Entrust® Securing Digital Identities & Information

SECURITY ON

Entrust Smartcard & USB Authentication

Technical Specifications

Entrust IdentityGuard smartcard- and USB-based devices allow organizations to leverage strong certificate-based authentication of user identities before granting logical access to networks or physical access to facilities — all from a single authenticator.

The industry-leading Entrust FIPS-201-compliant card provides Elliptic Curve Suite B compliance, operating at up to two times the speed of competitors. This provides the cardholder with a long certificate lifetime and long-life card construction, avoiding costly card re-issuance.

Using the latest chip technology translates to saving minutes on card issuance and allows for authentication and sign operations on tablets to be well under a second — providing a quick tap-and-sign experience.

By partnering with leading chip vendors, Entrust smartcards have best-in-class counter measures to fight Differential Power Analysis, Simple Power Analysis, Fault Injection and future laser-light attacks. If successful, these attacks could steal identities and private information.

The FIPS-140 and FIPS-201 certifications provide assurance to the cardholder that the card is secure, resistant to attacks and will interoperate with any other FIPS-201-compliant product.

Smartcards		
Model	**SC100 Series Smartcards**	**SC200 Series Smartcards**
Cryptographic Performance *Entrust real-world benchmarks include the full round-trip from computer to card and back.*		
RSA-1024, 2048		
Key Generation	< 3 seconds < 65 seconds	< 7 seconds < 50 seconds
Digital Signatures	0.126 seconds 0.47 seconds	0.15 seconds 0.619 seconds
Decryption	0.116 seconds 0.476 seconds	0.142 seconds 0.63 seconds
Elliptic Curve Cryptography (ECC)		
Digital Signature/ Verification	P256 sign — 0.117 seconds P256 verify — 0.133 seconds *(FIPS 201 Only)*	P256 sign — 0.119 seconds P256 verify — 0.138 seconds *(FIPS 201 Only)*
AES 256		
Decryption	0.025 seconds	0.027 seconds

Smartcards		
Model	**SC100 Series Smartcards**	**SC200 Series Smartcards**
Triple DES		
Decryption	0.024 seconds	0.020 seconds
Physical Access Options		
Mifare Classic	Available on Request	Available on Request
Mifare Desfire	No	Available on Request
125 kHz Proximity Option	Available on Request	Available on Request
PIV Compliance		
PIV-C (CIV)	Yes	Yes
PIV, PIV-I	No	Yes
EEPROM Memory		
Capacity	80 Kb	80 Kb
Read Cycles	Unlimited	Unlimited
Write/Erase Cycles	500,000	500,000
Data Retention Time	25 Years	25 Years
Hardware System		
Co-Processors	DES, AES, RSA, ECC	DES, AES, RSA, ECC
Connectivity		
Contact (ISO 7816)	SC100C	SC200C
Contactless (ISO 14443)	SC100CL	SC200CL
Dual Interface	SC100D	SC200D
Certification & Approvals		
FIPS 140-2 Level 2	Chip Only	Full-Device Certification
Common Criteria	EAL5+ (Chip & OS)	EAL5+ (Chip & OS)
EMVCo	Yes (Chip & OS)	Yes (Chip & OS)
RoHS	Yes	Yes
China RoHS	Yes	Yes
NIST NPIVP *(FIPS 201 Compliant)*	No	Yes (SC200D)
Customization		
Card Printed with Organization Logo	Available on Request	Available on Request

Smartcards		
Model	**SC100 Series Smartcards**	**SC200 Series Smartcards**
Cryptography		
Asymmetric Key		
Key Generation	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*
Digital Signature	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*
Key Exchange	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*
Diffie-Hellman	No	ECDH *(when used with the FIPS-201 application)*
Symmetric Keys		
	AES 128, 192, 256, 3DES	AES 128, 192, 256, 3DES
Hash Digest		
	SHA-1, 256, 384, 512 MD2, MD5	SHA-1, 256, 384, 512 MD2, MD5

USB Tokens		
Model	**USB100 Series USB Tokens**	**USB200 Series USB Tokens**
Cryptographic Performance *Entrust real-world benchmarks include the full round-trip from computer to card and back.*		
RSA-1024, 2048		
Key Generation	< 3 seconds < 65 seconds	< 7 seconds < 50 seconds
Digital Signatures	0.126 seconds 0.47 seconds	0.15 seconds 0.619 seconds
Decryption	0.116 seconds 0.476 seconds	0.142 seconds 0.63 seconds
Elliptic Curve Cryptography (ECC)		
Digital Signature/Verification	P256 sign — 0.117 seconds P256 verify — 0.133 seconds *(FIPS 201 Only)*	P256 sign — 0.119 seconds P256 verify — 0.138 seconds *(FIPS 201 Only)*
AES 256		
Decryption	0.025 seconds	0.027 seconds
Triple DES		
Decryption	0.024 seconds	0.020 seconds
PIV Compliance		
PIV-C (CIV)	Yes	Yes
PIV, PIV-I	No	No
EEPROM Memory		
Capacity	80Kb	80Kb
Read Cycles	Unlimited	Unlimited
Write/Erase Cycles	500,000	500,000
Data Retention Time	25 Years	25 Years
Hardware System		
Co-Processors	DES, AES, RSA, ECC	DES, AES, RSA, ECC

