Add-on PCL for iOS

Getting Started

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Restricted

Ingenico

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Contents

1 Introduction

This document will guide you through the installation process of all needed binaries on both iOS devices and Ingenico devices. Please follow carefully these instructions.
Please refer to the Integration Guide for information about how to develop an iOS application that includes the PCL features

1_1 Acronyms and terminology

PCL	Payment Communication Layer
Companion	Ingenico device that is used to manage the payment in conjunction with a mobile device. In the case of a connection with iOS, it can be either an iCMP or an iSMP / iSMP Companion

 This symbol indicates an important Warning.

 This symbol indicates a piece of advice.

2 Installation

2_1 Add-on content

The “Add-on PCL for iOS” contains all the binaries needed to ensure the communication between an iOS device and a Telium device, in order to perform payment transactions using either Bluetooth® wireless technology or the Apple specific connector.
It also contains header files and libraries to be used for application development.

2_2 Prerequisites

2_2_1 Hardware prerequisites

The “Add-on PCL for iOS” can only be used with the following Telium device (Companion):

- iMP322 (iSMP Companion without barcode reader)
- iMP320 (iSMP without barcode reader)
- iMP352 (iSMP Companion with barcode reader)
- iMP350 (iSMP with barcode reader)
- iCM122 (iCMP)

2_2_2 Software prerequisites

The SDK installed on the Telium device must be:
- 9.18 or higher

The following SDK components must be downloaded on the Telium device:
- OS
- Manager
- Link Layer With IP (component has been merged in the Manager since SDK 9.16)
- SPMCI

It is possible but not recommended to use older SDK version (down to 9.12) if you don’t need the latest PCL features.
Note that some features from earlier SDK will be deprecated so it is strongly advises to use SDK 9.18 with this version of PCL add-on.

If you want to use the backward compatibility provided by this add-on with previously developed Telium applications, you need to add the following component:
- DLL TCP/IMP

A computer with a Microsoft Windows® operating system is needed in order to extract the add-on files.

2_2_3 Supported versions of iOS

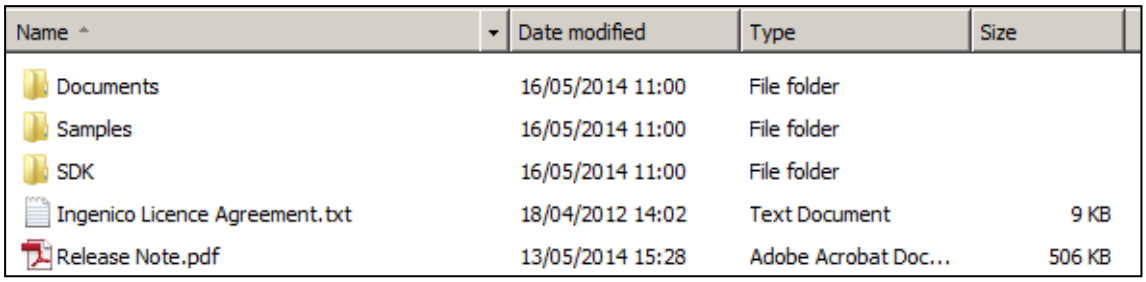
This add-on is compatible with the following versions of Apple iOS:

- iOS 4.x
- iOS 5.x except 5.0.1 because of an Apple issue on external accessory managing
- iOS 6.x
- iOS 7.x
- iOS 8.0.2
- iOS 8.1.0

2_3 Installing the Add-on PCL

Run the Add-on PCL for iOS setup file and install it in a %INSTALL_DIRECTORY% that must not contain spaces or special characters.

The content of %INSTALL_DIRECTORY% is shown below.

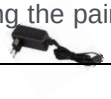


Name	Date modified	Type	Size
Documents	16/05/2014 11:00	File folder	
Samples	16/05/2014 11:00	File folder	
SDK	16/05/2014 11:00	File folder	
Ingenico Licence Agreement.txt	18/04/2012 14:02	Text Document	9 KB
Release Note.pdf	13/05/2014 15:28	Adobe Acrobat Doc...	506 KB

For more details about add-on content please refer to document “PCL for iOS Integration Guide”.

