

KOBRA VS storage devices

German VS-NfD / NATO RESTRICTED / EU RESTRICTED



Kobra
Infosec

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Approved by
German Federal Office up to
EU RESTRICTED /
NATO RESTRICTED
and German VS-NfD



SecurITy

Trust Seal
www.teletrust.de/itsmig

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in
Germany

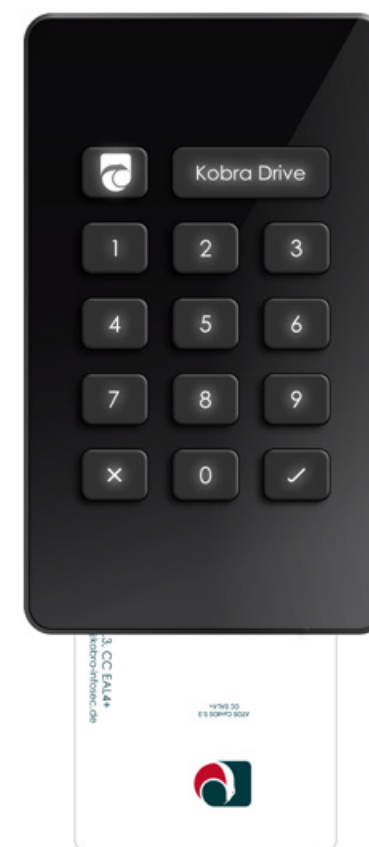
Kobra Infosec GmbH

- 2024 Foundation of **Kobra Infosec GmbH** with headquarters in Teutschenthal, Germany
- Focus on developing and marketing solutions for the protection of classified content in accordance with German VS-NfD, NATO-Restricted, EU-Restricted and higher
- Development and production of external encrypted hard drives to protect business and personal data

KOBRA Stick VS VS-NfD approved (NATO / EU)



KOBRA Drive VS VS-NfD approved (NATO / EU)



IT Security Made in Germany (TeleTrustT)

Trustmark „IT Security made in Germany“ confirms that:

- The company headquarters is located in Germany
- The company offers trusted IT security solutions
- The products do not contain any hidden entrances
- IT security research and development of the company takes place in Germany
- The company meets the requirements of German data protection law



KOBRA VS storage devices: Security mechanisms

Encryption:

256-bit AES full-disk
hardware encryption in
XTS mode using two 256-bit
crypto keys

Access control:

Two-factor authentication
via smart card and 4 to 8- di-
git PIN according to the prin-
ciple „having and
knowing“



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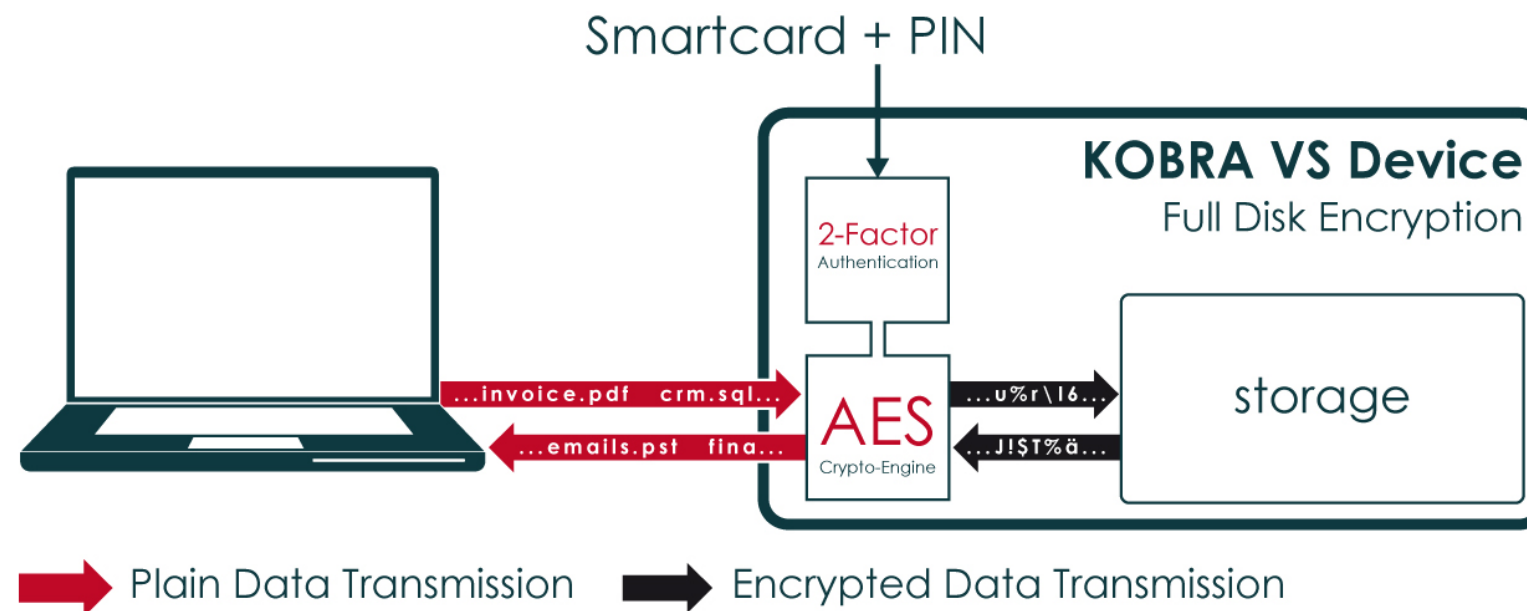
Management of the encryption key:

