

UM10467

PR533 Background application

Rev. 1.2 — 7 November 2017
232612

User manual
COMPANY PUBLIC

Document information

Info	Content
Keywords	PR533, Background application
Abstract	This User Manual presents the PR533 background application example provided by NXP, and describes how to install, use and modify the application.



Revision history

Rev	Date	Description
1.2	20171107	Security status changed into company public, no content change
1.1	20121004	License section updated
1.0	20120503	First release

Contact information

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1. Introduction

The PR533 Background application is a C# software that runs in background of Windows and detects when a PR533 device is plugged on a USB port.

When the device is detected, the background application sends configuration message to set the device in the right mode.

This application is not mandatory, but can be used when specific configuration is required for the PR533.

2. Deliveries

This application is delivered in two different packages:

- The installer and its source code (using Inno Setup).
- The application source code (in C#)

To use the application for evaluation, only the executable file is required. It can be found in the folder PR533_ProductSupportPackage\SW\PR533_BGAppSW\Installer\Output.

Follow the steps described in next chapter for this use.

The source code is delivered in the folder PR533_ProductSupportPackage\SW\PR533_BGAppSW\PR533BgAppSW. It is described briefly in this document in section Application source code.

3. Installation

3.1 Pre-requisite

The background application needs the CCID escape command to be activated on the PR533 device. As it is not enabled by default under Windows, the application setup enables it when launched, but this may not work if the device has never been plugged. Then it is mandatory to plug the PR533 prior to the installation so that its driver is installed.

3.2 Install package

The application is provided and installed by the PR533_BgApp_Install.exe package. This install package extracts the required files, writes the Windows registry to enable the automatic launch of the background application at start up, and enables the escape commands.

Finally, the background application named “SimpleDetector.exe” is launched, and the app first checks if the device is present. If the device is found, the configuration commands are sent and the device can be used with its customized configuration.

When the background application is running, it can be found under the Task Manager:

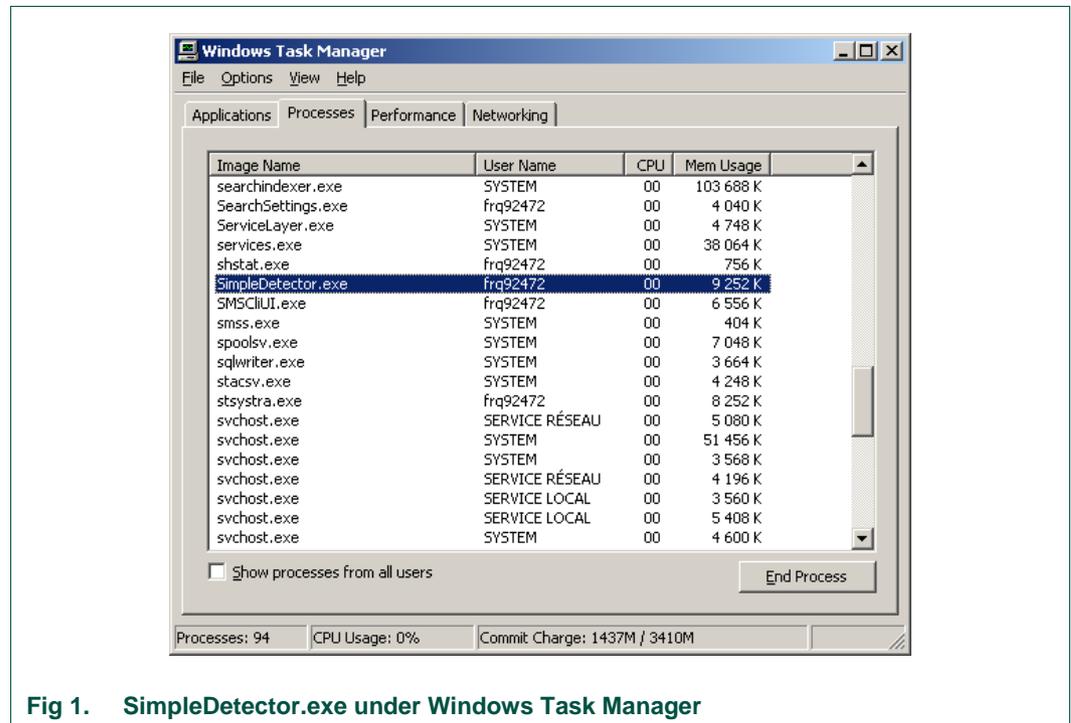


Fig 1. SimpleDetector.exe under Windows Task Manager

3.3 Installation summary

The steps to install the background application are:

- Plug the PR533 device and wait for the driver to be fully installed
- Launch the PR533_BgApp_Install.exe and follow the default installation

The device is now ready to work.