3 Bluetooth pairing

It is strongly recommended to have your Companion connected to the mains power during the pairing procedure, to prevent it going into standby mode and thus aborting the process.



3_1 Overview

Pairing is the action of registering a Bluetooth device with which communication will be done later.
Pairing is a mandatory step before being able to exchange data, but having paired two devices does not means that they are communicating.
PCL pairing process conforms to PCI DSS wireless guidelines. However, the final user is in charge of the following items:

- Pairing should be performed in a secure area where attackers cannot realistically observe the passkey entry and intercept Bluetooth pairing messages.
- Perform pairing as infrequently as possible: paired information is remnant and pairing should be done again only if the whole configuration has been erased.

To pair your iOS device, follow the steps below:

- Go to the Bluetooth menu using one of the following method, depending on your SDK version:
  - The shortcut “F . 57”
  - menu F > 0 – TELIUM MANAGER > 3 - Initialization > 2 – Hardware > x – Bluetooth
  - menu F > 1 – BT PAIRING
  - menu F > 1 – BLUETOOTH

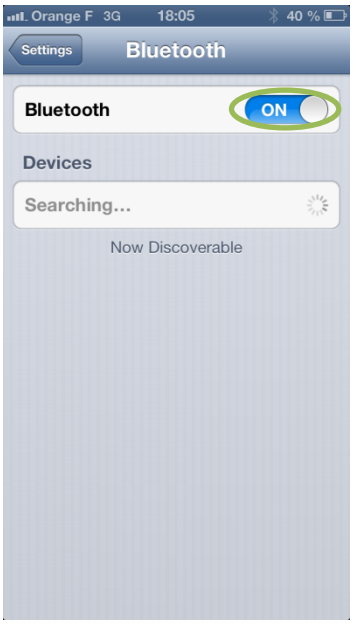
- Check that the security mode on the Companion is set to 4.
  - This is done by going in the menu 5 – Advanced options > 2 – Pairing mode.
  - If not the case, switch to mode 4, as this will simplify the pairing process.
  - Note that if you change security mode the Companion will reboot.
- Start pairing on Telium Companion before starting the iOS integrated tool. Use the menu 2 –Pair with phone. If security mode 3 is selected, a 16 digits PIN code is displayed.

In the above steps, we assume that the BTPairing and Bluetooth application have the number 1 in the Telium manager menu. Depending on your configuration, this might not be the case. But the name will always be the same.

3_2 Pairing with SDK < 9.18

3_2_1 Making the iOS device discoverable

Set your iOS device to discoverable using the iOS integrated tool (Settings/ Bluetooth and slide the button if it is not activated and stay on this page.

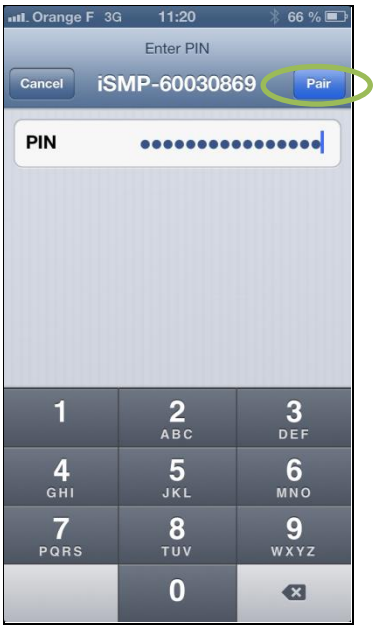


3_2_2 Performing a Bluetooth scan from the Companion

On the Telium Companion side:

- Use the menu F > 1 – BT PAIRING > 2 – Pair device (iOS)
- 0 – Search devices
- Select the device to pair

If security mode 3 has been selected, you will be asked to enter a PIN code. Enter the pin code displayed on the Companion screen then click on the Pair button.



