

# GemCore410-EMV

## The OEM Smart Card Reader

### Overview

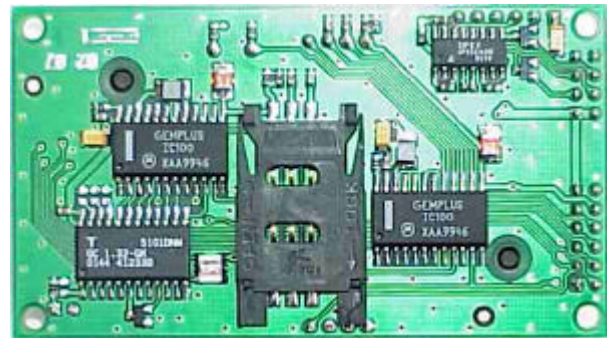
The GemCore410-EMV is a modular, yet very compact coupler. It offers the simplest means of integrating an EMVCo approved smart card reader into different types of electronic devices.

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 connected to the board.

The interface with the host processor is a serial TTL or RS-232 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 its technical documentation.



### Applications

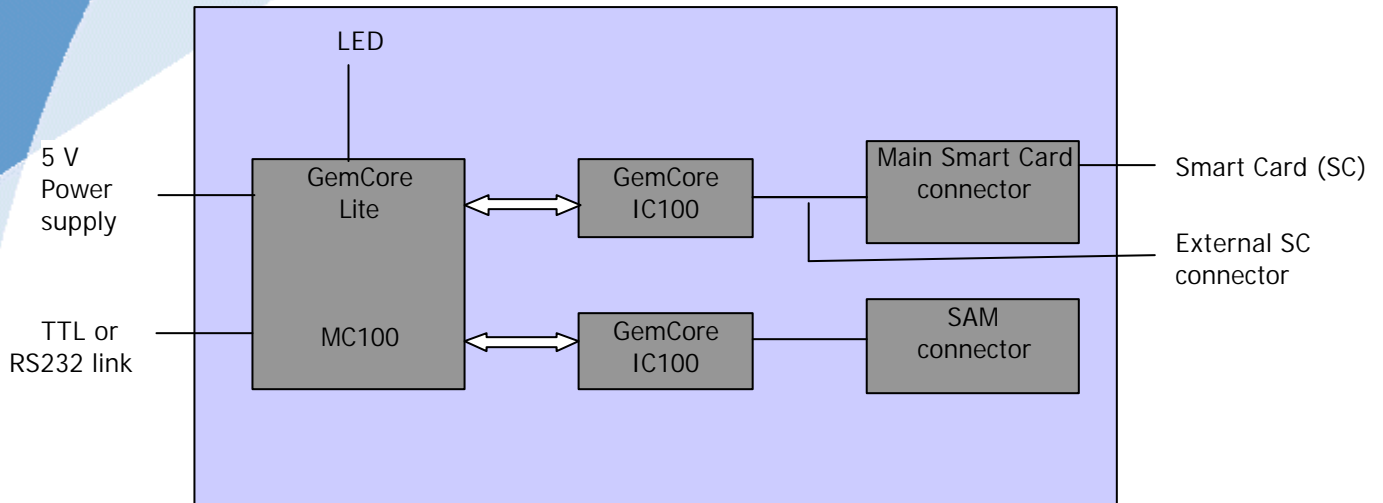
GemCore410-EMV is **EMVCo Level 1** (\*) and **“CB”** (\*\*) Type Approved; therefore it corresponds to the need of any smart card applications such as:

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

(\*) EMVCo approval number: 11349 0602 311 10 FIM

(\*\*) Cartes Bancaires approval number: 138C01 2002

## Architecture



## Specifications

<b>Communication interface</b>	Smart Card (SC)	<ul style="list-style-type: none"> <li>Access to all ISO 7816-1 to -4 microprocessor (T=0, T=1) and memory cards</li> <li>Reads both EMV and non-EMV ISO cards</li> </ul>
	Host	<ul style="list-style-type: none"> <li>Asynchronous serial link with TTL or RS-232 levels</li> <li>Programmable transmission speed from 9.6 Kbps to 76.8 Kbps</li> <li>Plug and Play support</li> </ul>
<b>Power supply</b>	Consumption	<ul style="list-style-type: none"> <li>25 mA typical with no smart card powered</li> <li>60 mA additional consumption by smart card powered</li> <li>200 mA max.</li> </ul>
	Coupler voltage	<ul style="list-style-type: none"> <li>5 V +/-5%</li> </ul>
	SC voltage	<ul style="list-style-type: none"> <li>3 V or 5 V</li> </ul>
<b>Operational conditions</b>	Storage T°	<ul style="list-style-type: none"> <li>-40°C to +85°C</li> </ul>
	Operation T°	<ul style="list-style-type: none"> <li>0°C to +70°C</li> </ul>
	Humidity	<ul style="list-style-type: none"> <li>95 % at +40°C</li> </ul>
	EMC	<ul style="list-style-type: none"> <li>CE 89/336, FCC part 15</li> </ul>
	Safety	<ul style="list-style-type: none"> <li>IEC 950, UL 1950</li> </ul>
	Vibration	<ul style="list-style-type: none"> <li>10 Hz to 150 Hz, 2 g</li> </ul>
<b>On-board smart card connector</b>		<ul style="list-style-type: none"> <li>Manual insertion, ISO chip location</li> <li>Landing technology with smart card presence detection</li> <li>Guaranteed for 80,000 insertion cycles. See note.</li> <li>The EMVCo Type Approval is valid with this on-board SC connector only.</li> </ul>
<b>Physical characteristics</b>	Dimensions	<ul style="list-style-type: none"> <li>45 mm x 80 mm x 20 mm</li> </ul>
	Weight	<ul style="list-style-type: none"> <li>100 g</li> </ul>
<b>Card protection</b>		<ul style="list-style-type: none"> <li>Short circuit</li> <li>Card removal when powered on</li> <li>ESD: 4 KV on card pins, Human Body Model</li> </ul>

Note: Performance is given according to UTE C93-421 norm. The reliability of the connector depends on conditions of environment and use which Gemplus cannot be responsible of.



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Information subject to change without prior notice