Contactless ISO Cards

ASSA ABLOY

The global leader
in door opening solutions

STANDARD-SIZED ISO CARDS, CONFIGURABLE TO PRACTICALLY ANY APPLICATION REQUIREMENTS INCLUDING MULTIPLE TECHNOLOGIES

- **Application compatibility:** Specify one, or combine multiple technologies per card, in contact, low frequency, high frequency or RAIN UHF.

- **DBond™ Technology:** Highly durable, patented direct bonding technology, allowing trouble-free direct to card printing.

- **Incomparable expertise and innovation:** From the worldwide leader in card identification systems.

Customers can trust ASSA ABLOY engineering and manufacturing expertise to deliver the world's most advanced and reliable contact and contactless cards. These cards combine innovative printing and radio frequency identification (RFID) technologies with industry-leading knowledge in the production of secure identity components and solutions. Proven processes and automated manufacturing ensure efficient and cost-effective production of high quality cards.

ISO cards are used in billions around the world, ranging from simple, non-technology printed loyalty cards to highly secure access control, payment or citizen ID cards. ASSA ABLOY's expertise allows fulfilling almost any need you may have on an ISO card.

Cards can be made from a choice of materials ranging from low-cost PVC over composite to high-end polycarbonate materials for increased temperature resistance and durability. Cards may be delivered blank-white for later personalization

with Direct to Card (DTC) printers or already be delivered pre-printed with high-quality offset or silk-screen printing. Optionally, features like holograms, micro-text, security inks, custom magnetic stripes, thermo-rewriteable areas and many more may be included on a card.

ASSA ABLOY can provide cards with almost any contact or passive RFID technology ranging from LF, HF/NFC to RAIN UHF. All major chip manufacturers are supported. Dual-Interface cards allow the mix of contact and contactless interface sharing a single chip. Multiple technologies may be combined in one card to support migration or multi-application scenarios.

Patented DBond™ technology connects the antenna directly to the chip instead of using a bulky chip module. This method is available for many common RFID chips like Unique or Mifare EV1. It provides perfect printability of cards in DTC printers and improves mechanical reliability of the RFID components.

SPECIFICATIONS

TECHNOLOGY HIGHLIGHTS:

Contactless ISO cards from ASSA ABLOY offer extensive options – customers choose to embed a single IC or select multiple technologies in a card -- including LF, HF and RAIN UHF. Dual-Interface or contact technologies including smart card controllers, and magnetic stripe can also be incorporated in these standard ISO size cards for universal compatibility in card printer/encoders. Cards with certain chips are manufactured using patented DBond™ technology for improved robustness with perfectly flat printable surfaces. Cards are ISO 7810 compliant. Alternatively, custom shapes or sizes are available on request to support special use cases.

APPLICATION AREAS:

ASSA ABLOY ISO cards are used in a wide variety of applications. They are effective for managing physical access, time and attendance, and logical access as well as providing a convenient method for cashless payment including automatic fare collection (e.g. MIFARE family or Calypso), loyalty programs, point-of-sale, as well as near field communication (NFC) applications.

	Contactless ISO Cards				
	Single-Frequency				**Combo**
Frequency	LF	HF		UHF	LF/HF/UHF
ELECTRONIC					
Operating Frequency	125 kHz	13.56 MHz		860 to 960 MHz	125 kHz, 13.56 MHz or UHF
Chip Type	HITAG: 1, 2, S Q5, Titan, Unique, ATA5577	LEGIC: MIM256, MIM1024, ATC1024-MV	ICODE SLIX (2), ICODE SLIX S, Vigo™ / MIFARE Ultralight, Ultralight C MIFARE Classic EV1: 1K, 4K MIFARE Ultralight EV1 128 Bytes MIFARE Plus EV1 2K MIFARE Plus EV1 4K MIFARE Plus SE 1K, S/X 2K, 4K MIFARE DESFire EV1: 256, 2K, 4K, 8K, MIFARE DESFire EV2: 2K, 4K, 8K, SLE66R35R, LEGIC: ATC4096-MP, CTC4096, NTAG 213, NTAG 216 Calypso; HID Trusted Tag™	Monza 4QT	Combine multiple chips per card
Memory	64 bit read-only to 2048 bit read-write	256 to 4096 bit EEPROM	1024 to 2048 bit EEPROM / 64 to 8192 byte EEPROM	128 bit EPC + 512 bit user memory	Based on requirements
Anti-Collision	Yes (Hitag)	Yes (ATC)	Yes		Based on requirements
PHYSICAL					
Dimensions	ISO card: 3.4 x 2.1 × 0.03 in (85.6 x 54 × 0.76 mm)				
Card Body Material	PVC (default)				
Color	White (other colors or transparent on request)				
CHEMICAL AND MECHANICAL					
Water	IP68, 68° F (20° C), 3.3 ft (1 m) x 24 h				
Withstands Exposure to	Acetic acid water, artificial perspiration, carbonated sodium water, ethylene glocol, fuel B, salt mist, salt water, sugared water; humidity 95% at 122° F (50° C) 24 h				
Force	Dynamic bending and torsion, 4 × 250 bends				
THERMAL					
Storage	**PVC:** -31° to +122° F (-35° to +50° C), **Composite:** -40° to +158° F (-40° to +70° C)				
Operating	**PVC:** -31° to +122° F (-35° to +50° C), **Composite:** -40° to +158° F (-40° to +70° C)				
Shock/Fatigue	-31° to +176° F (-35° to +80° C), 50 cycles, 5 min soaking time, 20 sec transition				
OTHER					
Standards	ISO 7810, ISO 7816, optional NFC				
		ISO 15693 (ATC only)	ISO 15693, ISO 18000-3 / ISO 14443	EPC C1G2, ISO 18000-6	Depending on chips used
Optional Features	Artwork ; encoding; visual (pre-)personalization via inkjet, thermal printing or laser marking; magnetic stripe; thermo-rewritable area; signature panel and optical security features . Non-technology cards, or other contact, contactless or dual-interface chips.				
Optional Materials	PC, PETG or Composite (Note: Chemical, mechanical and thermal tolerances will vary versus standard PVC, listed above.)				
Warranty	1 year				

ASSA ABLOY can create a custom card solution to fit your application requirements for chip type, programming and memory. Also, inquire about alternate form factors, such as contactless sticker cards, mini cards and fobs.

NFC   **RAIN RFID**   **CE**

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