If security mode 4 has been selected, you will be asked to compare a 6 digits passcode that should appear on both iOS and Telium devices.
On the iOS device, click on the Pair button to accept. On the Telium Companion press the green button to accept.

- In some cases, even if security mode 4 is enabled, you will be asked to enter a PIN code. Enter the PIN code that is displayed by the Telium device.
- In these two cases, if the pairing is ok, now you can see your Ingenico Companion in the device list like below

The Companion is now paired and activated!
You can use it to do payment transactions.

3_3 Pairing with SDK 9.18 and SDK > 9.18

3_3_1 Making the Telium device discoverable

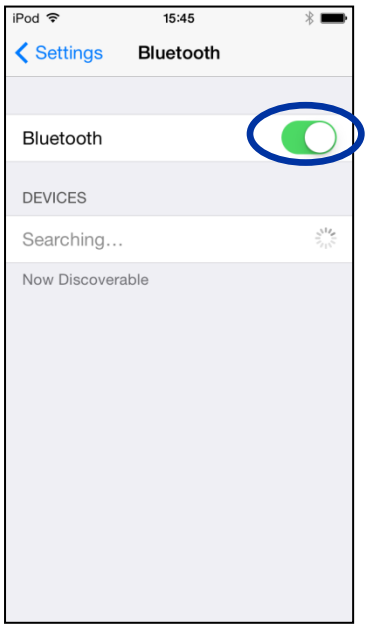
On the Telium Companion side:

- If the SD K use is 9.18.x:
  - Use the menu F > 1 – BT PAIRING > 0 – Pair device
- Else if is SDK 9.20 or more:
  - Use the menu F > 1 – Bluetooth > 2 – Pair with phone

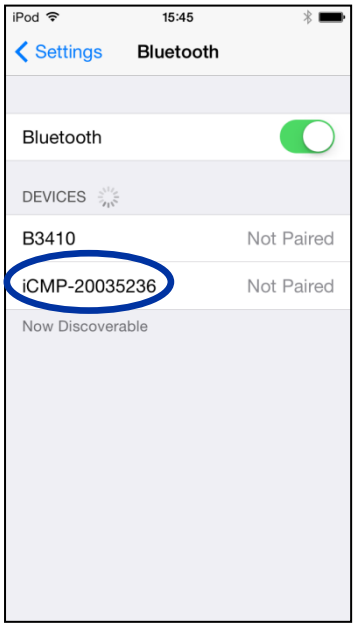
Your Companion is now discoverable and can be paired with an iOS device.

3_3_2 Performing a Bluetooth scan from the iOS Device

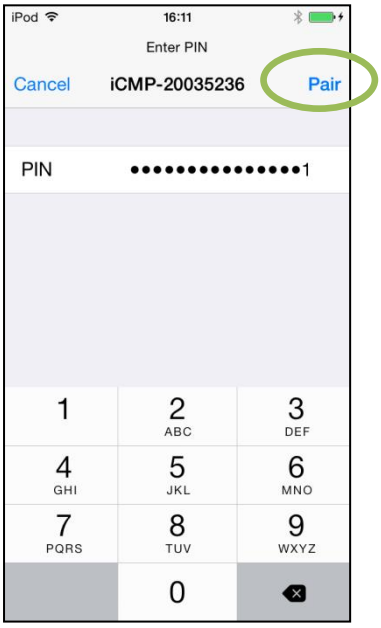
On the iOS device go to Settings > Bluetooth
Launch the scan of Bluetooth devices using the iOS integrated tool (Settings/ Bluetooth and slide the button if it is not activated and stay on this page.



