Purpose of Application: CRYPTO-BOX® Driver Installation at end-user sites
Version: CBUSetup.exe Version 1.9.22.207 and higher
Last Update: 12 Aug 2024
Target Operating Systems: Windows 11/10/8/7
Target Processor Platforms: x86/amd64/arm64
Applicable for Product: CRYPTO-BOX® SC / XS / Versa

Convenient Distribution of Protected Applications

After selecting the protection and licensing strategy that best suits your needs; protecting your software and formatting the CRYPTO-BOX hardware, it's now time to send everything to the end user. At this point it is important to include the CRYPTO-BOX drivers with your product. This document describes how to include the CRYPTO-BOX drivers smoothly into your software package.

Quick and efficient hardware based software protection!

Software and information piracy costs billions of dollars in annual losses to software vendors, distributors and content providers worldwide. The internets role in software and data distribution is growing rapidly and increases the importance of the situation dramatically. Hardware based protection can be used for creating robust and reliable secure demo versions of applications in a straightforward manner. While benefiting from strong and effective application protection provided by a hardware based approach you can create flexible and secure demo versions with ease. The CRYPTO-BOX makes it happen!

CRYPTO-BOX®

- Quick and easy protection of Windows applications with AutoCrypt

- Individual implementations with API for all common programming languages and platforms (Windows, Linux, macOS)

- Unique and stable metal case, optional with customer-specific color and labeling

- Network and remote update capability

- EAL 4+ certified Smart Card chip with AES/Rijndael encryption implemented on-chip.

- RSA 2048 bit support on-chip (CRYPTO-BOX SC) or on driver level (CRYPTO-BOX XS).

- The CRYPTO-BOX® is designed in Germany and manufactured in the European Union (TAA compliant).

- Customer specific solutions, such as implementation of specific functions or algorithms in firmware on request.

- Also available with USB-C plug and in different colors and customized product labeling.

Order your CRYPTO-BOX Evaluation Kit now — or contact us for any questions:

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1. CRYPTO-BOX® driver installation with CBUSetup

The CRYPTO-BOX requires devices drivers to work under Windows operating systems. MARX provides a special program called CBUSetup for this task.

> Under Linux and macOS, there are no CRYPTO-BOX drivers required. Please refer to the instructions in the readme files of the corresponding "Smarx OS 4 Linux" and "Smarx OS 4 Mac" packages available at www.marx.com → Support → Downloads for further details on configuring CRYPTO-BOX access under these systems.

CBUSetup performs automatic installation of CRYPTO-BOX-related components, depending on the operating system. The installer is a self-extracting tool containing all files needed to support the CRYPTO-BOX SC, XS or Versa (including USB-C variants), thus it is self-sufficient. You can use the "Quiet" installation mode. This feature allows you to integrate the setup into other proprietary installation scripts or batch files (see chapter *2* for more details).

> We recommend to install the drivers using CBUSetup before plugging the CRYPTO-BOX into the USB port of the computer for the first time. If the CRYPTO-BOX was already plugged into the USB port and is not detected after running CBUSetup, just re-insert the CRYPTO-BOX to the USB port.

CBUSetup.exe performs the following tasks:

- Detects the installed Windows version and installs the corresponding CRYPTO-BOX drivers (32 or 64 bit).
- Installs and registers SMRXCOM COM objects (32 or 64 bit) needed by protected applications using COM interface to interact with the CRYPTO-BOX.
- Copies legacy MPI library (mpiwin32.dll) to Windows\system32 folder, required by protected applications still using the legacy MPI system.

The following operating systems are supported by CBUSetup:
- Windows 11/10 (Intel 64/32bit)
- Windows 11/10 ARM 64Bit (Build 21277 or higher)
- Windows Server 2012 or higher
- Legacy systems:
  - Windows 8.1/8/7/Vista and Windows XP (Intel 64/32bit)
  - Windows Server 2008R2/2008/2003 (was not tested with latest CBUSetup)

> Check our website www.marx.com → Support → Downloads → Driver and Diagnostic Tools to get the latest version of CBUSetup.