- Creation, modification and destruction by user
- HW-based random number generator
- External generation and calculation

User management by administrator:

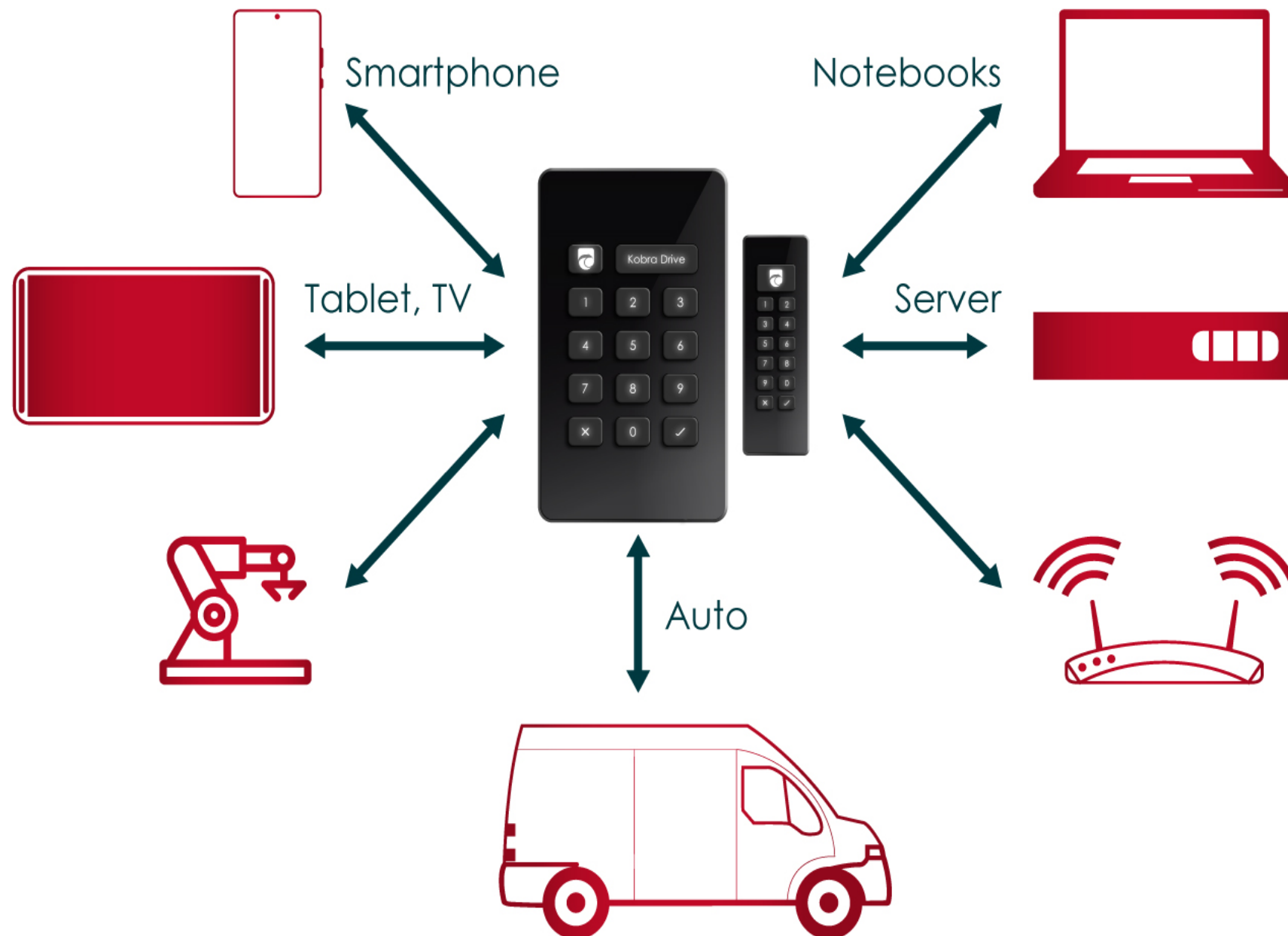
- Integrate and delete users
- Read / write authorisation
- Time-out, lock-out, number of failed attempts
- Locking the administrator functions