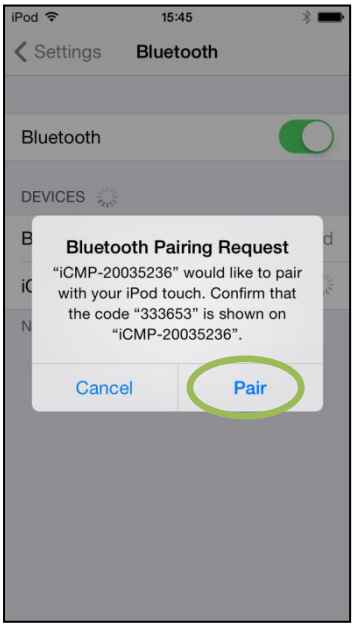
Select the device to pair



If security mode 3 has been selected, you will be asked to enter a PIN code. Enter the pin code displayed on the Companion screen then click on the Pair button.

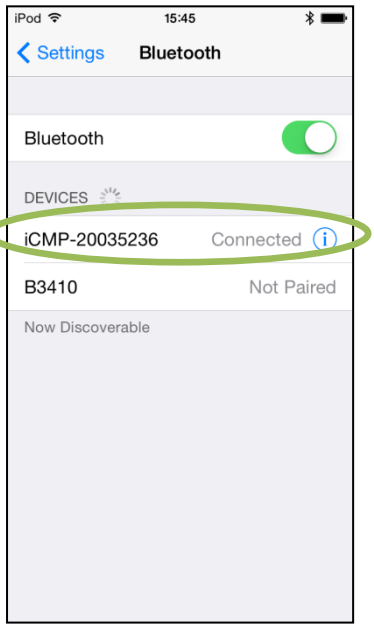


If security mode 4 has been selected, you will be asked to compare a 6 digits passcode that should appear on both iOS and Telium devices.
On the iOS device, click on the Pair button to accept. On the Telium Companion press the green button to accept.



In some cases, even if security mode 4 is enabled, you will be asked to enter the PIN code displayed on the Telium device

- In these two cases, if the pairing is ok, now you can see your Ingenico Companion in the device list like below



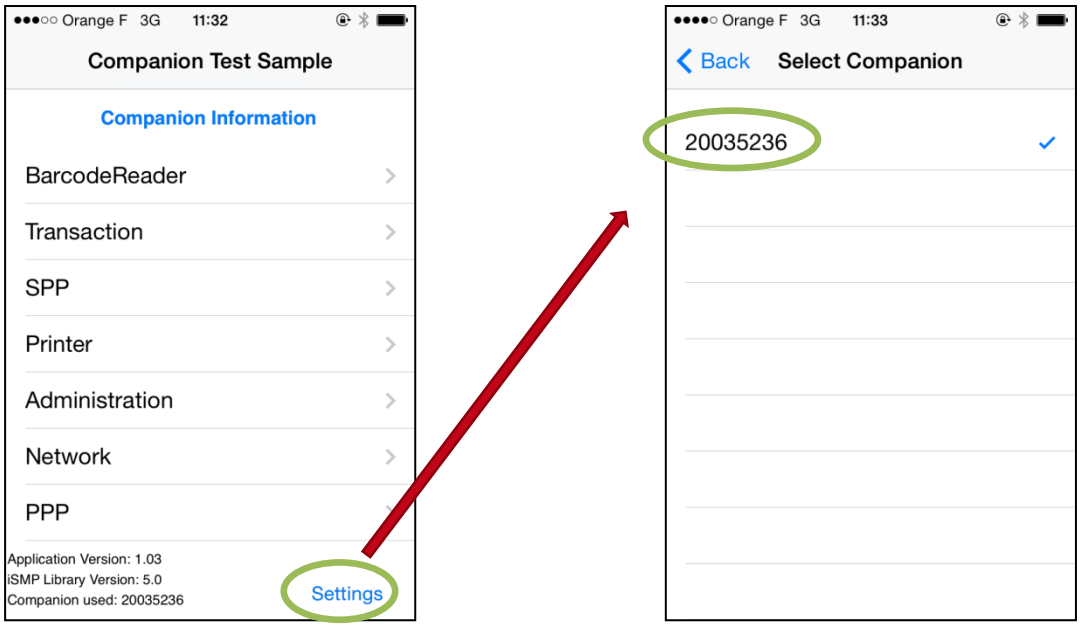
4 Using PCL

Note that unlike other PCL version, Ingenico is not providing binaries that can be directly installed on the iOS device. All source files must be compiled and signed with your own Apple certificate before being deployed.

