

Subject: Hardware Profile (TRX File) for configuring the CRYPTO-BOX

Version: Smarx OS PPK 5.90 and higher

Last Update: 15 Nov 2016

Target Operating Systems: Windows, Linux, OS X

Target Processor Platforms: Intel x86

Supported Programming Tools: none required

Applicable for Product: CRYPTO-BOX® SC / XS / Versa

Usage of the CRYPTO-BOX® Hardware Profile (TRX-File)

The hardware profile allows an easy and fast configuration of the CRYPTO-BOX with customer specific information. All access codes for the CRYPTO-BOX are stored in this hardware profile. Any time consuming manual entries of access passwords (user-password and administrator-password) with the tools of the Smarx OS Protection Kit are inapplicable. Furthermore, the hardware profile defines which optional functions of the Smarx OS Protection Kit are available, such as Remote Update (RUMS), Document Protection or Media Protection and Pre-Boot Authentication.



CRYPTO-BOX®

- Quick and easy protection of Windows and Linux applications with AutoCrypt
- Individual implementations with API for all common programming languages, incl. .NET
- The CRYPTO-BOX system can be customized according to individual requirements
- Multi-platform support: Windows, Linux, macOS, iOS and Android
- Unique and stable metal case, optional with customer-specific color and labeling
- Internal secure memory of 4-64 kB
- Network and remote update capability
- AES/Rijndael encryption on-chip
- RSA support on-chip (CRYPTO-BOX SC) or on driver level (CRYPTO-BOX XS/Versa)



White Paper
TRX File

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1. Import of the Hardware Profile into the Smarx® Application Framework

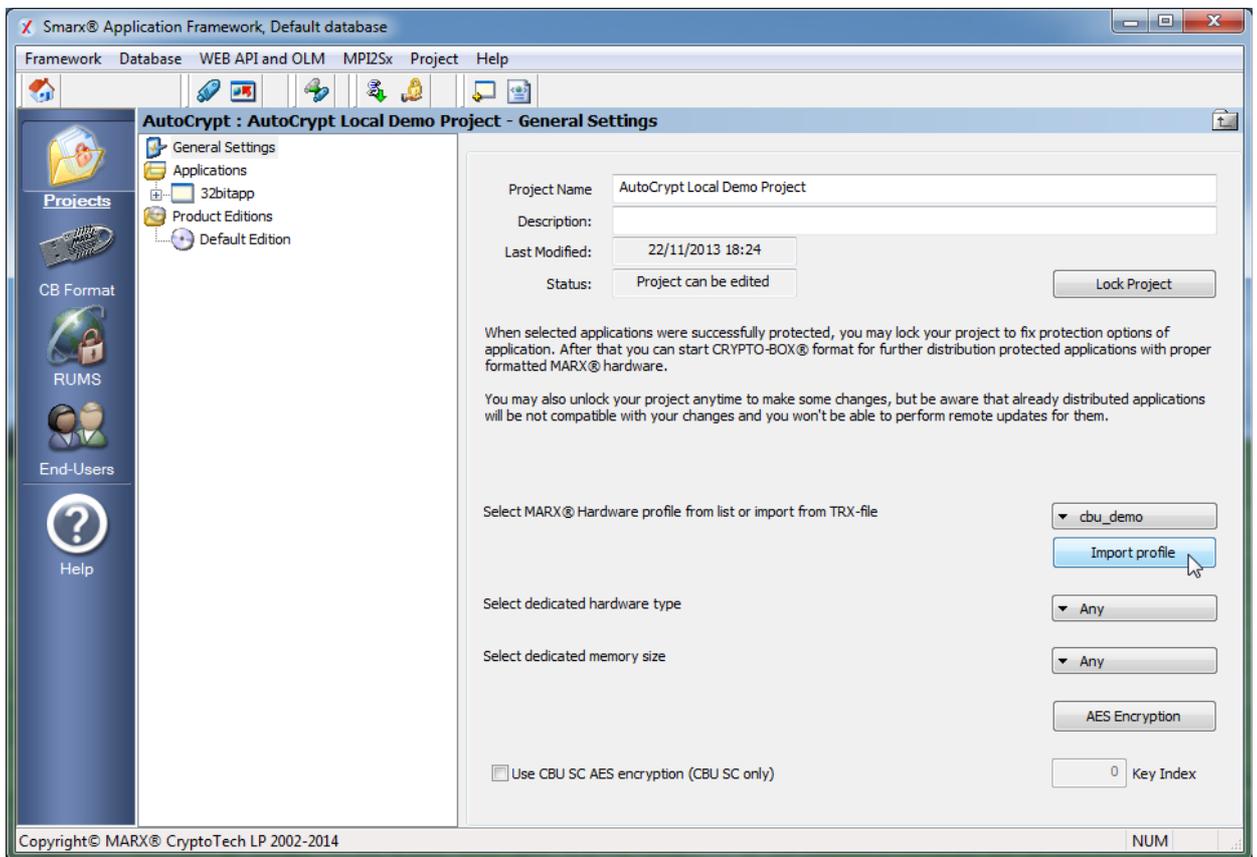


The hardware profile contains the access codes for your CRYPTO-BOX. Never hand it out to your end-users!

