

Mifare® proximity CARDS, TAGS & READERS

Mifare® technology for (proximity) smart cards & tags

When fast transport for large amounts of data, a high security level for the stored information and multiple applications on a single card or tag are required Mifare® is the technology of choice.

Features

Mifare® is characterised by its high data transaction speed. Above that the Mifare® chip contains 16 or 32 separate sectors (depending on card

re-sending of transmitted data.

Because of this Mifare® is exceptionally suitable for payment applications.

Cards

Keyprocessor's Mifare® cards comply with the ISO 7810 credit card size. The cards are of course very suitable for printing with text, a logo and or a photo. If required the cards can be supplied with a HiCo magnetic stripe on the backside of the card.

due to wear is very limited. The applied CMOS technology of the card and tag transponder ensures 100.000 writing cycles and a 10-year data retention under normal operating conditions.

One and the same card can be applied for several applications. A few examples are: access control, time and attendance, vending machines, paid parking, public transport, loyalty schemes and the storage of biometrics data.

CONTACTLESS READING & WRITING



memory) for storing information. The first sector is typically used for storing directory information. The remaining sectors can be used for storing for instance access control or balance information. As each sector is locked with its own security keys each sector can be used for a different application. The advanced security features prevent unauthorised reading of card data, brute force attacks and sniffing and

Mifare® tags

The small size of the Mifare® transponder permits it to be used into tags. The black epoxy tags are very robust and have the advantage that they can be worn on a key ring. Various other shapes and sizes are available upon demand.

Long lifecycle

As a result of contact-less reading and writing the chances of failure


Multi functional

One and the same card or tag can be used at once for a variety of applications such as access control, paid parking, copying, storage of biometric data, public transport, time & attendance, identification.

Various readers

Keyprocessor supplies two types of Mifare® readers: PX007MF SNR and PX007 MF. Both readers have an operating range of 2 up to 5 cm. The demanded security levels for payment applications limit the operating distance. The Mifare® serial number reader reads the unique serial number of the Mifare® chip in the card or tag. The Mifare® sector reader offers an extra high security level. One of the sectors of the card or tag is used to store the identification data. The other sectors of the card remain untouched.

TECHNICAL SPECIFICATIONS

Mifare® readers		
Card reading principle	ISO/IEC 14443A-3 / Mifare®.	
Frequency range	13.56 MHz.	
Data transmission	106 kBaud.	
Reading distance	0 - 5 cm.	
Power supply	5 - 12 Volt DC.	
Current	Current depends on model. Average : 15-130 mA Peak: 150-250 mA.	
Size (W x H x D)	46 x 140 x 22 mm.	
Housing	polyurethane, black.	
Temperature	-20 °C to 65 °C (-4 °F to 149 °F).	
Operating humidity	0 - 100% (condensing with sealed connections).	
LED's	Green, red.	
LED-functions	Power (green) /access (red) (externally controlled).	
Cable		
Connection	Via plug connection with screw connectors.	
Type	5 x 0,35 mm ² shielded (min.), 8 x 0,35 mm ² shielded (max.)	
Length	Max. 20 metre from controller.	
Proximity transponders		
Type	ISO/IEC 14443A-3 / Mifare®.	
Data transmission	Contactless.	
Operating frequency	13.56 MHz.	
Baudrate	106 kBaud.	
Transaction time	less than 100 ms.	
Read/write distance	Up to 1000 mm, antenna dependent.	
Data integrity	Fast anti collision.	
Multi-card operation	Fast anti collision.	
Life cycle	100.000 writing cycles, with 10-year data retention under operating temperature conditions.	
Energy	No battery, contactless energy.	
Chip technology	high speed CMOS EEPROM-process, single chip, one coil.	
Security mechanism	Fast anti collision protocol, individual access rights for each block, individual keys for each block, mutual authentication according to ISO/IEC DIS 9798-2, encrypted data, secure data protocol with CRC, unique serial number, transport key.	
Memory - 1 K	1024 x 8 bit EEPROM of which 768 byte free for use divided into 16 sectors of each 4 blocks. Sector 0 reserved for manufacturer data, serial number and MAD.	
Memory - 4 K	4096 x 8 bit EEPROM of which 3456 bytes free for use divided into 32 sectors of each 4 blocks and 8 sectors of each 16 blocks (a block consists of 16 bytes). Sector 0 reserved for manufacturer data, serial number and MAD.	
Cards		
Material	PVC, default white glossy surface, suitable for Photo-ID.	
Dimensions (W x H x D)	According to ISO 7810: 85,6 x 54 x 0,76 mm.	
Operation temperature	-35 °C to +50 °C / -31 °F to 122 °F (90% humidity).	
Mag stripe (option)	HiCo 3800 überstedt.	
Proximity tag		
Material	Epoxy EP 121.	
Dimensions (W x H x D)	31,5 x 245 x .16 mm.	
Operating temperature	-40 °C to +85 °C / -40 °F to +185 °F (90% humidity).	
Colour	Black.	

Subject to changes.

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