This section describes some important steps to do before using the sample application.
Note that these steps will also have to be done before using any PCL-based application.

4_1 Selecting the Companion (when several have been paired to one iOS device)

The pairing process allows multiple Companions to be paired at the same time to one single iOS device.
Due to Apple specificities, each time a Companion is paired, the Bluetooth connection is automatically established. However this does not mean that the PCL connection is established: only one PCL connection can be established at a time with a Companion.
So before doing using any features provided by the Companion, you need to select which Companion you want to use.
In the provided sample application, the selection is done using the application Settings menu

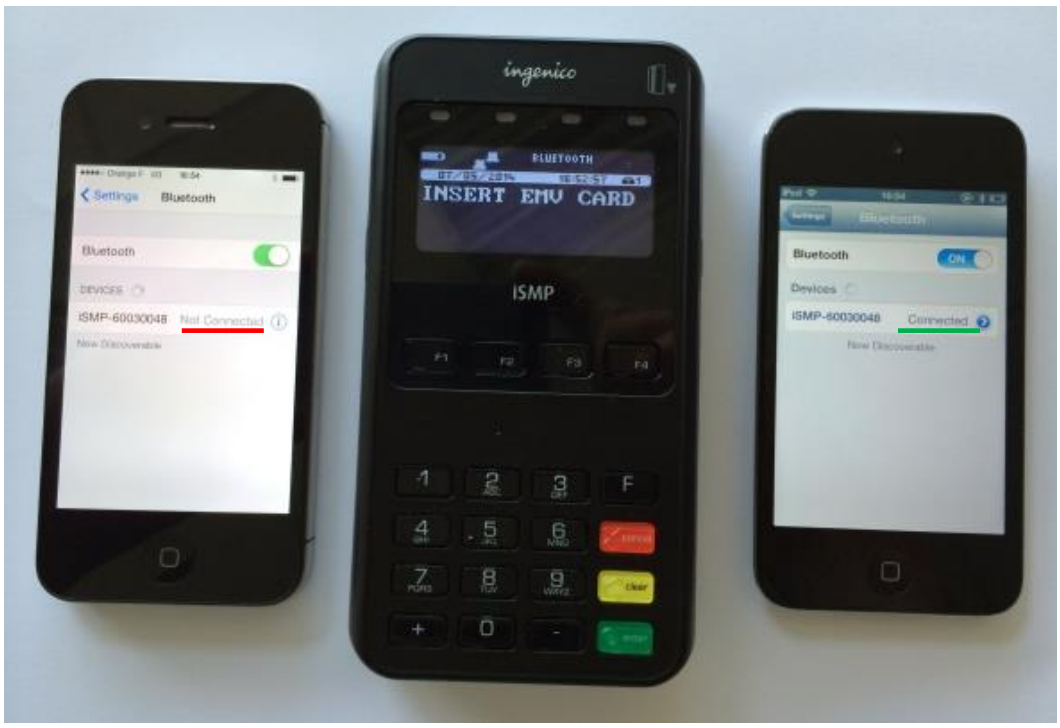


Note that if only one companion has been paired, there is no need to go through the selection process as it will be picked-up by default

4_2 Selecting the iOS device (when several have been paired to one Companion)

In the above section, we discussed the case where several Companions have been paired to one single iOS device.

But it is also possible to have the symmetrical configuration: several iOS devices can be paired to one Companion. However, unlike in the other case, only one iOS device can be connected at a given time to the Companion.
Managing which iOS device is connected to the Companion is done using the standard iOS Bluetooth Settings menu.
The below image shows 2 iPhone paired to the same Companion and one of them being connected to it. If you want the other one to take over the connection, you just need to click on the “Not Connected” menu.