4. Application source code

4.1 Introduction

The source code of the application is provided in a separate package as a Microsoft Visual C++ solution. The solution can be launched by version 2005 and above.

It allows the user to recompile the SimpleDetector.exe application to customize the configuration commands.

4.2 Customization

The only thing that must be changed to customize the configuration is the set of command sent in the **ConfigPR533()** function:

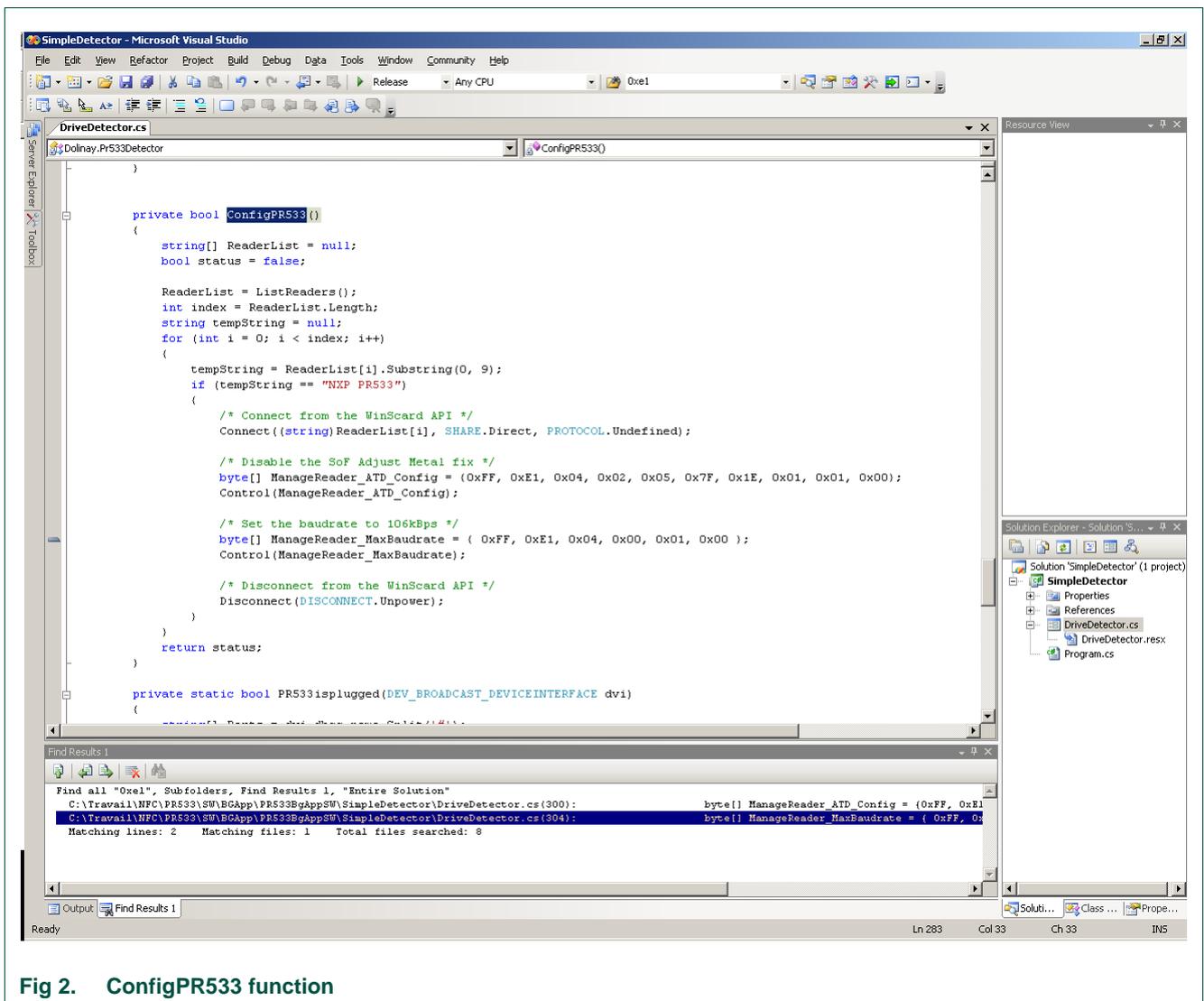


Fig 2. ConfigPR533 function

The existing commands can be modified, or the syntax can be copied to send new config command.

The provided version sends the following commands to the PR533 at start:

```
FF E1 04 00 01 00
```

This command changes the maximum bitrate to 106 kbps only.

4.3 New background application

When a new background application has been compiled, it must replace the existing one under “%Program Files%\NXP Semiconductors\PR533_PSP” folder.

It will then be taken into account after the next PC restart.

To avoid a PC restart, the SimpleDetector.exe process must be killed under the Windows Task Manager, and the new application launched.

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Date of release: 7 November 2017
232612

Document identifier: UM10467