2. Syntax and Exit Codes

CBUSetup supports command line switches, allowing you to fully control CBUSetup from within other applications. The following command line options are supported:

CBUSetup.exe /?	Get a help screen
CBUSetup.exe /Q /CRYPTOKEN	Run setup in quiet mode and install CRYPTO-BOX driver
CBUSetup.exe /Q /U /CRYPTOKEN	Perform "quiet" uninstall of CRYPTO-BOX driver
CBUSetup.exe /Q /CRYPTOKEN /DRIVERONLY	Install the driver without any additional files (the SMRXCOM ActiveX COM object will not be installed)

As already mentioned, you can run the setup in "quiet" or in normal mode. The "quiet" setup is useful when you wish to redistribute the setup and include it in your proprietary installations. By analyzing the return value of the setup, the proprietary installation can find out if CBUSetup.exe was executed successfully.

The following is a list of CBUSetup exit codes:

Exit Code	Description
0	No errors occurred
-1	The installer could not detect your operating system
-2	User aborted installation
-3	Wrong version of the operating system
-4	Setup internal error - please, contact your distributor
-5	User has requested the installer to run in the "quiet" mode but the device was specified incorrectly. Run the installer with a help switch (/?) to see the command line syntax.
-6	User does not have enough rights to install the driver. Contact your System Administrator
-7	The installer could not perform registration of device driver(s). Please run the installer again, and if this error code still appears, contact your distributor.

3. Installation script sample for InstallShield

The following is a sample of a CRYPTO-BOX installation script for InstallShield (without exit code check):

```
function InstDrivers()
      string szPath,szTargetFile;
begin
      szPath=TARGETDIR^"\\Drivers\\CBUSetup\\CBUSetup.exe";
      szTargetFile=WINSYSDIR^"\\CBUSetup.exe";
      CopyFile (szPath, szTargetFile);
      LongPathToQuote(szTargetFile,TRUE);
      LaunchAppAndWait (szTargetFile, "/Q /CRYPTOKEN", WAIT);
end;

function UnInstDrivers()
      string szTargetFile
begin
      szTargetFile=WINSYSDIR^"\\CBUSetup.exe";
      LongPathToQuote(szTargetFile,TRUE);
      LaunchAppAndWait (szTargetFile, "/Q /U /CRYPTOKEN", WAIT);
      DeleteFile(szTargetFile);
end;
```

4. CBUSetup as Windows Installer Merge Module

CBUSetup is available as Windows Installer Merge Module (CBUSetup.msm), which can be incorporated into existing Windows Installer or InstallShield setup for your application. This component performs automatic installation of CRYPTO-BOX driver and related components, depending on the operating system found (Intel 64/32 bit or ARM64 Windows systems).

> The latest version of CBUSetup.msm can be downloaded from our website:
> marx.com → Support → Downloads → Driver and Diagnostic Tools
> If you want to use another approach for CRYPTO-BOX driver installation and you need the driver as single files (.inf and .sys), you can download them from our website as well.

5. CRYPTO-BOX® drivers as separate files

If you want to use another approach for CRYPTO-BOX driver installation and you need the driver as single files (.inf and .sys), you can download them from our website as well:
marx.com → Support → Downloads → Driver and Diagnostic Tools

6. CRYPTO-BOX Network Server Installation

Smarx OS Networking allows protected applications to access a CRYPTO-BOX attached to the USB port of any computer in a network. A special program called **Smarx OS Network Server** (or CBIOS Network Server), manages remote connections to this CRYPTO-BOX. More details on Network License Management with the CRYPTO-BOX can be found in our "Network Licensing" White Paper.

> If your protected application does not support network licensing mode (CRYPTO-BOX will be accessed directly on the USB port of local computer only), installation of the network server is not required.

The CRYPTO-BOX Network Server is available for different platforms:
- Windows (Intel 64/32 bit or ARM64 versions, Windows 7 or higher)
- Linux (x86/amd64/armhf/arm64)
- macOS

> Please refer to the "Network Licensing" White Paper for details on installing and configuring the Network Server on your target system.