Mobiler Zugriff auf VS-NfD Daten



- Users cannot bypass encryption
- Simple and safe
- Transparent and operating system independent

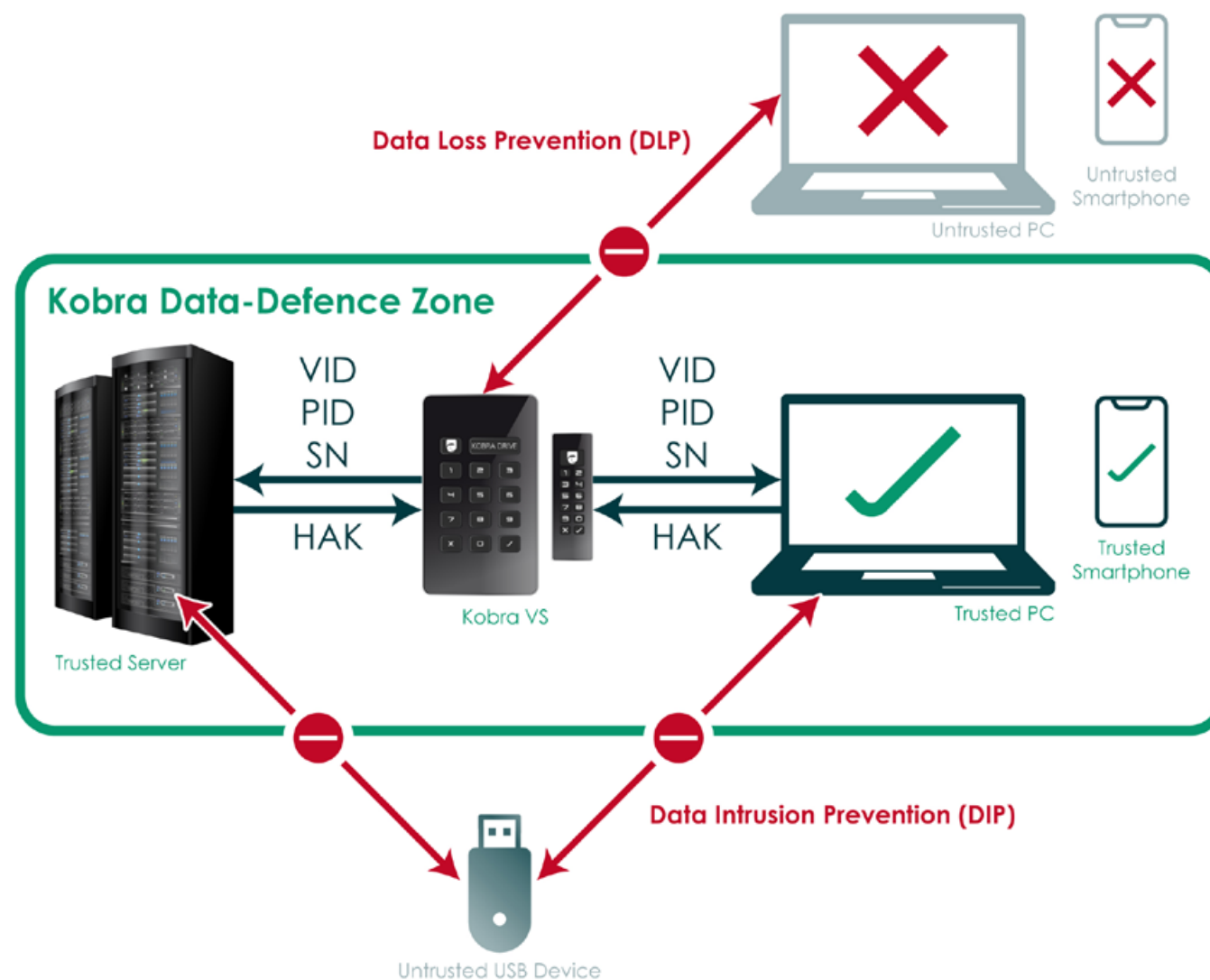
Operating system independent



Kobra Defence Zone

Client: Defence Company

- Includes host and device authentication
- Secure exchange of data between protected systems
- To achieve this, interface control software (e.g. Microsoft group policies, itWess, ivanti, DriveLock, DeviceLock