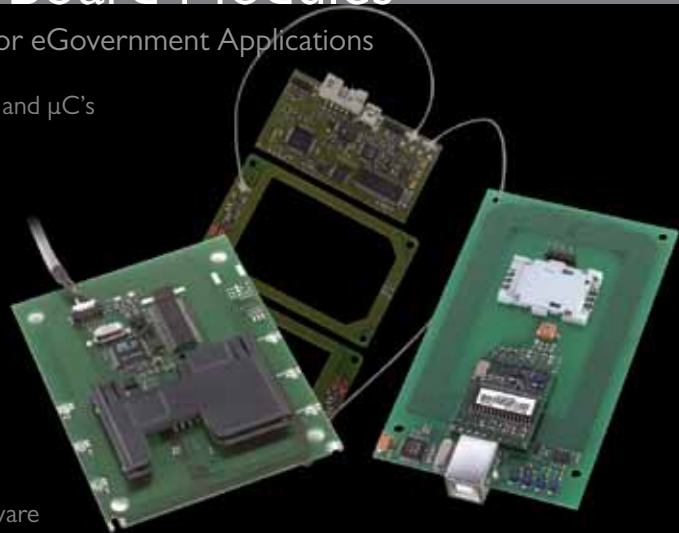


eGovernment Reader Board Modules

Standard and Customized Reader Modules for eGovernment Applications

- ▶ **Interoperable** – Reads all ICAO qualified e-PP, ID's and μ C's
- ▶ **Flexible** – Standard and customized antenna form factors and tuning, as on-board or external antenna design
- ▶ **Fast and easy** – Up to 848 kBit/s data transfer rate, modular set up allows easy integration
- ▶ **Reliable** – Advanced anti-collision algorithm capability, proven platform
- ▶ **Secure** – Supports Basic Access Control (BAC) and Extended Access Control (EAC) encryption
- ▶ **Future proof** – Optional Smart Card interface for additional SC applications, updateable reader firmware



SECURE identification.

HID Global offers a wide range of reader board modules to realize customized solutions for OEM partners. HID Global's reader board module platform is based on the developments and experience of two leading companies in this market segment. The former brands ACG and Integrated Engineering have been recognized in the Government segment and proofed at all ICAO interoperability tests to be at the top of its class. This expertise is now incorporated into the reader modules which are designed for integration by an OEM.

The option of on-board or external design with one, two or dual antennas offers maximum flexibility in configuration, combined with an optimal performance. The modular setup of the compact hardware allows for an easy integration. The read/write readers support all ISO 14443-4 A/B elements making the reader suitable for all existing and yet to develop ISO chips and chip operating systems.

To read electronic passports and provide a future proof solution, both Basic Access Control (BAC) and Extended Access Control (EAC) are supported. For additional security, advanced encryption techniques to protect against unauthorized access to the chip data are implemented.

- ▶ Interoperable with all ICAO-compliant secure contactless transponder solutions
- ▶ Optimized with PC/SC or proprietary drivers for an easy and compatible, or customized integration into USB systems
- ▶ Supports ICAO-compliant Basic Access Control (BAC) and Extended Access Control (EAC) encryption standards for ePassport applications
- ▶ Modular setup of the compact hardware allows for an easy integration
- ▶ Supported advanced encryption protects against unauthorized access to the chip data
- ▶ Supports operating systems and structured file system cards
- ▶ Read and write applications support ISO 14443-4 A/B
- ▶ Field upgradeable firmware or ROM mask, depending on request and platform

eGovernment Reader Boards and Antennas

	Reader Board with On-Board Antenna and SC Interface	Reader Board with On-Board Antenna and SAM	Reader Board with On-Board or 1, 2 or Dual External Antennas
Product Codes	53210015-1	0701800083	800-20XX
Power Consumption			
Supply Voltage	5 VDC	5 VDC	5 VDC
Power Supply	Via USB interface	Via USB interface	Via interfaces
Power Consumption – Standby Mode	Selective suspend via OS	< 1 mA	N/A
Power Consumption – Read/Write	< 150 mA	< 200 mA	< 220 mA
Environmental			
Dimensions (W x H x D)	96 x 78 x 8 mm (3.78 x 3.07 x 0.31 inch)	117 x 67 x 15 mm (4.60 x 2.64 x 0.59 inch)	40 x 76 x 12.5 mm (1.6 x 3.0 x 0.49 inch)
Operating Temperature	0°-55° C / 32-131° F	-0° C to 70° C / 32° F to 158° F	
Storage Temperature	-40° C to 85° C / -40° F to 185° F		
Humidity	10-90% non-condensing	0 – 95 % non-condensing	
Contactless Interface			
Frequency	13.56 MHz		
Supported Standards	ISO 14443 A/B, ISO 15693	ISO 14443 A/B	
Reading Range	Up to 90 mm depending on antenna and chip/inlay		
RF Transmission Speed	Up to 848 kBit/sec (chip/OS dependent)		
Antennas	Integrated or customized	Integrated or customized	Integrated or external External: 1 or 2 antennas in ID1, ID2 or ID3 size, or custom
Antenna Coax Cable Length / Thickness	N/A	N/A	MCX: 50–150 cm (19-59 in) / 7.6 mm (0.3 in) U.FL: 20 cm (7.87 in) / 4.5 mm (0.18 in)
Certifications Compliance	CE, EMV ² 2000 Level I, FCC, UL, RoHS, CCID (contact interface only) Microsoft® WHQL	ETS 300-330, CE/FCC – thru OEM RoHS Microsoft WHQL	ETS 300-330, CE/FCC – thru OEM RoHS
Interfaces			
Smart Card Interface	ISO 7816 & EMV2 2000 Level I ID-1 Size	SAM ID-0	N/A
Communication Protocols	PC/SC driver Synchronous API (on top of PC/SC)	Specific ASCII or Binary, PCSC/CCID LIB (Windows)	Proprietary T=CL, PCSC/CCID
Communication Interface	USB 2.0 CCID (also supports USB 1.1)	USB 2.0, RS232	
Input / Outputs	2 status LED's Smartcard interface	2 status LED's SAM Socket	3 status LED's
Encryption Support	Basic Access Control (BAC) and Extended Access Control (EAC)		
S/W Drivers	Windows® 98 / ME, 2000 / XP (32bit), 2003 Server, Windows® CE 5.0 / CE.NET (depending on hardware), Windows® XP 64bit (AMD64, EM64T, IA64), Windows® Vista (32bit / 64bit), Linux®, Mac® OS X	Windows 2000/XP/Vista DLL, PC/SC Driver for Microsoft® Windows 2000/XP/Vista 32/64Bit	PC/SC and T=CL Driver for Microsoft® Windows 2000/XP/ 32/64Bit

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