USB Tokens		
Model	**USB100 Series USB Tokens**	**USB200 Series USB Tokens**
Connectivity		
USB 1.1/2.0	Yes	Yes
Certification & Approvals		
FIPS 140-2 Level 2	Chip Only	Full-Device Certification
Common Criteria	EAL5+ (Chip & OS)	EAL5+ (Chip & OS)
EMVCo	Yes (Chip & OS)	Yes (Chip & OS)
RoHS	Yes	Yes
China RoHS	Yes	Yes
Customization		
USB Customized with Organization Logo	Available on Request	Available on Request
Cryptography		
Asymmetric Key		
Key Generation	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*
Digital Signature	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*
Key Exchange	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*	RSA-1024, 2048 ECC P256 *(when used with the FIPS-201 application)*
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Symmetric Keys		
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Hash Digest		
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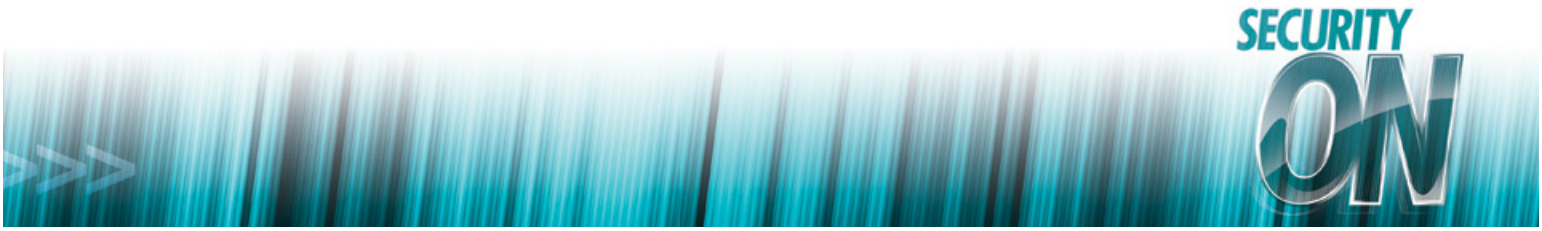

Available Card & USB Applications			
	Basic Application	**FIPS 201 Application**	**MRTD Application** *(Special Card Order)*
Fingerprint, IRIS scan digitally signed	No	Yes	Yes
Facial image digitally signed	No	Yes	Yes
Anonymous but authentic Card Authentication Key	No	Yes	No
Authentication, sign and encryption for user	Yes	Yes	No
Additional containers of data *(e.g., drivers license data)*	Yes *(Requires P11 driver)*	Yes	No
Data privacy protected by PIN	Yes	Yes	No
Data privacy protected by Machine Readable Zone (MRZ)	No	No	Yes
Driver	**Basic Application**	**FIPS 201 Application**	**MRTD Application**
Small Mini-Driver for Logical Access	Yes *(Distributed by Microsoft)*	Yes *(Depending on use and operating system, drivers available from Entrust (CSP) or Microsoft.)*	No
Certificate Renewal	**Basic Application**	**FIPS 201 Application**	**MRTD Application**
Certificate Issuance & Renewal	Entrust IdentityGuard, Entrust Entelligence Security Provider, Native Microsoft, Entrust Administration Services	Entrust IdentityGuard *(Only an authorized application, in possession of the card's administration key, may perform the initial issuance and renewal of the keys and card certificates.)*	Not Applicable
Physical Access			
Modern Physical Access	No	Yes *(Included in PIV application)*	No

About Entrust
A trusted provider of identity-based security solutions, Entrust secures governments, enterprises and financial institutions in more than 5,000 organizations spanning 85 countries. Entrust's award-winning software authentication platforms manage today's most secure identity credentials, addressing customer pain points for cloud and mobile security, physical and logical access, citizen eID initiatives, certificate management and SSL. For more information about Entrust products and services, call **888-690-2424**, email **entrust@entrust.com** or visit **www.entrust.com**.

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