etc.) on all host systems is used to authorise only Kobra VS data storage devices for connection and data exchange by means of the USB parameters VID and PID
- In addition, access to only predefined Kobra VS data storage devices can be restricted via the USB parameter serial number. These measures already protect the systems in the KDZ.



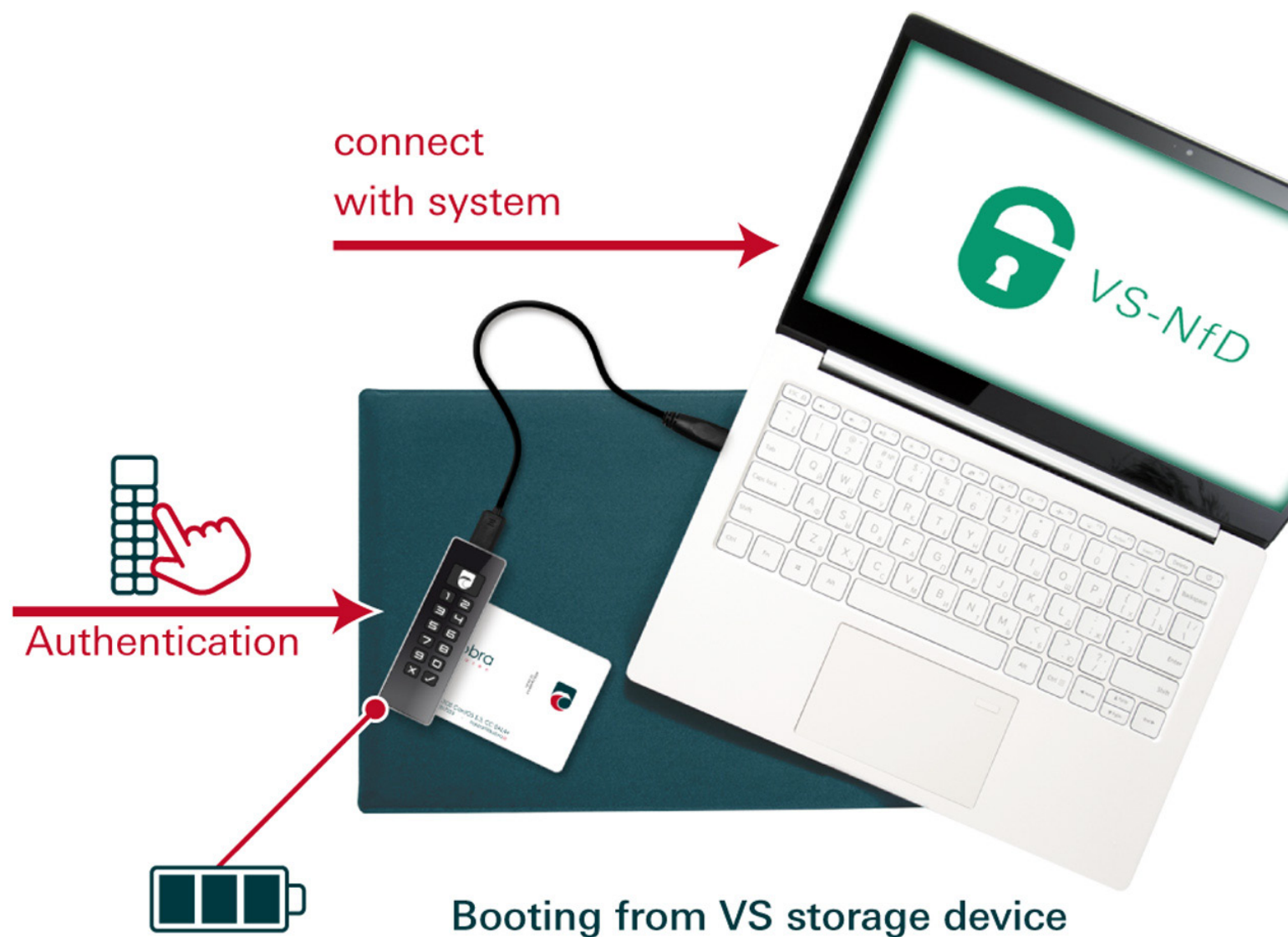
1. Interface control:
 VID: USB Vendor-ID
 PID: Produkt-ID
 SN: Serial number

