Bluetooth® & USB Version * Linēa battery low. Charge device before using.

Table 9

Troubleshooting

Barcode Scanning

If you're having problems scanning barcodes refer to the table below for possible causes.

Item	Problem	Possible Cause
1	Error: <i>Not connected to the reader.</i>	Bluetooth® Version <ul style="list-style-type: none">* Device Bluetooth® radio not on.* Linēa not paired with device.* Linēa battery low.* Linēa driver not installed on device.
		USB Version <ul style="list-style-type: none">* Linēa battery low. Charge battery.* Linēa driver not installed on device.
2	Error: <i>Barcode Read error.</i>	Bluetooth® Version <ul style="list-style-type: none">* Linēa battery low.* Linēa invalid or unreadable barcode.
		USB Version <ul style="list-style-type: none">* Linēa battery low.* Linēa invalid or unreadable barcode.

Table 10

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 Continued

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.

Contact Information

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