



***CryptoPlus KB***  
***Version 1.1.46***  
***USER'S GUIDE***



November 2009

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# 1 Introduction

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This document describes the installation and configuration of the CryptoPlus product that is used for access to the Mojobanka, Profibanka and Přímý kanál applications via certificates stored on můjklíč smart cards.

The CryptoPlus installer is supplied with detailed help; the user can continuously see the instructions and the options for working with the program. The User's Guide you are now reading therefore describes only the basic procedures, and does not deal with all the dialogues and potential error states.

**PLEASE DO NOT CONNECT THE READER TO PC BEFORE YOU ARE ASKED BY INSTALLATION PROGRAMME.**

## 2 CryptoPlus – How to Start

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### 2.1 HW and SW requirements

#### HW requirements

- Hardware which is compatible with the Windows 2000, Windows XP, Windows Vista operating systems.
- An available USB port for connecting the smart card reader (the connection requirements are specified by the respective manufacturer).

#### SW requirements

The current version of the CryptoPlus product is natively integrated into a cryptographic subsystem of the Microsoft Windows operating system (it has been tested with the Windows 2000, Windows XP and Windows Vista versions). All applications using this cryptographic subsystem can therefore cooperate also with the můjklíč smart card.

### 2.2 Licence covenants and restrictions

The licence terms and conditions applicable to the PC/SC interface of smart card readers and to CryptoPlus are displayed on the screen during installation. Since the manufacturers' original drivers are used for card readers, the licence terms and conditions are in English.

### 2.3 Language support

The current CryptoPlus version supports the following languages:

- **English**
- **Czech**

### 2.4 Card reader models supported by CryptoPlus

OEM drivers for Gemplus and Omnikey readers are integrated (without any adjustments) in the installer. The drivers are a standard part of CryptoPlus product supplies. They are the following:

- USB port card readers:
  - Gemplus: **GemPCTwin**
  - Omnikey **CardMan 3621 (Pin-Pad)**
  - Omnikey **CardMan 3821 (Pin-Pad)**
- PCMCIA card readers:
  - Gemplus: **GemPC Card**
  - Omnikey: **CardMan 4000**
  - Omnikey: **CardMan 4040**

## 3 CryptoPlus Installation

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The installer is designed to make an ordinary user's work as easy as possible. During installation it detects various states and guides the user how to proceed further with the help of easy-to-survey status logs and hypertext links.

If the installer finds some components already available in your PC it will leave them unchanged and use them for its operation. For instance, a functional PC/SC reader is already installed and plugged into your PC. If the installer detects it correctly it will show this on the opening screen and offer the next step to continue the installation (it will not offer the installation of the card reader).

PC/SC support for communication with card readers is installed together with reader drivers. If the PC/SC support is a part of the operating system (Windows 2000 and higher) or of it is available on the PC from a previous installation, this step is also skipped.

For the installation process to be correct and for the CryptoPlus product to work without any problems the right sequence of the installation steps should be followed. **We recommend that you read the information in the Current Status of Installation window very carefully and follow the displayed recommendations when you install the product.**



It is to be noted at the beginning that if you intend to install CryptoPlus in a multi-user environment (Windows 2000, XP, Vista) the installation must be started and completed under one and the same user account (for example, the Administrator) which has the administrator's rights.

### 3.1 Starting installation

We recommend closing all the applications running on your PC. The reason is that at the end of the installation process the installer restarts the PC and unsaved data might be lost.

Get the card reader ready, **but do not connect it to PC for the time being!** Download the installation file from the installer's opening page located at [http://www.mojebanka.cz/cs/certificates/instal\\_reader.shtml](http://www.mojebanka.cz/cs/certificates/instal_reader.shtml) to your PC and launch the installation.

After the installation suite starts running for a specific card reader model, the following window will open and request you to select the language in which the installation program will be communicating with you. Confirm your selection by clicking on "Pokračovat >>".

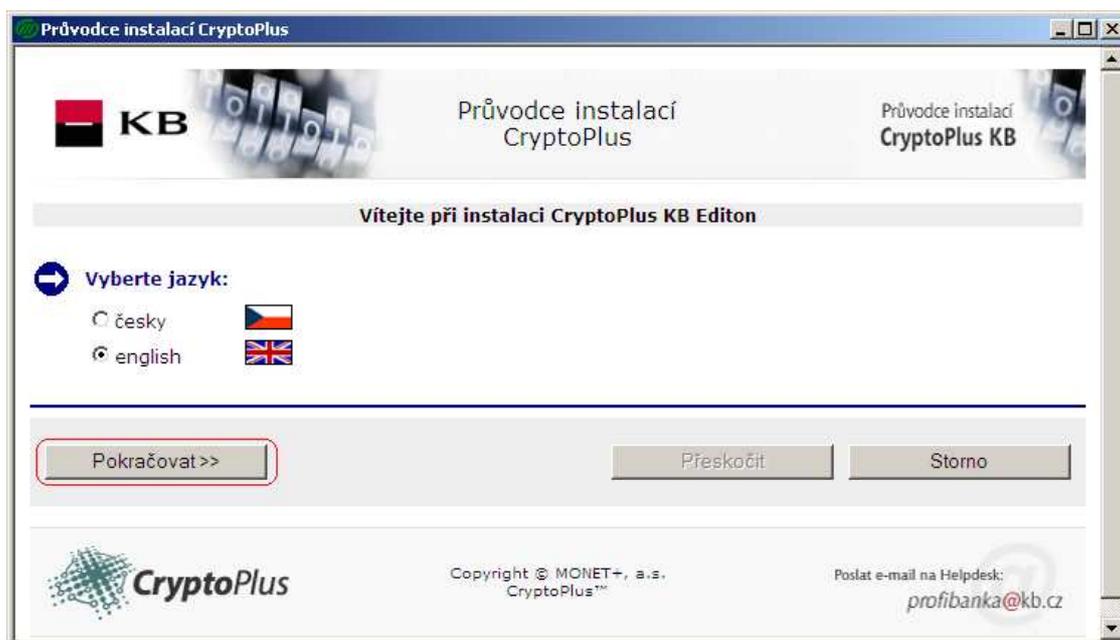


Figure 1: Dialogue window “Select language”

In the next dialogue window you can choose between two types of installation, **Automatic installation** or **User installation**.

