

#### Technical Data Sheet

# cryptovision SCinterface

#### **Powerful and secure Smart Card Middleware**

SCinterface connects a smart card or token to virtually any PKI-enabled application. It is a user-friendly and convenient universal middleware supporting dozens of smart cards, virtual smart cards, security tokens in different form factors and all major desktop operating systems.

PIN management includes:

· PIN and SO PIN change

· unlocking user PINs

· offline PIN reset

• PIN cache mode

· PACE-PIN and -PUK

· Key & certificate management:

 Generation of key pairs and secret keys, secure storage of secret keys

· Convenient lifecycle management for PINs, keys and certifica-

· Import of keys and certificates (PKCS#12)

· Higher security level with smart cards or tokens

· Generation of certificate requests (PKCS#10)

 Registration of certificates in Microsoft Windows Certificate Store

· Initialization & rollout functions:

 Generation of smart card profiles (PKCS#15, PKCS#15 with PACE, PKCS#15 biometric profile, third party profiles)

Biometric Match-on-Card for Java Card with Neurotechnology™

· Other token management functions:

· Configuration of default smart card container for MS-CAPI

· Creation, storage and administration of data on smart card

· Support of multiple keys per card with separate PINs

#### Functions

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Features	<ul> <li>Support of numerous smart cards and profiles, a wide range of applications, multiple platforms</li> <li>Microsoft Virtual Smart Card (MS VSC) support, including initialization and personalization</li> <li>Citrix, VMware, Fat- and Thin Client (IGEL, eLUX) support</li> <li>Password Authenticated Connection Establishment (PACE) support</li> <li>Support of elDAS-compliant "Siegel" tokens</li> <li>Support of D-Trust siegel &amp; signature card</li> <li>Support of biometrics (biometric extention)</li> <li>Personal Identity Verification (PIV) support (PIV extention)</li> <li>Advanced signature profile support</li> <li>Elliptic Curve Cryptography (ECC) support</li> <li>Localization via language files</li> <li>Encrypted session PIN via Minidriver and PKCS#15-PACE profile</li> <li>Secure PIN pad support</li> <li>Secure messaging support</li> <li>Java Card GlobalPlatform support up to Version 2.2.2 with SCP03</li> <li>Support of ECC keys up to 521 Bit, platform dependent</li> <li>Support of RSA keys up to 4096 Bit, platform dependent</li> </ul>
Supplied modules	<ul> <li>PKCS#11 Module (v2.4)</li> <li>Full-featured CSP</li> <li>Microsoft certifiable Smart Card Minidriver for Crypto Next Generation Key Storage Providers (Specification v7.06)</li> <li>Microsoft certifiable read-only Minidriver</li> <li>Crypto Token Driver for macOS</li> <li>SCinterface Utility for card management functions typically needed by users</li> <li>SCinterface Manager for smart card initialization, personalization and management</li> <li>Register Tool for certificate registration in Windows Certificate Store</li> <li>Plug-ins for validity warning and root certificate registration</li> </ul>
Supported standards	<ul> <li>PKCS#10 for certificate requests</li> <li>PKCS#11</li> <li>PKCS#12 for key and certificate import</li> <li>PKCS#15</li> <li>ISO/IEC 7816</li> <li>Microsoft CryptoAPI, CNG</li> <li>macOS Crypto Token Driver</li> <li>PC/SC</li> <li>PACE (BSI TR-03110)</li> <li>ISO/IEC 19794-2</li> </ul>

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Supported smart cards and tokens	<ul> <li>AET: AET profile</li> <li>CardOS: M4.01A / V4.2 / V4.2B / V4.2C / V4.3 / V4.3B / V4.4 / V5.0 / V5.3 / V5.4 / V5.5 / V6.0</li> <li>AustriaCard JCOP: 21 V2.2 / 21 V2.31 / 31 V2.2 / 31 V2.3.1 / 31/72 V2.3.1 / 31 / 72 V2.3.1 contactless / 41 V2.2.1 / 41 V2.3.1 / 41 V2.4</li> <li>D-Trust: D-Trust Card 3.1 / 3.4 / 4.1 / 4.4 (siegel card) / 5.1 / 5.4</li> <li>E.ON: Card V1 / V2</li> <li>ePasslet-Suite 1.1/1.2 on JCOP V2.4.1R3 and on JCOP V2.4.1R3 with PACE profile</li> <li>ePasslet-Suite 2.0 on JCOP V2.4.2R3 with PACE profile</li> <li>ePasslet Suite 2.1 on JCOP V2.4.2R3 with PACE profile</li> <li>ePasslet Suite 3.0 on JCOP V3.0 and on G&amp;D Sm@rtCafé Expert 7.0 and on Infineon SLJS2 (Dolphin) with PACE profile</li> <li>ePasslet Suite 3.5 on JCOP V4.0 and on Infineon Secora ID X with PACE profile</li> <li>Gemalto: TOP IM GX4, IDClassic 340</li> <li>G&amp;D: Sm@rtCafé Expert 3.1 / 3.2 / 4.0 / 5.0 / 6.0 / 7.0 / 8.0</li> <li>G&amp;D: STARCOS 3.0 / 3.1 / 3.2 / 3.4 / 3.4 (Swiss Health Card eGK) / 3.4 (Swiss Health Card VKplus G2) / 3.5 / 3.52</li> <li>G&amp;D: StarSign CUT S Token (SCE 7.0)</li> <li>HID: Crescendo C700</li> <li>HID: Crescendo C700</li> <li>HID: iCLASS Px G8H</li> <li>Infineon: JCLX80 jTOP / SLJ52 (Dolphin/Trusted Logic), Secora</li> <li>Infineon: SECORA ID S/X v2.01, IFX Applet Collection eSign V1.3</li> <li>MaskTech MTCOS Pro 2.5 with PACE (BSI TR-03110), EC and RSA, including "profile protection" (ISO 7816/15) via PACE-CAN</li> <li>Microsoft: Virtual Smart Card</li> <li>NXP: JCOP V 2.1 / V2.2 / V2.2.1 IDptoken 200 / V2.3.1 / V2.4 / V2.4.1 / V2.4.2 R1+R2+R3 / V2.4.2 R3 SCP 03 / V3.0 / V4.0 / V4.5</li> <li>Siemens: CardOS M4.01a / V4.3B / W4.4</li> <li>SwissSign: suisselD (CardOS M4.3B / M4.4)</li> <li>TCOS: Signature Card 1.0 / 2.0</li> <li>TCOS 4.0</li> <li>TU Dortmund: UniCard (SECCOS)</li> <li>Volkswagen: PKI Card (CardOS M4.3B / 4.4)</li> </ul>
Add-ons	<ul> <li>SCinterface Cache: secure PIN caching</li> <li>PKCS#11 module for iOS</li> <li>SCinterface VSC: TPM-based and TPM-less virtual smart card extension</li> <li>SCinterface RSC: remote smart card with centralized backend</li> </ul>