2. Host authentication:
 HAK: Host authentication key

Secure Mobile Workspace

Client: German machine builder

- Integrated power supply enables pre-boot authentication
- Encrypted installation of operating systems on Kobra VS storage devices
- Flexible change of purpose from laptop/PC
- pSLC memory recommended to ensure longest possible lifetime
- When the storage device is disconnected from the PC, the data remains encrypted and is stored only on the Kobra VS storage device.



Geo-Redundant Backups

Client: German aviation company

- Protects data against unauthorised access
- Offers full control over sensitive and personal data
- Several Kobra VS storage devices can be operated with one smart-card
- Secure backups of e.g. project-based developer laptops with NATO Restricted and EU Restricted content
- Cost-effective secure geo-redundant storage of backups for disaster recovery



Server system migration

Client: Federal authority

Windows Server 2008

Windows Server 2022

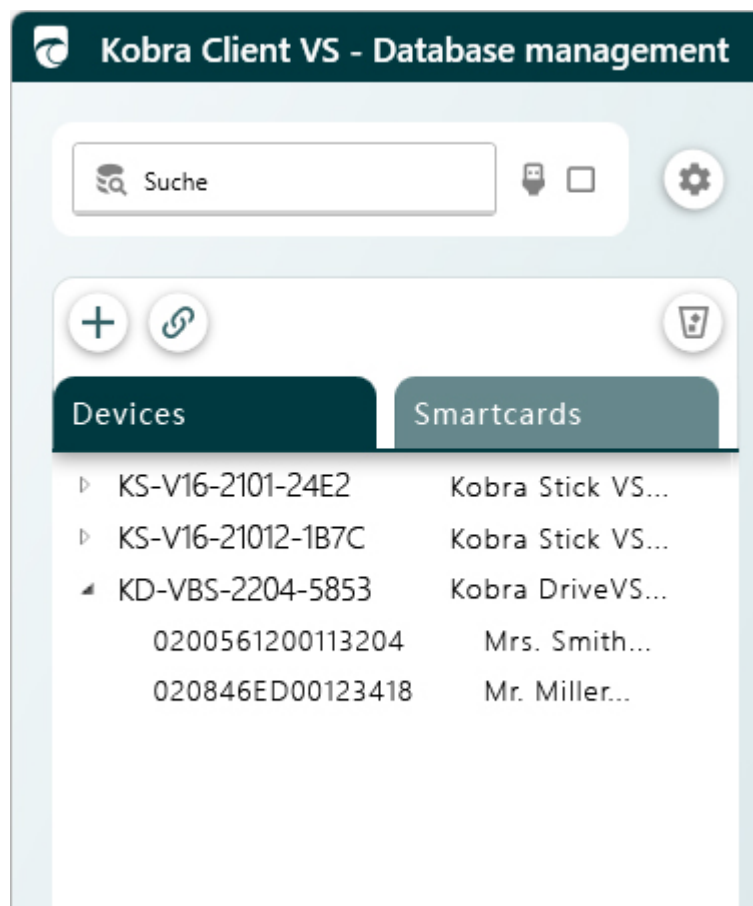


- Kobra Drive VS with up to 16TB storage on one storage device
- Protects data against unauthorised access
- Offers full control over sensitive and personal data
- Several Kobra VS storage devices can be operated with one smart card
- Secure transport of data to new location