***Less experienced users are recommended to use the Automatic installation.***

Confirm your selection again by clicking on “**Continue >>**”.



Figure 2: Dialogue window "Installation type selection"

### 3.2 Automatic installation

Automatic installation starts by the installation of the drivers for the smart card reader. The smart card reader is shown in the picture, and its name can be found to the right of it.

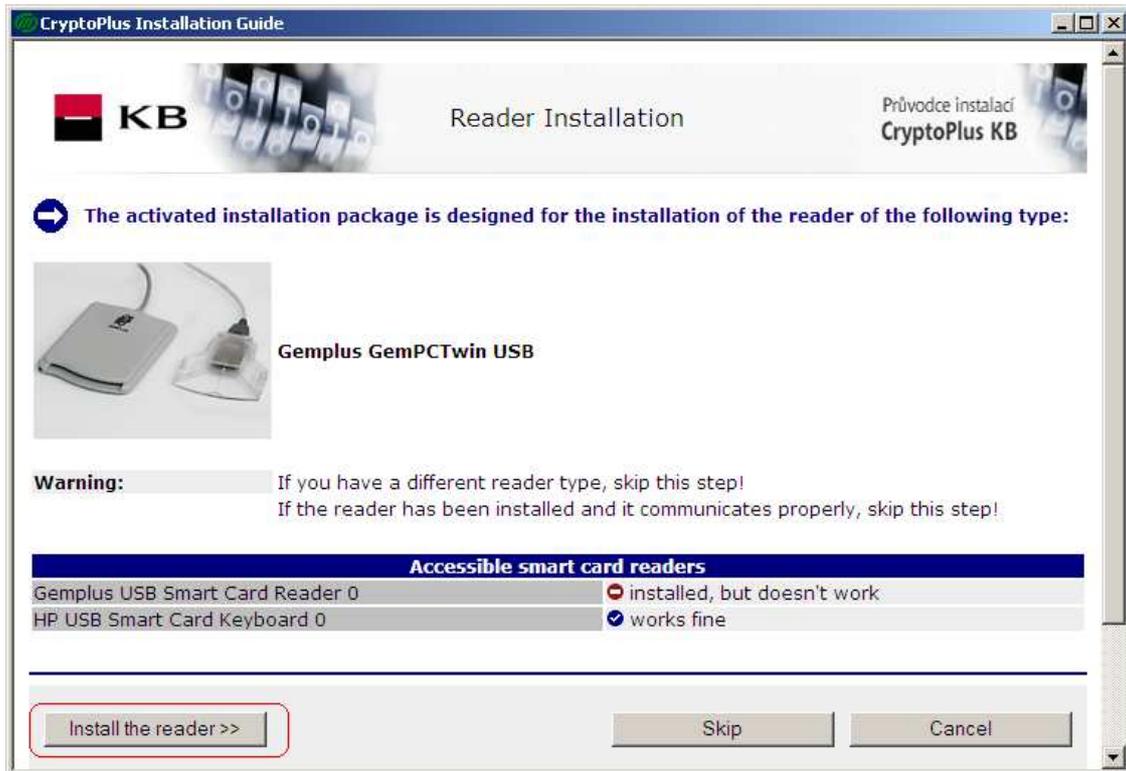


Figure 3: Dialogue window “CryptoPlus Automatic Installation Guide”

If you had installed a card reader in the past, a table called “Accessible smart card readers” will appear, listing all the readers.

- The card reader driver will be installed after clicking on “**Install the reader >>**”
- Then the dialogue window with the licence will appear. If you agree with the licence terms and conditions click on “**I agree >>**”, otherwise click on “**Cancel**”.

