



Optelio Contactless D32 R5 for Santander Data Sheet

FINANCIAL SERVICES & RETAIL > PRODUCT RANGE

ENTERPRISE

INTERNET CONTENT PROVIDERS

PUBLIC SECTOR & TRANSPORT

TELECOMMUNICATIONS



Optelio Contactless D32 R5 for Santander Data Sheet

Product Status	
Product Name	Optelio Contactless D32 R5 for Santander
Product life status	To be released and certified in September 2010
Certifications	Gemalto will handle MasterCard Certification for PayPass M/Chip4 and M/Chip2.2 Gemalto will handle VISA certification for PayWave qVSDC
Main characteristics	
Chip	Cryptographic co-processor for PK and DDA
EEPROM	32k EEPROM available for applications and data
Standard Compliance	
JC (JavaCard)	2.2.1
GP (Global Platform)	2.1.1
Post Issuance	Not allowed (for MC/VISA branded cards)
Contact Interface	
Standard compliance	ISO7816
T=0	Yes
T=1	In option
Contactless Interface	
Standard compliance	ISO 14443 –2, -3, -4
T=CL	Type A
Baud Rate	106kb both ways
Operating Frequency	13,56MHz
Mifare capability	Including Mifare 4K emulation
Cryptographic algorithms	
DES/3DES	Yes
RSA	Yes up to 2048 bits (CRT mode) ¹
SHA-1	Yes
Card Body	
Type	Dual Interface
Standard compliance	ISO 14443-1 compliant
Material	Banking grade PVC with overlay for post personalization
Technology	Hot lamination
Magnetic Stripe	ISO 7816 –4, -5 compliant
Antenna	Full size or half size (allowing 5 lines embossing)

Changes are periodically added to the information herein. Furthermore, Gemalto reserves the right to make any change or improvement in the specifications data, information, and the like described herein, at any time.

¹ For VISA applications, applets implementations limit this size to 1024 bit

For MasterCard, to reach performance transaction performances, it is strongly recommended not to use RSA keys above 1024b

Application supported

PayPass M/Chip4 (Mastercard)

Applet based on the latest version of the MASTERCARD Paypass M/Chip specifications V1.3.

M/Chip2.2(Mastercard)

This applet is only SDA (not DDA)

WARNING 1: Gemalto and Santander will need to work together to obtain from Mastercard the authorization to certify the card using MChip2.2 instead of MChip4. This applet operates only in contact mode

VSDC2.7.1 (Visa)

Applet developed by VISA on latest version of the VISA payment contactless specifications 2.0.2. It includes VSDC contactless, qVSDC and MSD applications.

DualVSDC (Visa)

Applet developed by Gemalto on latest version of the VISA payment contactless specifications 2.0.2. It includes VSDC contactless, qVSDC and MSD applications.

Classic IAS V3 (GemSAFE) (PKCS#11 PKI application)

This applet can be used for strong authentication, digital signatures and encryption, and storing digital certificates. The authentication and signature scheme used by the applet is based on E-Sign standard. The applet is compliant with PKCS#15 and all PKI applications that are following the PKCS#11 APIs and/or Microsoft CAPI can use the Classic IAS applet.

This means that Santander universities can either use the Classic IAS software or software from any third-party.

This applet operates in contact mode only

WG10

Gemalto will use the standard WG10 applet already used by Banco Santander

Welcome Realtime (WRT) XLS V7 (Xena)

*Loyalty application applet developed by WRT.
Certification to be granted by WRT*

Personnalisation

CPS is available for VSDC2.7.1, PayPass M/Chip4 and M/Chip2.2

CPS = Common Personalization Specification is a standard defined by EMV Co., and endorsed by Visa, Mastercard and JCB.

With CPS, the same personalization commands can be used to Personalize a VSDC or a M/Chip or a JSmart application.