

MIFARE DESFire Light card



The MIFARE DESFire Light card from NXP is a simplified, low-cost DESFire card with a pre-defined file system. It is intended to support a single application, using the latest DESFire EV2 commands with an upgrade path to the multi-application DESFire EV2 range. It can be used in various applications from access management to ticketing and loyalty. The MIFARE DESFire Light card operates at 13.56 MHz, according to ISO 14443A, and also complies with NFC standards. It has 640 bytes of total available memory, roughly equivalent to that on a legacy MIFARE Classic 1k card.

The MIFARE DESFire Light card comes with an impressive array of security options. The card supports up to five customer-defined AES 128-bit keys, mutual 3-pass authentication, a transaction counter and a configurable secure messaging mode. Random ID and an anti-tear mechanism guarantee data integrity during contactless transactions. There is also an elliptic-curve-based 'originality signature' that identifies both the card and data origin. The hardware and software in DESFire Light chips have been certified to Common Criteria EAL4.

These cards typically operate at a distance of up to 5cm, depending on the power provided by the reader. The card can also be configured as an NFC forum type 4 tag, allowing it to interact with mobile devices with NFC card reading capabilities.

Please check that your systems are compatible with DESFire Light prior to ordering a large quantity of these cards. Legacy applications that use previous generation (DESFire EV1) commands and file structures may not work without some adjustment.

Supplied as blank, white, printable PVC cards to ISO standard size and thickness. Our cards contain only original NXP chips and use premium quality materials and production methods in order to ensure maximum performance, reliability and compatibility.

Secure contactless RFID/NFC card with standard encryption algorithms and pre-defined file system, with 640 bytes memory. Operates at 13.56 MHz.

To buy, visit:

<https://www.smartcardfocus.com/shop/ilp/id~881/mifare-desfire-light-card/p/index.shtml>

This Product Briefing has been produced by Dot Origin Ltd, the smart card experts behind SmartcardFocus.com. If you have a query email sales@smartcardfocus.com or call us on +44 (0)1428 685250.

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Technical Specifications

EEPROM available memory: 640 bytes

Write-endurance: 200 000 cycles

Data retention: 10 years

Organisation: pre-defined file structure (compliant with MIFARE DESFire EV2)

- 3 standard data files (1 x 32 bytes and 2 x 256 bytes)
- 1 cyclic record file (4 records x 16 bytes)
- 1 value file for upper and lower limits in value operations
- optional Transaction Message Authentication Code file

Contactless Interface

Standards: ISO 14443A 1-4, NFC forum NFC Type 4

Frequency: 13.56MHz

Anticollision: bit-wise

Data rate: Up to 848 kbits/s

Operating distance: Up to 100mm

Security

Unique Serial Number: 7 bytes, cascaded

Random Number Generator: Yes

Access keys: Up to 5

Access conditions: Per file

AES security: 128-bit

Anti-tear support: Yes

Transaction counter: Yes

Transaction protection: TMAC key

Secure messaging mode: Optional, CMAC or full enciphering

Originality signature: Yes

Certification: CC EAL4 for chip (both hardware and software)

Special features

Single application

Pre-defined file structure

Purse functionality: Value file

Manufacturer: NXP