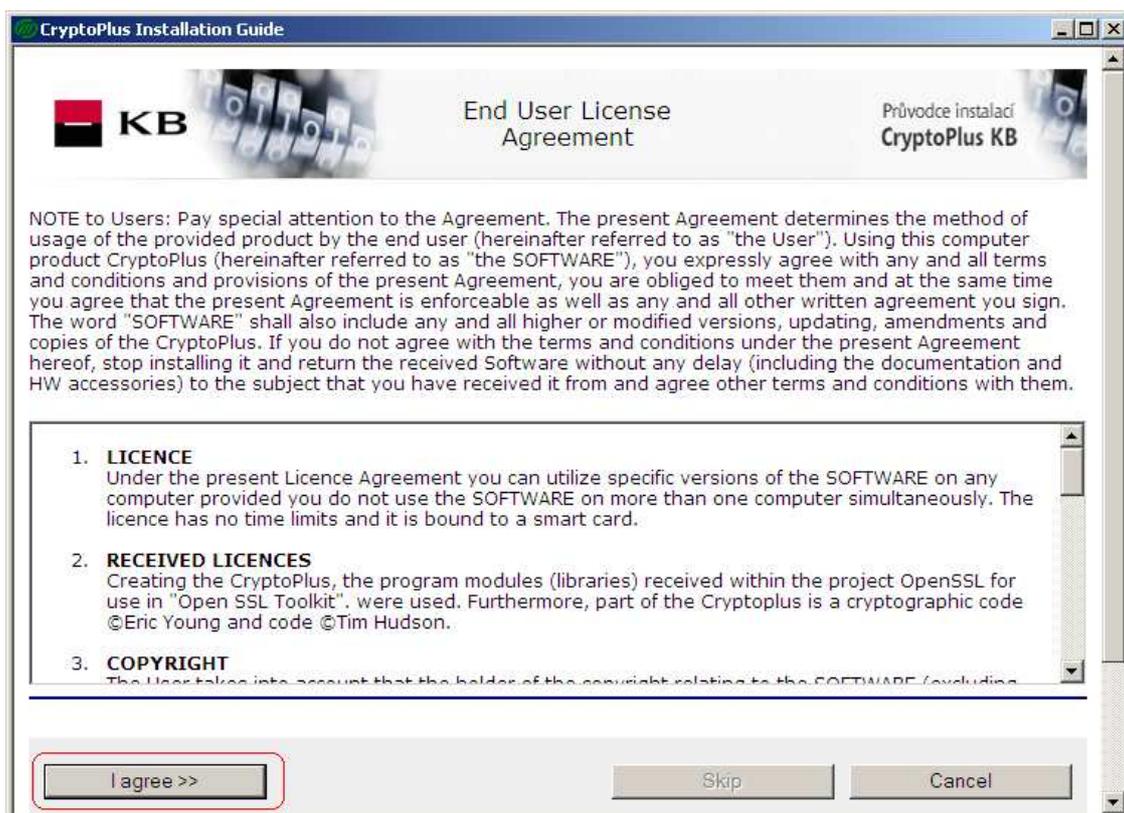


Figure 4: Dialogue window "End User Licence Agreement"

- Now you have reached the stage of installing the CryptoPlus software suite.
- If the preset target folder for installation suits you click on "**Install CryptoPlus >>**". Otherwise select your own directory path by clicking on "**Browse**". Select your target folder and only then confirm "**Install CryptoPlus >>**".



Figure 5: Dialogue window "CryptoPlus installation"

- If no target folder exists you will be prompted to confirm the creation of such folder.
- The installation of the CryptoPlus software suite is running now.
- **After completion, the installer will display the sequence of steps that have to be taken. The steps are: turn off the PC, plug the smart card reader into the PC, and turn the PC on again. You have to click on the “Turn off” button rather than turning your PC off in the customary way.**



Figure 6: Dialogue window “Finishing of installation”

Once the system is up again, the installer will start running automatically and complete the installation correctly.

- Now only click on “End”, which will close the installer.
- The card reader and the CryptoPlus suite should be installed and ready for use.



Figure 7: Dialogue window “Completion of CryptoPlus installation after turning on the PC”

### 3.3 User Installation

User installation is intended for more experienced users. **It also serves for troubleshooting, if needed.**

Select User installation and continue by clicking on **“Continue >>”**.



Figure 8: Dialogue window “Installation method selection”

Like automatic installation, also Custom installation begins with the installation of smart card reader drivers.

- By clicking on **“Install smart card reader”** you will reach a page that is identical with the page for card reader driver installation in the automatic installation mode. The process of installing the card reader drivers is also identical.

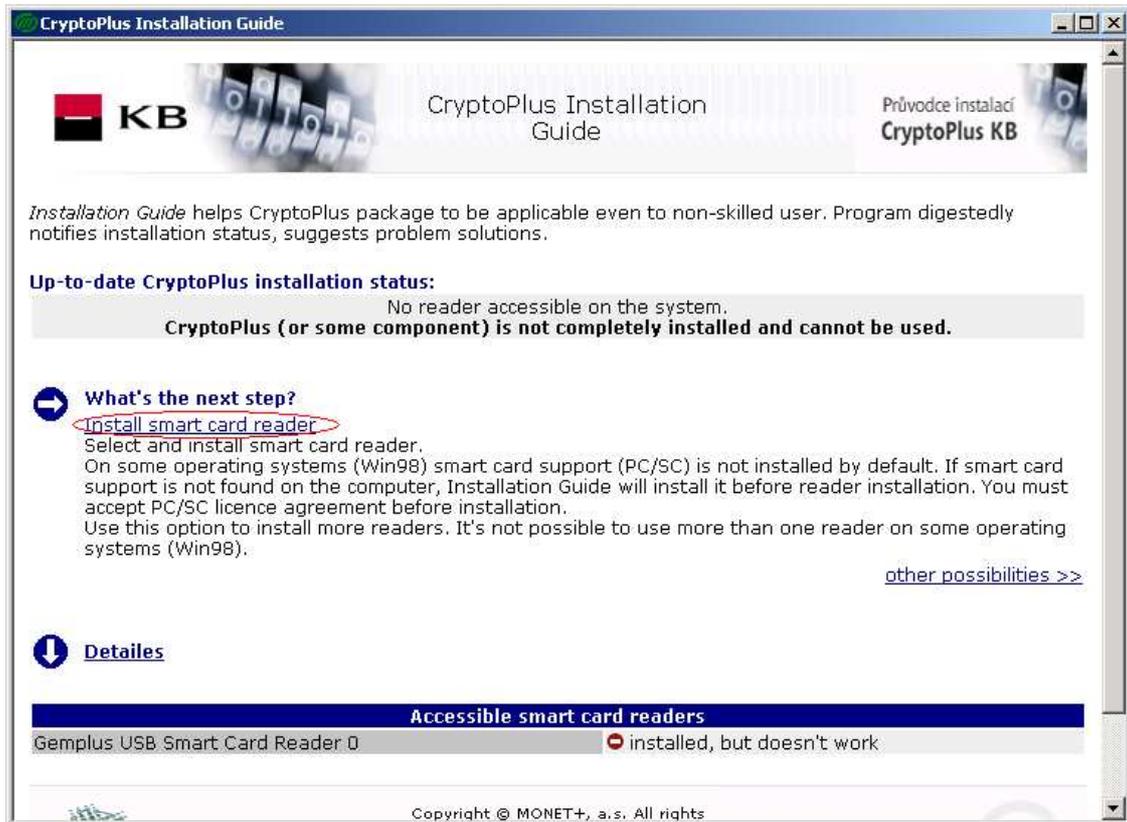


Figure 9: Dialogue window “CryptoPlus User Installation Guide”

- Then click on “**Install the reader >>**”, and the card reader driver will be installed.

