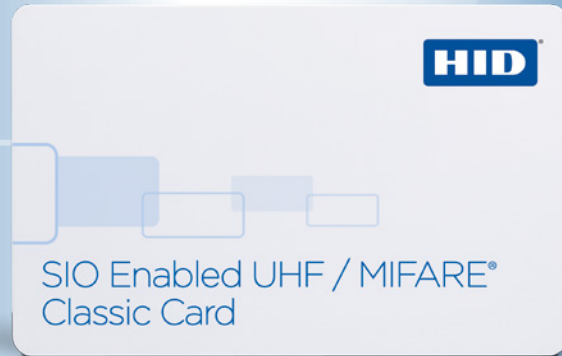


SIO Enabled UHF / MIFARE® Classic Smart Card



Features:

- EPC Class-1 Generation-2 and ISO18000-6C compliant
- Supports 860 MHz and 960 MHz UHF frequencies
- Card memory has a 50-year data retention capability and 100,000 cycle endurance

HIGHLY SECURE UHF DUAL-TECHNOLOGY LONG RANGE SMART CARD FOR PARKING & GATE APPLICATIONS

- **Impressive read range** – Ultra High Frequency (UHF) technology can be read from a distance of up to five meters depending on frequency, reader and environment.
- **Highly secure** – Secure Identity Object® (SIO®) enabled, for multi-layered security beyond the card technology, protecting identity data from unauthorized access.
- **Interoperable** – Single card solution supports UHF and MIFARE® CLASSIC for use in mixed technology applications.
- **Cost effective** – Passive no-battery design does not require maintenance.

The SIO Enabled UHF/MIFARE Classic Smart Card is an extension of the iCLASS SE® platform, providing a secure Ultra High Frequency (UHF) long range parking and gate control solution that can be used in conjunction with other existing technologies. The UHF card can be read from distances of up to five meters for long range identification.

This dual-technology smart card combines UHF and MIFARE Classic 4K technologies, offering a single card solution for both door and gate access. In addition to access control, the card can be used for PC logon, biometric verification, time and attendance, cashless vending, public transportation, airline ticketing and customer loyalty programs.

The SIO Enabled UHF/MIFARE Classic Smart Card is the most secure UHF credential available. In UHF mode, the reader issues a password to obtain access to protected areas of the tag's memory for safe storage of confidential or business-sensitive data.

In addition to this security measure, the dual-technology smart card leverages HID Global's Secure Identity Object (SIO) data model that adds an additional layer of encryption and authentication for advanced security and performance.

Due to the underlying passive UHF and high frequency (HF) technologies, the dual technology smart card is also cost effective. The card does not contain a battery because it is powered by the reader, eliminating the need for battery maintenance.

The SIO Enabled UHF/MIFARE Classic Smart Card offers secure contactless read/write smart card technology along with the ability to add anti-counterfeiting features. These features include custom artwork or photo identification imprinted directly on the card.

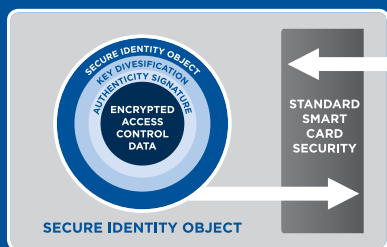
This durable dual-technology smart card meets strict ISO standards for thickness and can be used with high definition printers. It is strong, flexible and resistant to cracking and breaking.

ULTRA HIGH FREQUENCY (UHF) FEATURES:

- UHF read/write contactless smart card technology for long range, reliable communications with high data integrity.
- Based on EPC (Electronic Product Code) Radio Frequency Identity Protocols Class-1 Generation-2 UHF RFID Protocol for Communications at 860 MHz - 960 MHz
- Leverages HID Global's portable credential technology based on Secure Identity Object* (SIO®).
- Uses logical protection (access password) to prevent unauthorized access to the memory.
- Passive, no-battery design allows for large number of reads. Strong and resistant to damage.

MIFARE® Classic FEATURES:

- 13.56 MHz read/write contactless smart card provides high-speed, reliable communications with high data integrity.
- MIFARE Application Directory (MAD) allows flexible programming of additional applications to the MIFARE Classic® card.
- Securely separated sectors allow complex applications and provide for future expansion
- MIFARE 4K: memory arranged in 40 sectors: 32 sectors of 64 bytes, 8 sectors of 256 bytes
- Meets ISO14443A for contactless communications.



The Secure Identity Object® deliver three key benefits; portability, security and extensibility.

SIOs are defined using open standards that can support any piece of data, including data control, biometrics, PC login and many other applications.

SPECIFICATIONS

Base Part Number	603 - Composite PET/PVC Card
Description	UHF / MIFARE Classic® Contactless Smart Card
Card Construction	Composite 40% Polyester / 60% PVC
Dimensions	2.127" x 3.375" x 0.033" max. (5.40 x 8.57 x 0.084 cm)
Weight	0.20 oz (5.7 g)
Operating Temperature	-40° to 158° F (-40° to 70° C)
Operating Humidity	5 - 95% non-condensing
UHF Operating Frequency	860 - 960 MHz
HF Operating Frequency	13.56 MHz
UHF RF Interface	As suggested by ISO18000-6C and EPC Class-1 Gen-2
HF RF Interface	As suggested by ISO14443-A
UHF Baud Rate¹	"Demodulated data from reader is PIE encoded with a data rate: 26.7Kbit/s ->128Kbit/s Back scattered data from tag to reader is encoded either as FMO or Miller subcarrier modulation with a data rate of 40Kbits/s -> 640Kbit/s"
HF Baud Rate	ISO14443-A mode : 106Kbit/s
Memory Type	NVM, read/write
Multi-application memory	MIFARE 4K: memory arranged in 40 sectors: 32 sectors of 64 bytes, 8 sectors of 256 bytes
Data Retention	100,000 cycles
UHF Typical Read Range	Up to 5 meters - depends on installation conditions
HF Typical Read Range	Up to 10 centimeters - depends on installation conditions
Card Marking²	Laser engraving
Custom Graphics	Optional
Operates with	iCLASS SE® U90 Reader (UHF) - iCLASS SE readers iCLASS SE readers and any reader that can read MIFARE technology.
Warranty	Lifetime warranty. See complete warranty policy for details.

1. Encoding choice and data rate are selected by the reader.
2. Direct To Card Printing not recommended.



hidglobal.com

North America: +1 512 776 9000
Toll Free: 1 800 237 7769
Europe, Middle East, Africa: +44 1440 714 850
Asia Pacific: +852 3160 9800
Latin America: +52 55 5081 1670

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