Simplified data transport

Client: Federal authority

- Storage device is prepared by admin for access by sender and recipient.
- Cost-effective transport by parcel service provider instead of own staff



Serial number	Public key	Write permission	Status	State	Label	Open	Delete
0200561200113204	DDCA7A670C53CBFFF3305A5C4...	☐	✓	✓	Mrs. Smith - Berlin	↗	🗑
020846ED00123418	B5F440AB675845C705E13E022D...	☒	✓	✓	Mr. Miller - Munich	↗	🗑

Airgap bypass

Client: Federal authority



- Activated write protection against unwanted leakage of information
- Administrator can define two smartcards: Smartcard 1 for work in the NATO Restricted Area (read and write) and Smartcard 2 for VS-NfD Area (read only).

Serial number	Public key	Write permission	Status	State	Label	Open	Delete
0200561200114337	ACFCB593D10C57F0AE6251A98B...	☒	✓	✓	Nato-Restricted		
020056120011100D	9E9B5DB30CA47491719C58E35F...	☐	✓	✓	VS-NfD		

Use as data diode

Client: Federal authority



- Activated write protection against unwanted leakage of information from higher classified systems to lower classified systems.
- Administrator can define two smartcards: Smartcard 1 for work in the NATO Restricted and EU Restricted area (read and write) and Smartcard 2 for secret area (read only).

Serial number	Public key	Write permission	Status	State	Label	Open	Delete
0200561200114337	ACFCB593D10C57F0AE6251A98B...	☒	✓	✓	VS-NfD		
020056120011100D	9E9B5DB30CA47491719C58E35F...	☐	✓	✓	Secret		

Deposit of source code

Client: Software company

- Instead of depositing mountains of papers full of source code at the notary (which is not possible in many cases), it is stored on the Kobra VS storage device.
- The smartcard can be deposited at the notary under certain conditions
- The client can demand access to the smartcard
- Mountains of paper stacks no longer have to be exchanged or updated, but source code is updated on the Kobra VS storage device.
- This application option saves a lot of space, energy and is very sustainable as well as environmentally friendly



Log data from vehicles

Client: Vehicle manufacturer

- Log data from emergency vehicles (aircraft, helicopters, utility vehicles, ships) are stored on Kobra VS storage devices after use and transported for evaluation.