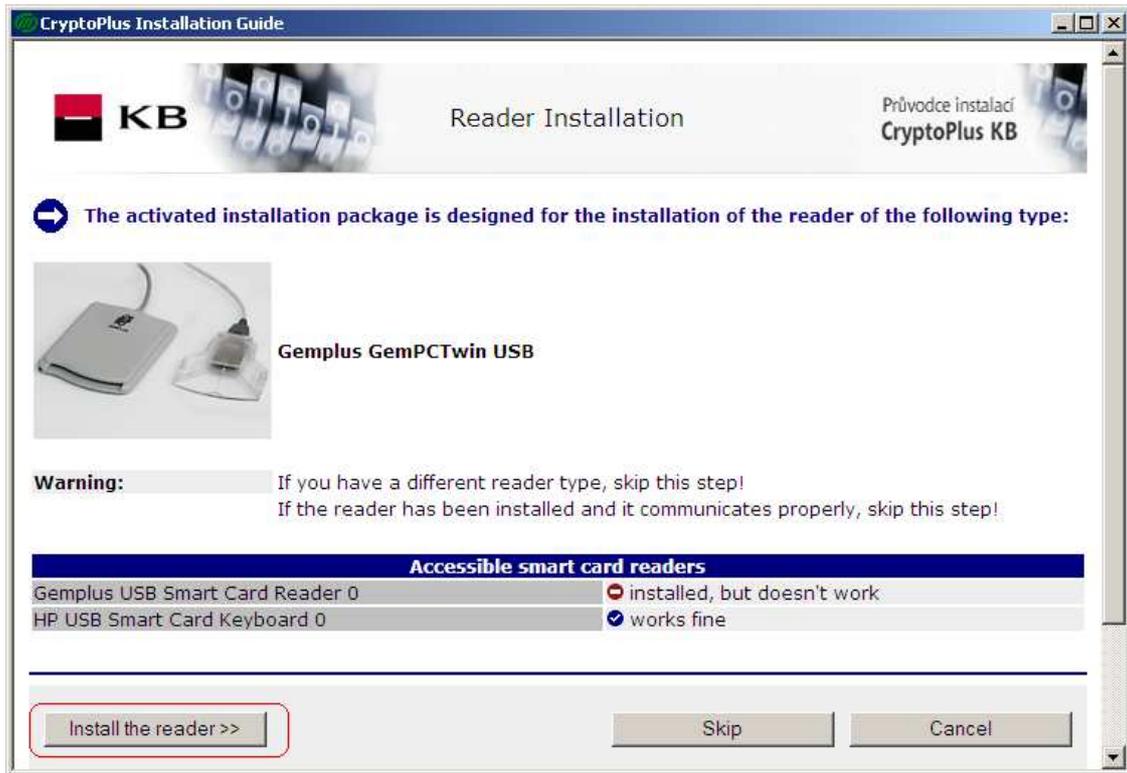


Figure 10: Dialogue window “Card reader drivers installation”

- Then a page will appear, containing a link called “**Install CryptoPlus software**”. Click on the link.

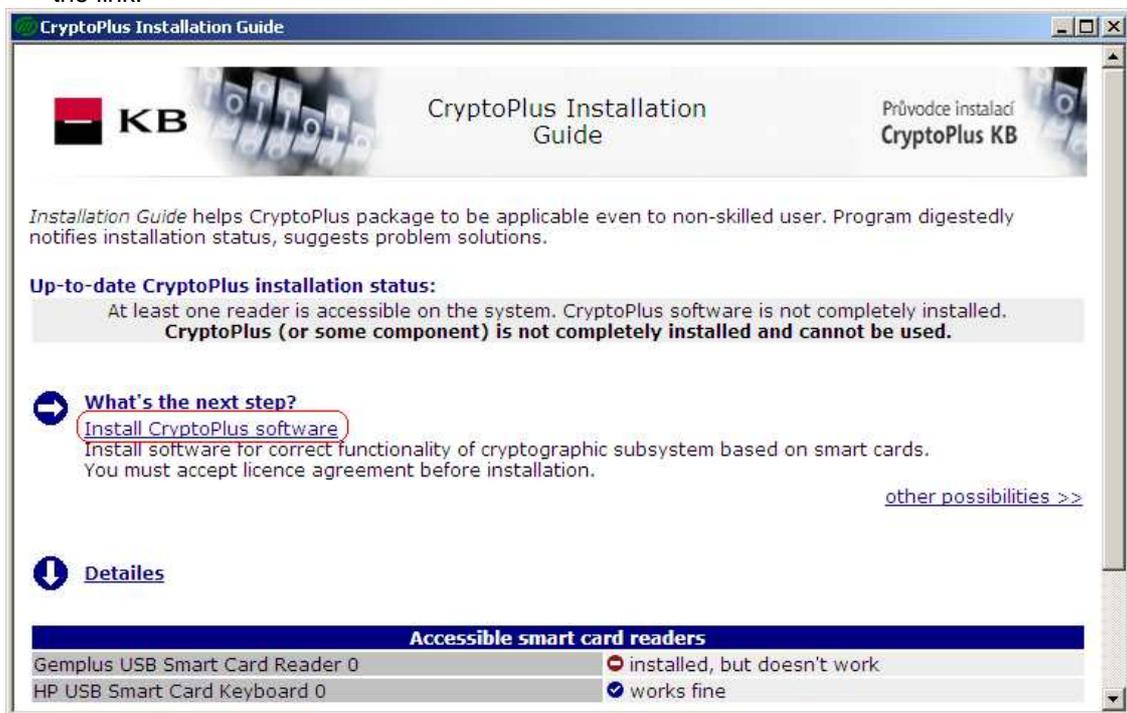


Figure 11: Dialogue window “CryptoPlus software installation”

- Then the dialogue window with the licence will appear. If you agree with the licence terms and conditions click on **“I agree >>”**, otherwise click on **“Cancel”**.

