



Secure 13.56 Mhz
contactless memory chips

PicoTag® 2KS

PicoTag® 2KS is a highly optimized chip for single applications. Millions of PicoTag chips are currently being used in smart cards for applications such as transport, access control, ID and in RFID tags and labels for logistics and object tracking. PicoTag offers the combination of ISO 15693 communication standard compatibility and cryptographic security for payment and data protection.

Features

- 13.56 MHz operating frequency
- Standard communication protocol ISO 15693 - 2 fast
- Read/Write EEPROM memory
- Memory Size: 2K bits
- Fast anti-collision 50 chips/s
- Unique 64 bit serial number
- Authentication using Inside's proprietary cryptographic algorithm
- Write protection by cryptographic signature
- Operating range up to 1.5 m
- PowerGuard® Anti-tearing function
- Compliant with other Inside's contactless chips

Typical applications

- Access control
- ID cards
- Payment
- Toll Gate
- Transport
- Border Control
- Security
- Ski Pass
- RFID (secure tags, smart labels)
- Anti counterfeit

Product characteristics

PicoTag 2KS is a secure chip where access to data is protected by cryptographic authentication. Two unique debit and credit keys are used to manage two different applications or a secure stored value system. PicoTag is able to communicate at both Proximity and long range distances with data rates of 26 Kbps.

Benefits

PicoTag 2KS offers benefits for both Smart Card and secure RFID applications

- Security allows developers to design systems that require data to be protected by cryptographic authentication. This ensures that only the right reader has access to the chip.
- Fast anti-collision (50 chips/s) identifies and selects a number of chips in the field at the same time.
- ISO 15693 communication support allows to combine long range identification with Proximity payment for applications like transport and ski pass.

Key Technical DATA of the PicoTag 2 KS chip

Features	PicoTag 2KS
Protocol	ISO 15693-2 Fast Mode
Carrier frequency	13.56 MHz
Baud rate	26 Kbits/s
Anti collision	50 chips/s
Unique serial number	64 bits
EEPROM Memory size	2K bits
Secure Stored Value Area	65534 units
Recharging counter	65535 times
Cryptographic authentication	64 bits key length
Key area	Credit and debit keys
Read/Write protection by security	Yes
Read/Write lock fuses	Yes
Smart E.A.S.	Yes
EEPROM cycle	Over 100K cycles
EEPROM data retention	10 years
Operating temperature	- 40 to + 85° C

INSIDE contactless chip offer

Product	ISO standards	Cryptographic Security	Memory size and personalization
PicoPass 16KS	ISO 15693 &	Yes	(8 x 2K pages) or (1 x 16K page)
PicoPass 2KS	ISO 14443B		2K bits
PicoTag 16K	ISO 15693	No	1 x 16K page
PicoTag 2K			2K bits
PicoTag 2KS		Yes	2K bits
PicoCrypt 16KS	ISO 14443A	Yes	(8 x 2K pages) or (1 x 16K page)
PicoCrypt 2KS			2K bits

Packaging. For the choice of packaging options and details please contact INSIDE.

PicoTag 2KS Chip Block Diagram

