

1 GENERAL INFORMATION

1.1 Product description

The GemCore410-EMV device is a smart card coupler that can be integrated in different types of electronic devices. Smart cards which can be used with the GemCore410-EMV coupler are ISO7816-1/2/3/4 memory and micro processor smart cards.

Typical applications are:

- Payphones and screen-phones
- Payment terminals, kiosks, electronic purse
- Vending and game machines
- Access control, park meters,
- Metering
- Others...

The GemPC410 is a product developed by the Gemplus company.

For more information, see product's data sheet at section 1.6.

1.2 Related Submittal(s) / Grant(s)

All host equipment used in the test configuration are FCC granted, when relevant.

1.3 Tested System Details

The FCC IDs for all equipment, plus description of all cables used in the tested system (including inserted cards, which have grants) are :

Trade Mark – Model Number (Serial number)	FCC ID	Description	Cable description
GemCore410-EMV* (sn: M0220100010)	MES410EMVGC	Smart card coupler	Serial cable, shielded, ended by SubD9 and PS2 connectors (PS2 is for 5V power supply of the EUT) : 1m Flat cable, 8 wires, unshielded : 1m (for TTL link)
GEMPLUS MPC0S64K-3DES sn: TEST-CEM	none	Smart card	none
GEMPLUS SAM CARD	none	Sam card	none
Laptop Dell Latitude CPiAD400XTB series PN: 0006692D-12800-03T-3722 (sn: VSRW6) with AC adapter Dell P/N: 0009364U	Dec. Of Conf	Personal computer	All data cables are shielded Power cable unshielded
HEWLETT PACKARD D2846A (sn JP74001000)	Doc. Of Conf.	21" color monitor	Shielded video cable
COMPAQ (Logitech) M/N: M-S48a (sn: 187104-001)	JNZ201213	Mouse	Shielded cable
HEWLETT PACKARD C6410A (sn: MY9761915T)	Doc. Of Conf.	Parallel printer	HP 24542D shielded parallel cable
INTEL YC76 sn : 0045143	EDUYC76	WebCam	Shielded cable (USB)

*Equipment Under Test

1.4 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4-1992, CISPR22-1993/A1:1995/A2:1996 and EN55022:1994/A1:1995/A2:1997.

Radiated testing was performed at an antenna to EUT distance of 10 meters. During testing, all equipment's and cables were moved relative to each other in order to identify the worst case set-up.

1.5 Test facility

Tests have been performed on March 18th, 2002

The test facility used to collect the radiated and conducted data is the SMEE Actions Mesures facility, located ZI des Blanchisseries, 38500 VOIRON, France. This test facility has been fully described in a report and accepted by FCC as compliant with the radiated and AC line conducted test site criteria in ANSI C63.4-1992 in a letter dated August 04, 1999 (registration number 94821).

This test facility has also been accredited by COFRAC (French accreditation authority for European union test lab accreditation organization), accreditation number 1-0844 as compliant with test site criteria and competence in EN55022/CISPR22 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.

1.6 Data sheet of the product

GemCore410-EMV

The OEM Smart Card Reader

Overview

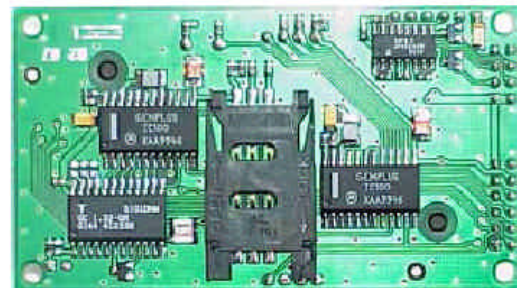
The GemCore410-EMV is a modular, yet very compact coupler. It offers the simplest means of integrating an EMV certified smart card reader into different types of electronic devices.

Built around the GemCore™ technology, this coupler allows larger systems to easily access all types of smart cards through an on-board or external smart card connector.

A Security Access Module (SAM) can also be inserted directly on to the board.

The interface with the host processor is a serial TTL or RS232 link. The communication protocol is supplied as a C language source code library (GILK). PC/SC drivers are provided for Windows environments.

The GemCore410-EMV is physically compatible with its predecessors, the GemCore410 and the GCI400 couplers. Functional evolutions are presented in the technical documentation.