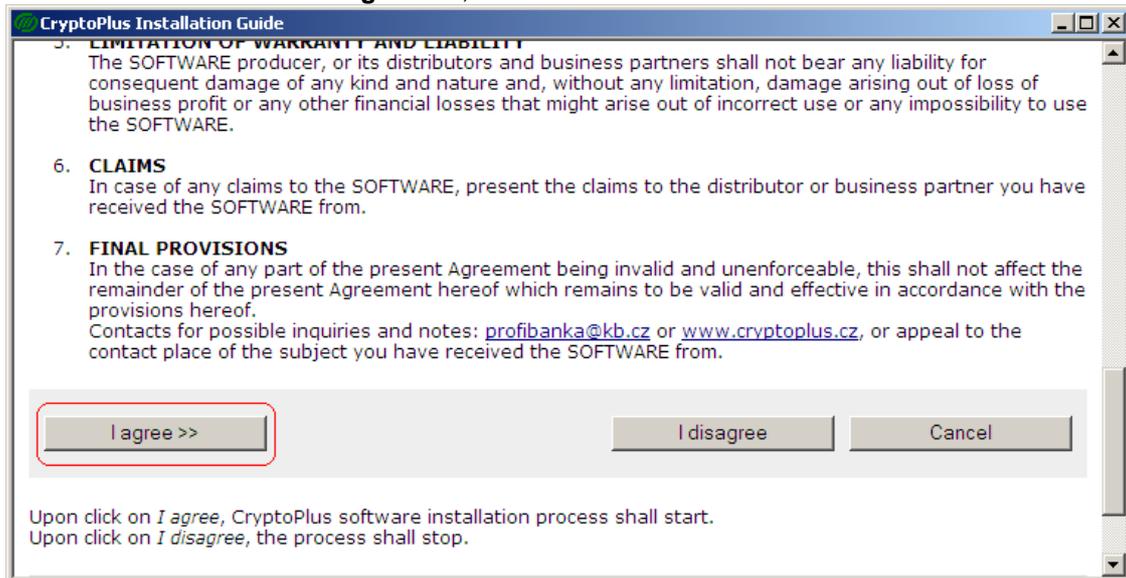


Figure 12: Dialogue window “Licence Agreement”

If the preset target folder for installation suits you click on **“Install”**. Otherwise select your own directory path by clicking on **“...”**. Select your target folder and only then confirm **“Install”**.

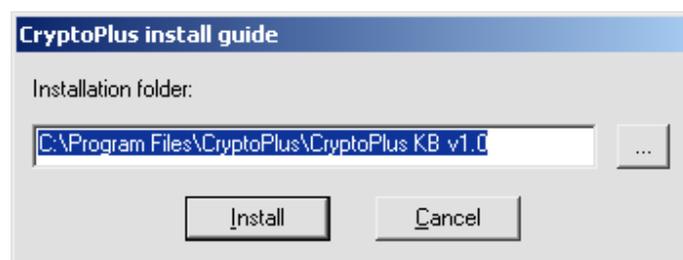


Figure 13: Dialogue window “Folder selection for installation”

- After completion, the installer will display the sequence of steps that have to be taken. The steps are as follows: turn off your PC, plug the smart card reader into the PC, and turn the PC on again. You have to click on the **“Turn the computer off”** button rather than turning you PC off in the usual way.



Figure 14: Dialogue window “PC turn off”

- Once the PC has been turned on again the installer will start running automatically and complete the installation correctly. The installer will display the current status of the installation.
- Now only click on “**End**”, which will close the installer. The card reader and the CryptoPlus suite should be installed and ready for use.

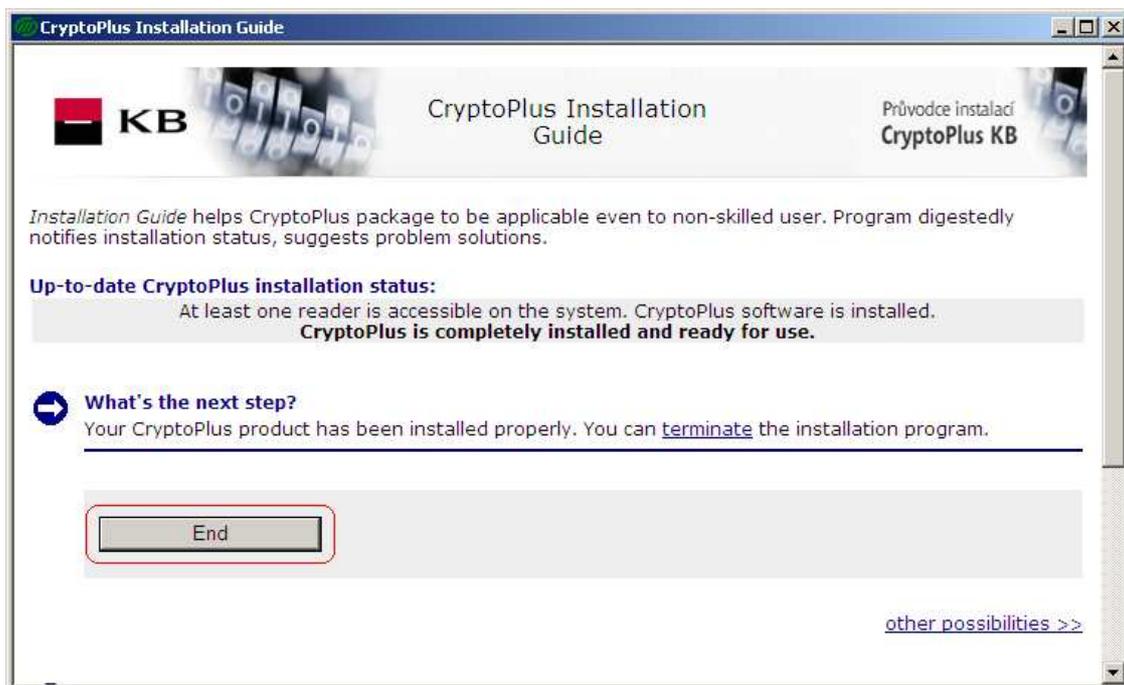


Figure 15: Dialogue window “CryptoPlus installation completed”

### 3.4 Extended functions of Custom installation

The main advantage of Custom installation is that it offers alternative options for CryptoPlus installation. The menu will appear after selecting “other possibilities >>”.



