



DeviceFidelity

CREDENSE 2.10J CLASSIC IS NFC CARD-EMULATION AND CERTIFIED JAVACARD SE IN A MICROSD CC EAL5+ & PAYMENT NETWORKS CERTIFIED SECURE ELEMENT AVAILABLE FOR USE FOR NFC APPLETS AND HOST APPLICATIONS.

PRODUCT OVERVIEW

DeviceFidelity patent-protected CredenSE product line for microSD host devices brings a self-contained NFC card emulation mode that features a payment certified smartcard chip (SE) that runs JavaCard applets accessible from both the host side and the contactless interface. CredenSE brings both NFC card emulation and SE to any Android, Blackberry, Windows Mobile 8 (expected) phones and adds the payment certified SE to those which have NFC. Phone Apps can take full advantage of applet on the SE for typical security token applications.

CONSUMER CENTRIC BENEFITS

- Device Independent: compatible with most devices with microSD
- Fully independent from type of subscriber voice and data plan and mobile operator.
- Dedicated security domains for multiple independent services
- Removable and portable

SERVICE DELIVERY MADE EASY

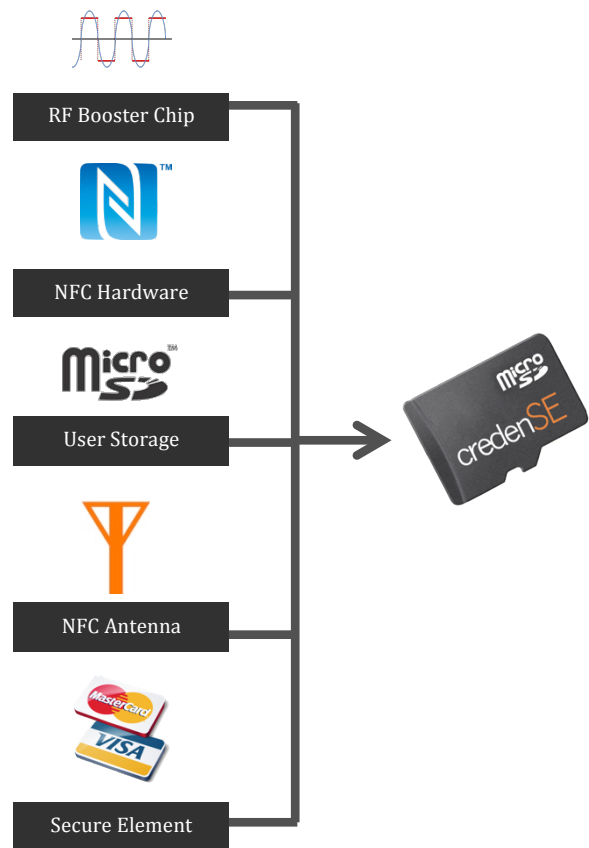
- Multiple issuance options
 - Compatible with major service bureaus and integrated with main TSM
 - Blank, initialized or personalized EMV mass personalization possible
 - Post issuance on-site or via TSM
- Distribution Flexibility
 - Device bundle
 - MNO and retail
 - Service bundle
 - Direct Mailing
 - On-site issuance

MAIN FEATURES

- 4GB – 8GB of user storage
- Plug and play NFC card emulation
- On-going NFC SE certification by Visa, MasterCard and CUP
- MIFARE™ support and Applet for MIFARE4Mobile™
- High level APIs for Apps to communicate with SE
- Compatible with DeviceFidelity and CUP APIs
- NFC RF control
- Supported by major TSM vendors.
- Support issuer and consumer centric models
- SDK and APIs for Android, Blackberry, Java. WM8 expected

TECHNICAL DATA

Run Time Environment (RTE)	Global platform	2.1.1
	JavaCard	3.0.1 classic
	Certifications	VISA, CAST, EMVco
Com protocols	Contactless T=CL	ISO 14443 Type A and MIFARE™
	ISO 7816-3,4 T=0 and T=1	DeviceFidelity APIs for APDU exchange over default host file system and mass storage driver
	CUP interface	Compliant with China Union Pay APIs
	User storage	Standard SD interface for typical host file system for microSD
Available Applets	Visa®	VMPA 1.4.1 (c12) Multi-instance ok
	MasterCard®	<input checked="" type="checkbox"/> MPP1.0 multi instance ok
ROM: <input checked="" type="checkbox"/>	Mifare™	<input checked="" type="checkbox"/> Flex Classic 4k <input checked="" type="checkbox"/> MIFARE 4 Mobile™
Certification pending	HID™	SEOS and mClass
	JavaCard	135kb available for use
Storage	User Storage	4GB and 8GB
	SDK & host APIs	Android, Blackberry, Java, Windows Mobile 8 (Expected)





DeviceFidelity

SECURE microSD PRODUCT FAMILY

NFC microSD with payment certified SE for
NFC Card Emulation and host applications

Common Features		CredenSE 2.8J	CredenSE 2.9J	CredenSE 2.10J
AVAILABILITY	Status and plan	Available	Project Driven	Available
RTE SPECIFICATIONS	Hardware	NXP J3A080	NXP J3D081	NXP J5C145
	Global platform	2.1.1	2.2	2.1.1
	JavaCard	2.2.2	3.0.1 classic	3.0.1 classic
	EMVco Platform Cert.	Preloaded Applet	✓	✓
PAYMENT CERTIFICATIONS	Visa® (VMPA)	Not planned	Project driven	Pending for Q2
	MasterCard® (MMPP)	Not planned	Project driven	Pending for Q2
	Amex	Not planned	Project driven	Expected
COMMUNICATION	Contactless T=CL	✓	✓	✓
	ISO 14443 Type A	✓	✓	✓
	ISO7816 APDU ¹	✓	✓	✓
	MIFARE Tag	✓	✓	✓
	Standard microSD Slot	✓	✓	✓
USE OF SE	NFC Card Emulation	✓	✓	✓
	Contactless Card	✓	✓	✓
	Host Applications	✓	✓	✓
HOST APIS AND SDK	Android	v2.1 and above	v2.1 and above	v2.1 and above
	BlackBerry	v4 and above	v4 and above	v4 and above
	J2ME	N/A	Expected	Expected
	Windows mobile 8	Not planned	Expected	Expected
	China Union Pay Protocol	✓	✓	✓
	Windows PC	Java APIs	Java APIs	Java APIs
PAYMENT CONTROL	PPSE	✓	✓	✓
	RF on/off control	✓	✓	✓
RF PERFORMANCES	Onboard CLF Amplifier ²	✓	✓	✓
AVAILABLE APPLETS	Visa	VSDC 2.7.1	Project Driven	VMPA v1.4.1(c12)
	MasterCard	M/Chip4 v1.3.1	Project Driven	βMMPP v1.0G
	MIFARE multi-instances	No	No	βM4M 1.0G R3
	MIFARE emulation	4k	No	βFlex classic 4k
	MIFARE DESFire EV1	No	β	No
	PPSE	✓	Project Driven	βPPSE v4.1
	HID iClass	mClass / Seos	Project Driven	Planned
APPLET STORAGE	JavaCard storage	80k	80k	145k
MICROSD CAPACITY	User Storage	2GB	4GB	4GB to 8GB

¹ APDU exchange through DeviceFidelity APIs (over standard microSD file system)

² Alleviate the need for external booster or range extender