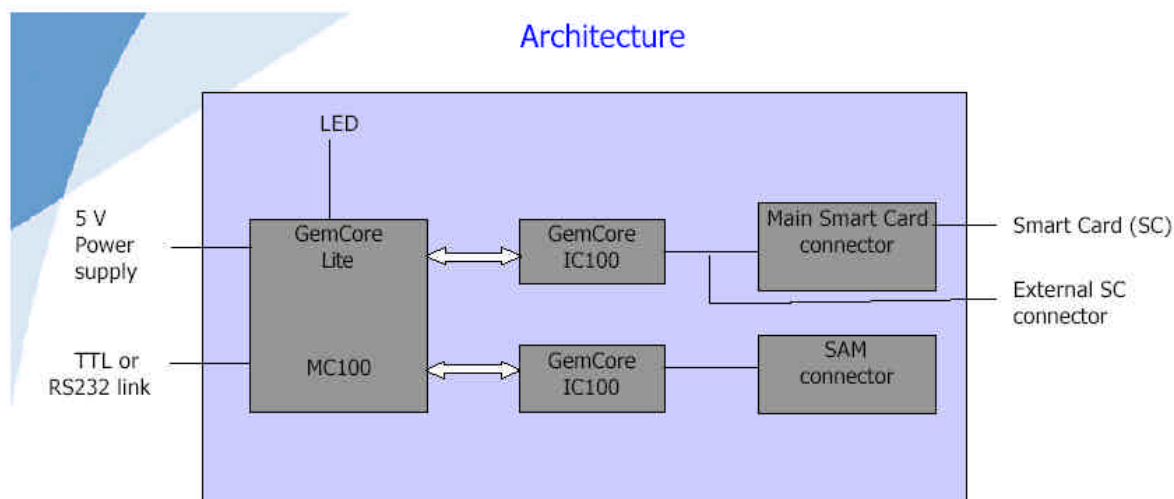
Applications

The GemCore410-EMV is certified EMV Level 1 and therefore answers to the demands of many applications such as:

- Payphones and screen-phones
- Payment terminals, kiosks, electronic purse
- Vending and game machines
- Access control, park meters
- Metering.

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Architecture



Specifications

Communication interface	Smart Card (SC)	<ul style="list-style-type: none"> Access to all ISO7816-1 to -4 microprocessor (T=0, T=1) and memory cards Reads both EMV and non-EMV ISO cards
	Host	<ul style="list-style-type: none"> Asynchronous serial link with TTL or RS232 levels Programmable transmission speed from 9.6 Kbps to 76.8 Kbps Plug and Play support
Power supply	Consumption	<ul style="list-style-type: none"> Average of 25 mA 60 mA additional consumption by smart card powered
	Coupler voltage	<ul style="list-style-type: none"> 5 V +/-5%
	SC voltage	<ul style="list-style-type: none"> 3 V or 5 V
Operational conditions	Storage T°	<ul style="list-style-type: none"> -40°C to +85°C
	Operation T°	<ul style="list-style-type: none"> 0°C to +70°C
	Humidity	<ul style="list-style-type: none"> 95 % at +40°C
	EMC	<ul style="list-style-type: none"> CE 89/336, FCC part 15
	Safety	<ul style="list-style-type: none"> IEC 950, UL 1950
	Vibration	<ul style="list-style-type: none"> 10 Hz to 150 Hz, 2 g
On-board smart card connector		<ul style="list-style-type: none"> Manual insertion, ISO chip location Landing technology with smart card presence detection Guaranteed for 80,000 insertion cycles (UTE C93-421) The EMV Level 1 certification is valid with this on-board SC connector only.
Physical characteristics	Dimensions	<ul style="list-style-type: none"> 45 mm x 80 mm x 20 mm
	Weight	<ul style="list-style-type: none"> 100 g
Card protection		<ul style="list-style-type: none"> Short circuit Card removal when powered on ESD: 4 KV on card pins, Human Body Model


GEMPLUS

Z.I. Athéla III Voie Antiope
13705 La Ciotat FRANCE
Tel.: +33 4 42 36 54 55 Fax: +33 4 42 36 63 13

Information subject to change without prior notice