Figure 16: The installer’s dialogue window in the case CryptoPlus is installed already

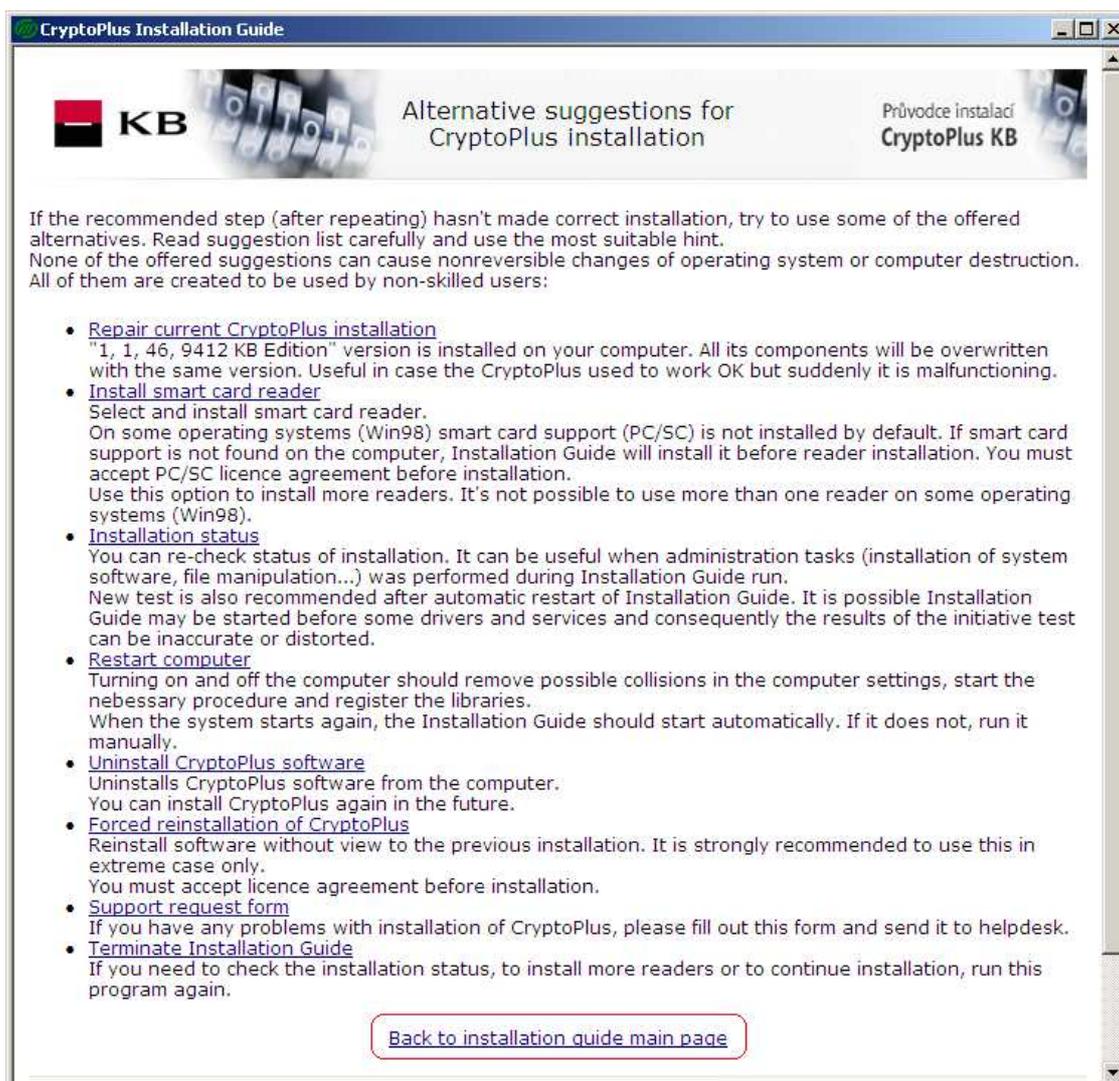


Figure 17: Dialogue window "Alternative options for CryptoPlus installation"

- **Repair current CryptoPlus instalation** - This option is displayed when the installer detects an installed version. The installer will repair such version, and/or add the missing parts of the current installation.
- **Install smart card reader** - The option enables installing a card reader from the list of supported readers. You can use this option when extending the system to include another card reader or to repair a faulty card reader installation.
- **Installation status** - A function helping to find quickly out whether the CryptoPlus installation has been complete and functional. In particular notebook users will appreciate it, because they often plug in and unplug external peripherals. The function identifies the current status of CryptoPlus installation.
- **Restart computer** - After the PC has been restarted all the modifications carried out during the installation will be activated. The CryptoPlus product cannot be used correctly without the restart. When selected, the installer will be launched again automatically and the current status of the installation will be displayed.
- **Uninstall CryptoPlus software** - Clicking on "Uninstall the CryptoPlus software" will cause CryptoPlus to be uninstalled without any further warning. CryptoPlus has to be uninstalled in the event of CryptoPlus re-installation or of some other fault in the installation, and when the product is abolished.

- **Forced reinstallation of CryptoPlus** - The option is always present when any CryptoPlus version is installed. It serves for reinstallation when attempts at repairs have failed. The option will carry out a complete reinstallation regardless of any previous installation. It does not address problems with the card reader's communication.
- **Support Request Form** – This option runs the default internet browser with a support request form
- **Terminate Installation Guide** – The option will terminate the installation.
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## 4 Smart Card Reader Connection Description

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- **Principle 1**

Plug the card reader into your PC only after the first stage of CryptoPlus installation, and only upon the installer's prompt.