The Smarx Application Framework (SxAF) is the core management system to generate projects for automatic protection (AutoCrypt), implementation with API, as well as document protection. For more details on SxAF and the different project types please refer to the [Smarx Compendium](#), chapter 4.

How to import the hardware profile?

- Start SxAF and generate a new project, or open an existing project



- Choose "General Settings" in the navigation tree (middle window).
- Click "Import profile" in the right window to load the hardware profile.
- Insert the CDROM with the label "Confidential", which was included in your CRYPTO-BOX delivery. Choose the TRX file from the CDROM and click "Open"



A matching CRYPTO-BOX must be connected to import the hardware profile!

- After successfully importing the profile it will appear in the select list, and can be used with existing and new SxAF projects.



Some options of the SxAF (such as RUMS, Document Protection and Pre-Boot Authentication) are only available with a valid license. These licenses can be ordered from MARX or your distributor. If there is no valid license, an error message will be displayed.

2. Using the Hardware Profile with AutoCrypt Wizard

AutoCrypt Wizard is the easiest way to protect your .EXE or DLL files. The Wizard guides you through each step of protection, licensing and CRYPTO-BOX configuration for quick results.

Please refer to the [AutoCrypt Application Notes](#), chapter 2 for details on how to use the hardware profile with AutoCrypt Wizard.

3. Usage of the Hardware Profile with Command Line Tools

Additional to the Smarx Application Framework (SxAF), the Protection Kit also contains command line tools. They offer more flexibility than the GUI-based SxAF and AutoCrypt Wizard, and can be controlled from external applications or batch-files. This allows the integration into almost any distribution system in combination with time saving automation.

The command line tools can be found in the Smarx Protection Kit:

[Smarx OS PPK Installation Folder]\Tools

or push the button "Drivers & Tools" in the Control Center of the Protection Kit.

The following command line tools are available:

- AC_Tool.exe – Automatic protection of applications (analog to AutoCrypt in the SxAF)
- SmrxProg.exe – Configuration of the CRYPTO-BOX (analog to CB Format in the SxAF)
- RU_Tool.exe – Remote Update Tool (analog to RUMS in the SxAF)
- Doc_Tool.exe – Automatic document protection (analog to Document Protection in the SxAF)
- EFI_Tool.exe and EFI_Installer.exe – Secure EFI Loader (Pre-Boot Authentication with the CRYPTO-BOX)

More details on using the hardware profile with command line tools can be found in the readme-file (in the sub-folder of the corresponding tool) and in the [Smarx Compendium](#), chapter 7.



Some tools (such as RU_Tool.exe, Doc_Tool.exe or the Secure EFI Loader) require a valid license to work with your CRYPTO-BOX. These licenses can be ordered from MARX or your distributor. If there is no valid license, an error message will be displayed.

CRYPTO-BOX® Data Sheet

	CRYPTO-BOX SC (CBU SC)	CRYPTO-BOX XS/Versa (CBU XS/Versa)
		
Controller chip	RISC Smart Card Processor with USB Interface	RISC Smart Card Processor with USB Interface
Chip certification	EAL4+	EAL4+
Supported operating systems	Windows, Linux, Mac OS X, iOS, Android	Windows, Linux, Mac OS X, iOS, Android
In hardware implemented algorithms	AES 128 Bit, RSA (up to 2048 Bit key length), others (for example: ECC) on request	AES 128 Bit in hardware, RSA up to 2048 Bit key length on driver level
Memory size (complete)	72KByte, ca. 32KByte free	4, 32 or 64 KByte
Internal memory read/write performance	ca. 80kByte/s	ca. 12kByte/s
Password (PIN/PUK)	up to 16 Byte length	
Case & LED	Designer metal housing, cast zinc, with LED display of operating status, eye for key ring/lanyard	
Connector	USB Type A	
Memory programming	minimum 100,000 write cycles	
Data retention time	minimum 10 years	
Conformity & Certifications	FCC, CE, RoHS, WEEE, USB logo	
Dimensions	14 x 7 x 32,5 mm / 0.55" x 0.28" 1.28"	14 x 7 x 32,5 mm / 0.55" x 0.28" 1.28"
Weight	7,5g	7,5g
Temperature	-10°C to +70°C / 14°F to 158°F	
Humidity	0% to 95% relative humidity	

CRYPTO-BOX Certifications



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Evaluation Kit

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