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Extentions	<ul> <li>SCinterface biometric: match-on-card fingerprint authentication</li> <li>SCinterface PIV: supports FIPS201-2 PIV NIST standard</li> <li>SCInterface eID: for electronic identity documents</li> </ul>
Supported readers	All PCSC 2.0 compliant readers (macOS, Unix/Linux needs "pcsclite"), recommended:  Identiv CLOUD 2700 F (not for macOS)  Identiv CLOUD 4700 F  Cherry SmartTerminal ST-2000 (Class2)  REINER SCT cyberJack® wave  REINER SCT cyberJack® one  REINER SCT cyberJack® RFID standard  REINER SCT cyberJack® RFID komfort  Mobile Readers:  Identiv @MAXX ID-1  Identiv SCR3500  Identiv SCL3711
Supported readers with fingerprint sensors	<ul> <li>ACS AET52 / AET63 / AET65</li> <li>Omnikey 7121 Biometric</li> <li>Futronic FS 82</li> <li>All finger print readers supported by Neurotechnology</li> <li>All finger print readers supported by id3 Technologies</li> </ul>
Supported biometrics	Biometric Match-on-Card for Java Card with Neurotechnology Biometric Match-on-Card for Java Card with id3 Technologies
Cache configuration options	<ul> <li>via KeyUsage</li> <li>via time limit</li> <li>via process (white/black listing)</li> </ul> Options can be combined for highly selective configuration
Supported platforms	Microsoft:  · Windows 10, 11  · Windows Server 2016, 2019, 2022  Linux:  · RHEL 8, 9  · Ubuntu 24.04  · SLED/SLES 15  macOS:  · Ventura (13.7.2)  · Sonoma (14.7.2)  · Sequoia (15)

Supported applications	<ul> <li>Compatible with several Smart Card Management Sytems (e.g. Versasec, Intercede, IDnomic, OpenTrust CMS, Noreg, Nexus Prime)</li> <li>Smart card login to Linux, macOS, Microsoft Windows, Micro Focus eDirectory, IBM Notes</li> <li>Single Sign-on with NetIQ SecureLogin, ActivIdentity Secure Login, IBM Security Access Manager for Enterprise Single SignOn, and Control Sphere</li> <li>TLS authentication with smart card (Internet Explorer, Edge, Chrome, Firefox, Safari, etc.)</li> <li>Microsoft Terminal Services, Citrix, XenDesktop and XenApp</li> <li>SAP Secure Login Client</li> <li>Digital signature and encryption via smart card for e-mails (cryptovision's Green-Shield, Mozilla Thunderbird, Microsoft Outlook, IBM Notes, Secude Secure Mail)</li> <li>Kobil mIDentity</li> <li>Qualified signatures with SuisseID, SwissSigner, all D-TRUST signature and siegel cards</li> <li>VPN (Checkpoint, Windows, Cisco, NCP, OpenVPN)</li> </ul>
	<ul> <li>Support of PKIs (CAmelot, PKIntegrated, RSA, Keon® PKI, VeriSign® PKI, GlobalSign PKI, Microsoft® PKI, Nexus)</li> <li>Smart card login for disk encryption with Pre-Boot Authentica-</li> </ul>
	tion (Cryptware Secure Disk, CPSD, etc)
	<ul> <li>Microsoft Office, Libre Office, Apache OpenOffice, NeoOffice</li> </ul>
	· Adobe Acrobat, Adobe Reader
	<ul> <li>Encrypted and signed data according to S/MIME, PKCS#7, XML Encryption</li> </ul>
	XML Digital Signature, and other formats
System requirements	<ul><li>Supported platform</li><li>Supported card reader with installed driver</li></ul>
	Free USB or microSD slot for card reader
	Supported security token or MS VSC on TPM 2.0
	Additional application-specific requirements may occur



cv cryptovision GmbH Munscheidstr. 14 D 45886 Gelsenkirchen

1: +49 209 16724-50 F: +49 209 16724-61