- **Principle 2**

Before plugging the card reader into the PC, turn the PC off! After the PC has been turned on again the CryptoPlus installer will start running automatically, and the installation will be completed (second stage)

- **Principle 3**

If you plug the card reader into the PC prior to launching CryptoPlus installation and the Windows operating system's Plug & Play function reports the connection of an unknown device and offers the installation of an internal driver, terminate the installation offer (the Cancel function). You do not have to unplug the card reader in such a case. Just continue the installation by inserting the installation CD or launching the installer downloaded from the website.

### Connecting a USB card reader:

1. Plug the card reader into an available USB port on your PC.
2. Since the card reader is supplied with power from the USB port the connection is complete and you can start to use the card reader.

### USB Reader

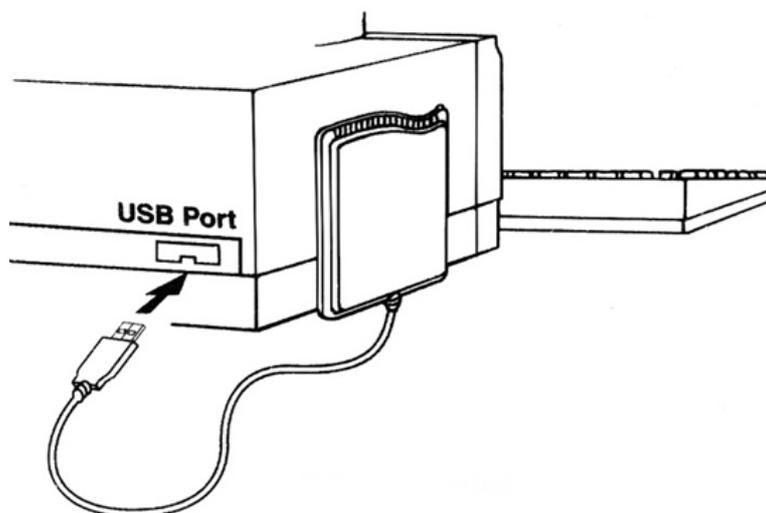


Figure 18: Scheme of USB card reader connection

**Important notes:**

USB ports' nature and features make it possible, once CryptoPlus has been installed, to plug the card reader into a running PC even without turning the PC off in case of need.

## 5 CryptoPlus Update

### 5.1 Identifying the CryptoPlus version

The following steps will help you to identify the version of the CryptoPlus software suite installed:

- Launch the CryptoPlus installation program.
- The installation program will show you the installed version of the CryptoPlus suite, see: "The .... version was found at your PC".

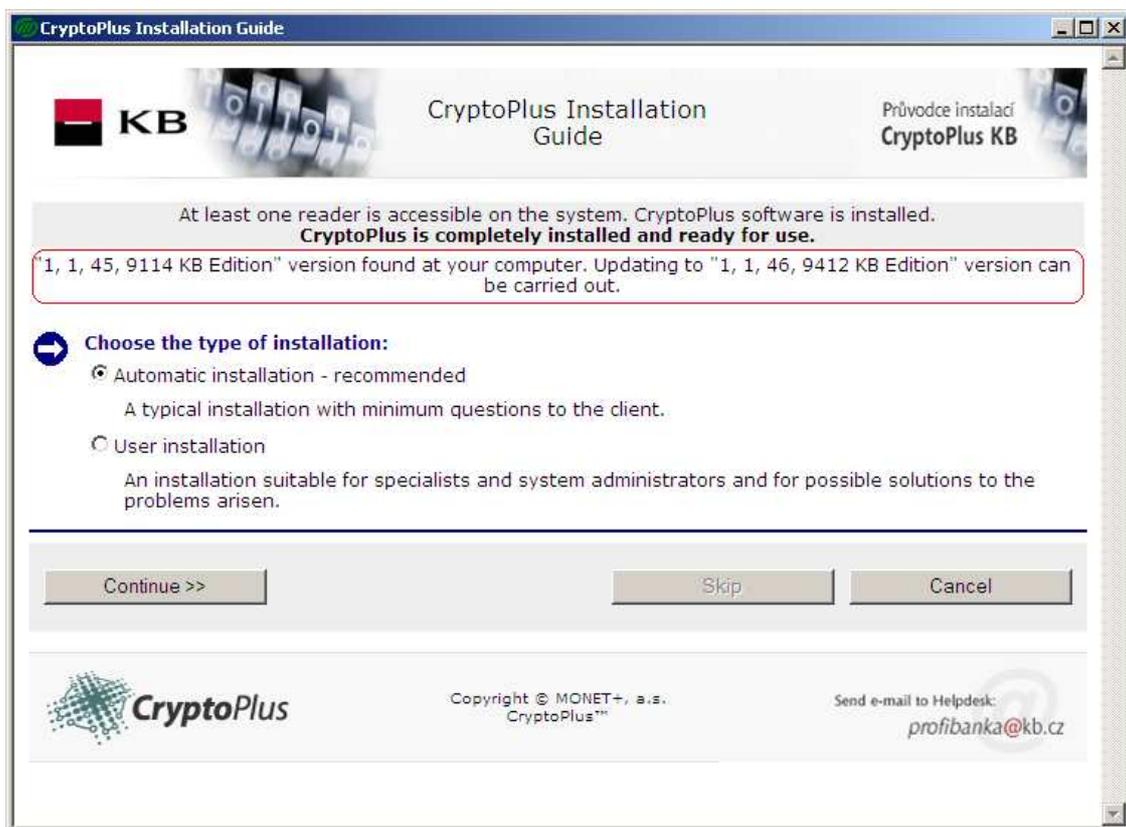


Figure 19: Dialogue window "Identifying the CryptoPlus version"

## 5.2 CryptoPlus update

If you want to update your CryptoPlus product take the following steps:

- Launch the file containing a new, updated CryptoPlus installation from the opening page of the installer (see point 3.1). You will see a window with the following information (the version numbers in the picture need not match your own situation).
- The installer will display the version of the CryptoPlus product installed and inform you about the option to update it to a more recent version.
- Select **“User installation”** and confirm the selection by clicking on **“Continue >>”**.