Secure Software Deployment

Client: Transportation company

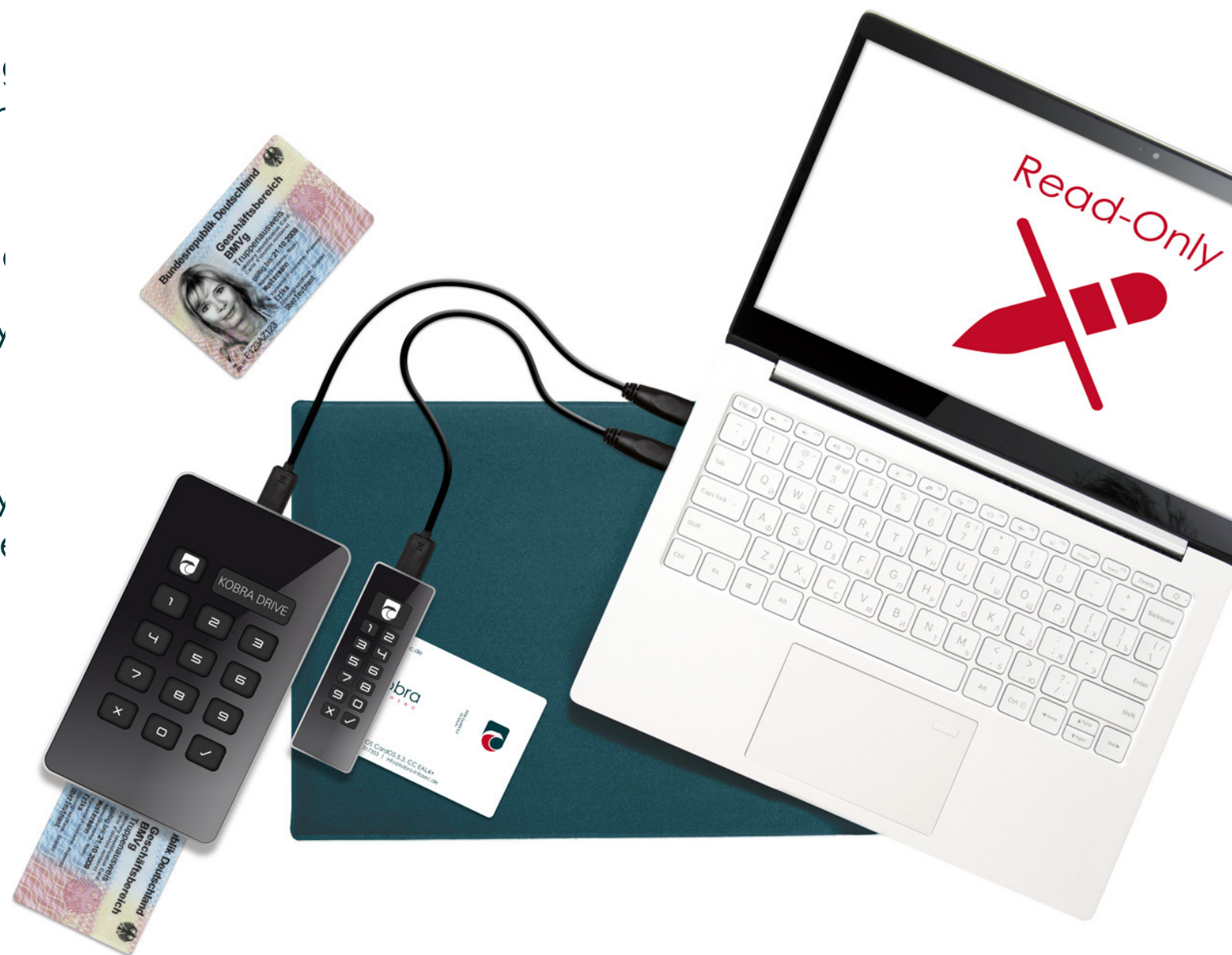
- Software is copied from the source system to the Kobra VS storage device and transported to the place of use/vehicle.
- The software/firmware is then transferred/installed/updated on the target system.
- Protection of the integrity and confidentiality of software systems and configurations during transport, especially in the case of larger physical distances.



Read Only Windows / OS

Client: Space & Defence

- Activated write protection against unwanted leakage of information from higher-rated systems to lower-rated systems
- Faster booting due to flash memory
- No modification of system data possible
- Processed information is not persistently stored on the Kobra VS storage device at any time
- Easy update of the software systems by exchanging the data carriers via simple postal dispatch



Use on smartphones as data storage

Kunde: State authority Police, Technology Partner



- Use on smartphones, tablets, and notebooks as VS-NfD data storage
- Authentication via smartcard and PIN, e.g., for VPN or cloud access

Two-factor authentication for:

- E-mail encryption
- VPN access
- Cloud access
- Windows or Linux login
- Digital signing of documents and files



KOBRA Client VS

Kobra Client VS

Device information

Product name

Kobra Stick VS

Storage Capacity

16 GB

Serial number

KS-V16-2101-24DF

Firmware version

1.3.3

Write protection

Formatting status

Database

Open

Device Label

Field service

Settings

Advanced settings

Presets

Write protection

Off On

Lockout

Off On

Admin-PIN

Off On

Quick Login

Off On

Power Bypass

Off On Extended

Lock On Eject

Off On

PIN Entry

Device only Dual

Simulate keypress

Disabled Enabled

Self Format

Off On

Timeout

0 + - Deaktiviert

Save

Discard

Add smartcard

Smartcard table

Changes

Save

Discard

Serial number	Public key	Write permission	Can delete DEK	Status	State	Label	Open	Delete
0200671400142912	9D1DAB0140BD9D5B628D...							
0200561200113443	E4253A8F8CE24192423609...							
0200561200112E55	D65A59608CECE6CA38DC9...							

Smartcard-Reader: No smartcard inserted

Thank you for your attention

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