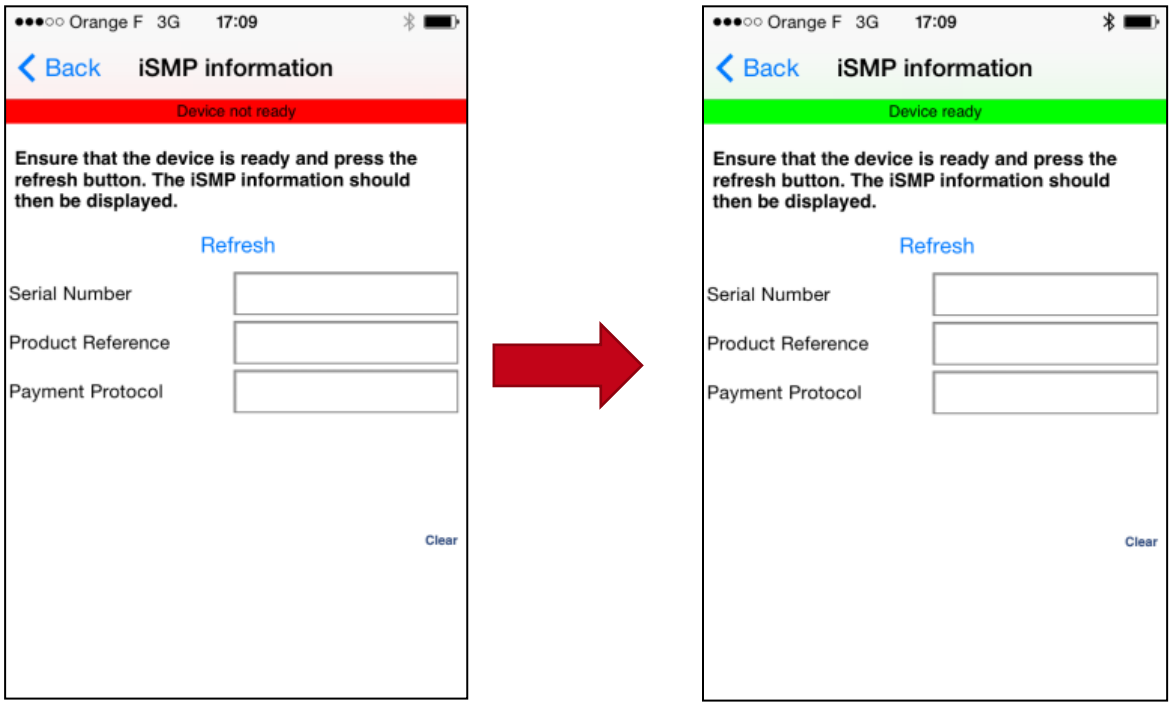


4_3 Using the Companion Test Sample application

Because of Apple policy, a ready to use test application cannot be provided by Ingenico. However the complete source of a fully functional test application is provided in the directory Samples\Companion\TestSample.
The “Companion Test Sample” application can be used to perform unitary tests of each PCL functions. This application has many goals

- Provide code sample for each PCL functions
- Provide a way to understand, from a user perspective, what is the purpose and behavior of a PCL function
- Provide a reference application that can be used to validate possible issues

After having started the application, and selected the test you want to run, make sure to wait for the connection communication channel to be up and running.
The communication status is easily identifiable by the red/green banner at the top of the application



5 FAQ

5_1 How do I unpair a device

On the Telium Companion side:

- If the SD K use is 9.18.x:
  - Use the menu F > 1 – BT PAIRING > 1 – Remove Paired device
  - Select the device to delete

Else if is SDK 9.20 or more:

- Use the menu F > 1 – Bluetooth > 4 – Paired devices
  - Select the device to delete
  - Click on 1 - Remove

5_2 How do I know which SDK is installed on the Companion

In order to know which SDK version is used by the Companion, you can either contact your reseller, or, check it by yourself in the menu (if avavailable).
On the Companion, use the menu:
F > 0 – Telium Manager > 2 – Consultation > 4 – Configuration > 2 – Software > OnDisplay > Telium SDK
The SDK version is the value of the field SDK Rel.=