Anti-counterfeiting and anti-piracy technology guide

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Contact Chips

This technology works by embedding a microchip into a plastic card. The microchip contains unique product data, which is read by dipping or inserting the part of the card with the chip in it into a card reader. Contact chip technology is most commonly used for hotel room keys and pre-paid cards.



Used for

- Authentication
- Tracking/Tracing
- Anti-tampering / Anti-alteration

Suitable for

- Small products

Goes on

- Product

Can be used for

- Physical products

Visibility

- Invisible

Reading device needed

- Yes

Connection to server

- Yes

Description

Contact chips come in two forms – memory cards and microprocessor cards. These differ according to the characteristics of the microchip.

- Memory cards (memory-only smart cards). Here, the microchip contains a permanent memory component, in which data can be read and written through a set of functions in a pre-programmed wired logic circuit printed in the chip during production. The logic circuit includes a mechanism that protects access to the stored data, typically via a set of access permissions. These types of card offer secure data storage capabilities only.
- Microprocessor cards. Here, the microchip contains a microprocessor and therefore has computing power Uses Memory cards are used mainly to store data that does not require a high level of protection. They can be used in the exact same situations as magnetic stripe cards. Microprocessor cards are used to store and protect data that requires strong authentication mechanisms and a higher level of security in general. Implementation As contact chips are embedded in cards only comparable to small laptops. These ‘smart cards’ process, store and protect information via complex cryptographic algorithms.



Uses

Memory cards are used mainly to store data that does not require a high level of protection. They can be used in the exact same situations as magnetic stripe cards.

Microprocessor cards are used to store and protect data that requires strong authentication mechanisms and a higher level of security in general.

Implementation

As contact chips are embedded in cards only (not objects), you do not need to make any changes to the production process if you want to associate contact chips with your product(s).

Cost

The costs associated with contact chips will be determined by the type of microchip used. Memory-only smart cards are simpler and therefore cheaper.

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