

D12CR

Smartcards · Cybersecurity · Identities

D12CR is a dual cryptographic Java smartcard following Java Card 2.2.2 and Global Platform 2.1.1 standards; it is performed with a STMicroelectronics ST31G480 chip of 32 bits. D12CR is a Flash card with 88 kBytes non-volatile free storing and 4 kBytes user RAM. Its dual interface allows to work at contact and contactless environments, supporting ISO 7816 T=0 and T=1, ISO 14443 A, B and T=CL and being compatible with MIFARE® protocol.

All Feitian cards should be delivered with standard default keys for developing and testing environments, otherwise, they can be encoded to be used in all type of security inquiries. Moreover they have a full programming framework and a supported PKI applet.

Feitian is a trusted leader in the global market for multi-factor authentication, personal identity, rights management, smart card and mobile smart card reader technology. Established in 1988, Feitian has developed as an essential component in the information architecture of private and public enterprise, government, and educational institutions throughout the world.

Grama has a high industrial know-how so we can advise you on different market options, quality, safety and reliability of various security devices and their functionality.



Main features

- **Dual JavaCard** with both contact and contactless interfaces compatible with ISO 7816 and ISO 14443 including MIFARE®.
- **PKI applet** designed for authentication, electronic signature and digital certificates solutions.
- **Cipher algorithms** including RSA 2048-bits, ECC, AES and 3DES. Integrity checking by SHA-1, SHA-256, SHA-384 and SHA-512.
- **According to industrial standards** of Global Platform, EMV and ISO.
- **Seamless OS support** for Windows, Linux and MacOS, and easy integration with PKI software.
- **Developing libraries**, SDKs and middleware fully online supported.
- **Customizable full colour card** printing at both sides with logos, texts and pictures.
- **Sharing tools and software** with the rest of manufacturer's cybersecurity and cryptographic portfolio.

D12CR technical specifications

Overall

<i>Card title</i>	FT-Java/D12CR
<i>Card manufacturer</i>	FEITIAN Technologies Co., Ltd
<i>Chip brand</i>	STMicroelectronics
<i>Chip model</i>	ST31G480
<i>Chip certifications</i>	CC EAL5+, EMVCo
<i>OS certifications</i>	n/a
<i>CPU</i>	32 bits
<i>Card type</i>	Dual (contact and contactless)

Storage

<i>Memory type</i>	Flash
<i>Total NVM size</i>	480 kBytes
<i>Total ROM size</i>	n/a
<i>Total RAM size</i>	12 kBytes
<i>Code area</i>	FLASH
<i>User NVM size</i>	88 kBytes
<i>User RAM size</i>	4 kBytes

Algorithms

<i>RSA 2048</i>	Yes
<i>AES</i>	Yes
<i>SHA-1</i>	Yes
<i>SHA-256</i>	Yes
<i>SHA-384</i>	Yes
<i>SHA-512</i>	Yes
<i>MD5</i>	No
<i>3DES (ECB, CBC)</i>	Yes
<i>ECC</i>	Yes
<i>KOREAN SEED</i>	No

Protocols

<i>ISO7816 T=0</i>	Yes
<i>ISO7816 T=1</i>	Yes
<i>ISO14443 T=CL Type A</i>	Yes
<i>ISO14443 T=CL Type B</i>	Yes
<i>SWP</i>	No
<i>MIFARE®</i>	Yes
<i>USB interface</i>	n/a

Performance

<i>APDU buffer size</i>	261 bytes
<i>Transaction size</i>	3 kBytes
<i>Extended APDU</i>	Yes
<i>RMI</i>	No
<i>Logical channels</i>	1-4 (1 by default)
<i>Garbage collector</i>	Yes
<i>Applet deletion</i>	Yes

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