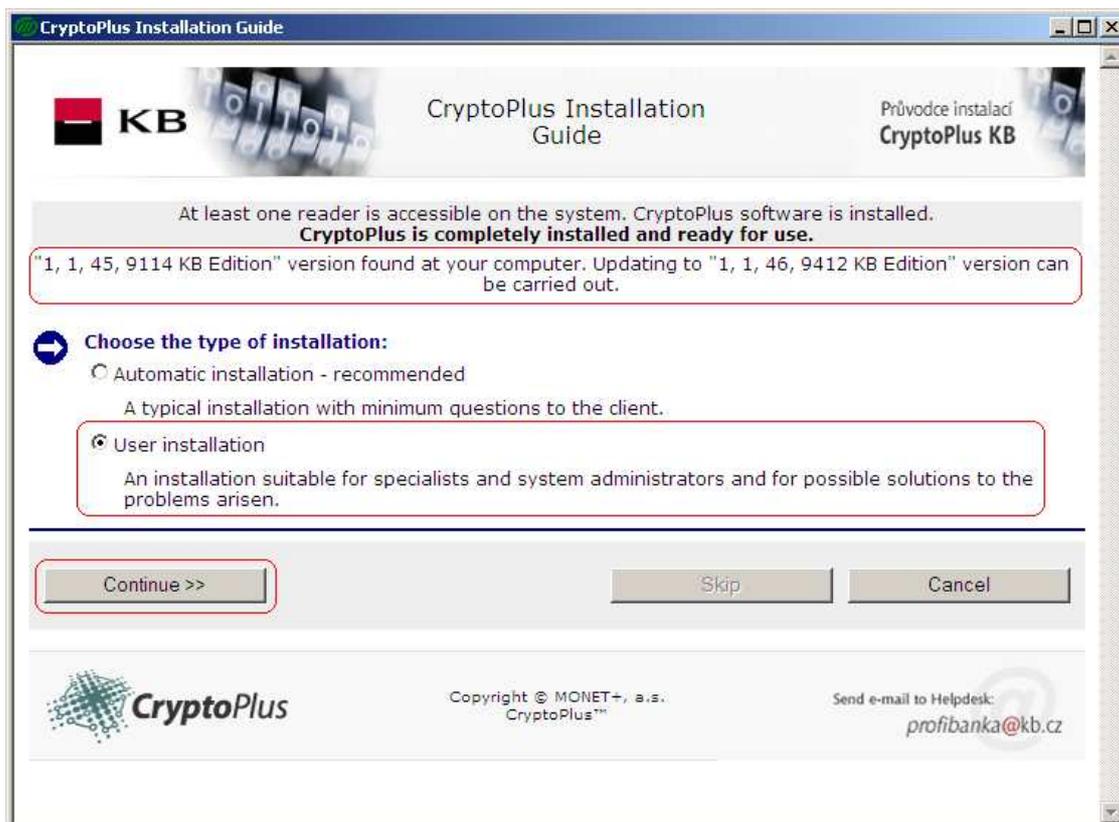


Figure 20: Dialogue window “CryptoPlus update”

- After clicking on “**Update current CryptoPlus installation**” you will see a dialogue window for selecting the target directory. It is enough to only confirm it by clicking on “Install”.



Figure 21: Dialogue window “Updating the CryptoPlus product”

- Once the installation has been completed the installer will request you to restart your PC. This has to be done by clicking on “Restart”.
- Once the system is restarted the installer is launched automatically; it will complete the installation correctly. Continue by clicking on “Finished”.
- Now you have a current version of CryptoPlus software installed in your PC.

## 6 Brief Summary of the Installation Process

For the installation process to be correct and for the CryptoPlus product to work without any problems the right sequence of the installation steps should be followed. We recommend that you read the information in the Current Status of Installation window very carefully and follow the displayed recommendations when you install the product.

1. We recommend that you terminate the applications running on your PC.
2. Do not plug the card reader into your PC for the time being! Launch the CryptoPlus installation program.
3. Select the language for communication during the installation process.
4. Select automatic installation and confirm the selection by clicking on “Continue >>”.
5. Click on “**Install the reader >>**”.
6. Confirm your agreement with the licence terms and conditions by clicking on “**I agree >>**”.

7. Click on “**Install CryptoPlus >>**”.
8. Now the installer will request you to turn your PC off. The installer will also request you to connect the card reader to your PC.
9. The installer will start to run again after the restart, and display: “Current status of CryptoPlus installation”. If the installation program fails to run after the restart, launch it manually.
10. Terminate the installation program when the installation is completed correctly.

**NOTE**

If you plug in the card reader into your PC before starting the installation process the reader's Plug & Play function will cause the Windows operating system to detect the card reader immediately and try to find a default driver for it. Although some of the more recent Windows versions have already built-in smart card reader drivers, these drivers may not behave quite correctly for the purposes of CryptoPlus. Therefore click on “Cancel” in response to Windows' message that new hardware was detected and whether a driver for this new hardware should be found. You can then begin with installation as described above.

## 7 Trouble Shooting

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Always make sure that you have the most current CryptoPlus version installed in your PC. You will find the number of the current CryptoPlus version and the number of your installation by launching the current CryptoPlus installation program from <http://www.mojebanka.cz/> (see section 5, CryptoPlus Update). If you have a lower version of the Cryptoplus product, update it.

If the updating of the CryptoPlus product fails to eliminate the problems you may have with the card reader uninstall the version you have and install the most recent CryptoPlus version, keeping the procedure described in section 3, CryptoPlus Installation.

**Should your problems with the CryptoPlus application, the smart card reader, or the můjklíč smart card persist call the toll support line at +420 955 551 556.**