



Smart Connector

The Best Time-To-Market for EMV & multi-SAM Architectures !



Overview

GemCore Smart Connector is the "All-in-One" smart card interface for multi-card architectures. Based on Gemplus know-how in silicon conception and to 15 years of experience in development of readers, this product proposes a complete solution that guarantees the best time-to-market and cost effectiveness to multi-card devices suppliers.

This **Smart Connector integrates a complete smart card interface**: GemCore single chip, friction connector and direct interfaces to SAMs.

EMVCo considers this product as a complete IFM (InterFace Module) thus this product is already certified by Gemalto thus the device does not require any new EMVCo level 1 approval!

Main advantages and benefits

- Already EMVCo level 1 approved
- Best time-to-market thanks to easy integration
- All contacts on back side (cf Visa PCI specifications)
- Up to 1 smart card and 4 SAMs interfaces capability
- Smart card transfer rate: up to 500 Kbps on the main smart card
- Compatible with microprocessor and memory cards, EMV and non-EMV cards
- Simplified logistic: only one reference to purchase and to stock

Applications

Whether EMVCo is mandatory for your application or not, the Gemalto Smart Connector is recommended for any systems needing to interface with smart cards and which is requiring relatively small footprint, quick time to market and optionally up to 4 SAMs interfaces. The target volume per project is from a few hundreds to a few hundred thousand units. Typical applications are payment, security and identity.

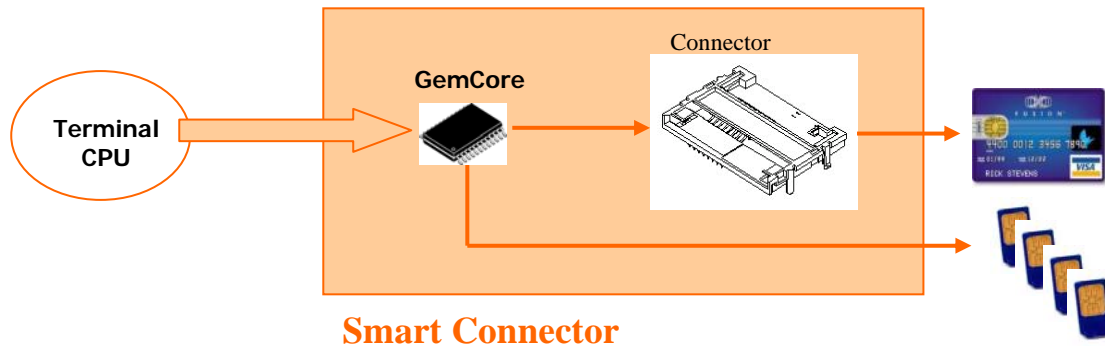
Compliance with standards

- **ISO/IEC 7816-1, 2, 3, 4:** Integrated circuit cards with contacts
- **EMVCo Level 1:** EMV2000 specifications version 4.1
- **CB:** Cartes Bancaires (France)
- **Other compliances:** ZKA, Mondex, Proton: please contact Gemplus.

Technical features

POS Smart Connector can interface:

- One external smart card: EMVCo approved
- Up to 4 SAMs: direct electrical interfaces



Supported smart cards	Asynchronous	<ul style="list-style-type: none"> • Microprocessor cards • T=0, T=1 protocols • Transmission rate: 2 Kbps to 500 Kbps (main card)
	Synchronous	<ul style="list-style-type: none"> • On the main interface only
Smart card electrical interface	Smart card power supply	<ul style="list-style-type: none"> • 5V/55mA, 3V/50mA, 1.8V/20mA • Short circuit current limitation • Power up/power down control sequences
	Smart card management	<ul style="list-style-type: none"> • Card presence indication • Card insertion/extraction detection
	ESD protection on card I/O	<ul style="list-style-type: none"> • 4 KV Human Body Model
SAM electrical interface	Asynchronous cards	<ul style="list-style-type: none"> • Microprocessor SAMs • 125 Kbps
	SAM power supply	<ul style="list-style-type: none"> • 5V, 55mA
GemCore chip power supply	Voltage	<ul style="list-style-type: none"> • 4.6 V to 5.4 V
	Power down mode	<ul style="list-style-type: none"> • 20 μA to 100 μA power down current • Power down/power up by host command • Power up by card insertion
Host interface	Serial asynchronous link	<ul style="list-style-type: none"> • Transmission rate: 9.6 Kbps to 115 Kbps • Format: 8 bits, no parity
	USB link	<ul style="list-style-type: none"> • Full speed 12 Mbps
	Communication protocol	<ul style="list-style-type: none"> • CCID protocol (for both serial and USB links) • API source code available for free
Mechanical features	Connector reliability	<ul style="list-style-type: none"> • 100K insertion cycles • Friction technology
	External dimensions	<ul style="list-style-type: none"> • L x l x H: 62 mm x 40 mm x 8 mm
	Temperature range	<ul style="list-style-type: none"> • Operating range: 0°C to +70°C
	Cable to host & SAMs	<ul style="list-style-type: none"> • By flex (custom cable as an option)
	Security	<ul style="list-style-type: none"> • For security reasons (cf Visa PCI specs), no possible access to contacts: all contacts are on the back side • Protection against 2 smart card insertion • CE/FCC
	Environmental	<ul style="list-style-type: none"> • RoHS compliant