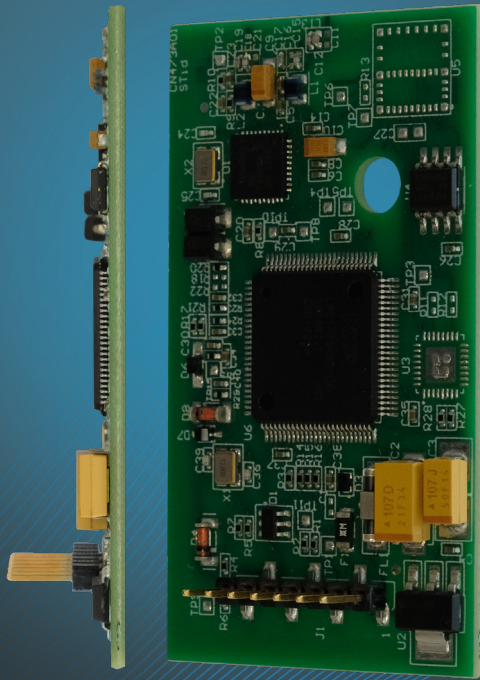


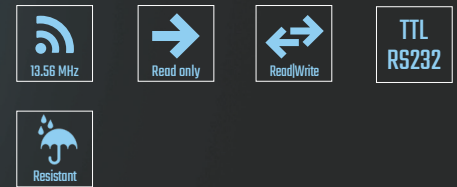


## HIGH SECURITY OEM MODULE MIFARE® DESFIRE® EV2 RFID CARDS



### COMPATIBILITY

- MIFARE® credentials
- NFC Smartphones
- SECard software
- SSCP v1 & v2 protocols



### CERTIFICATIONS



### A HIGH-SECURITY INTEGRATED MODULE

The MS2 module, which uses the latest levels of advanced security, is specially designed for your contactless high-security identification and access control applications. With its built-in antenna, this extremely compact module can be easily integrated in even the most restricted spaces.

### WELCOME TO HIGH SECURITY

The module supports the latest contactless MIFARE® and DESFire® EV2 chip technologies, with their new data protection measures:

- **Secure Messaging EV2** : a method that secures transactions by protecting them against interleaving and replay attacks.
- **Proximity Check** : protection against relay attacks.

All public encryption algorithms can be used (3DES, AES, RSA, SHA, etc.), which are recommended by official data security agencies (such as the French national agency ANSSI).

### MIGRATE IN COMPLETE PEACE OF MIND

The MS2 simplifies the management of extensions, upgrades and technological migrations.

It is compatible with many 13.56 MHz contactless identification technologies :

- MIFARE® : Ultralight® & Ultralight® C, Classic & Classic EV1, Plus® & Plus® EV1, DESFire® 256, EV1 & EV2,
- CPS3,
- NFC smartphones (HCE),
- PicoPass® and iCLASS™\* (CSN only).

When migrating, or in complex multi-site configurations, it can be used to read different types of badges and to gradually switch to mobile technologies.

### FLEXIBILITY & SCALABILITY

This new module boasts the high processing power required for quick and easy updates. Updates can be easily managed on site to extend the life cycle of your installations.

### AN OPEN ECOSYSTEM

Our modules are based on open technologies, standards and recognized public encryption algorithms.

This ambition runs counter to proprietary technologies and enables organizations to keep control of their security policy, in compliance with the recommendations of the French State information systems agency (ANSSI).

### STANDING THE TEST OF TIME

With its tropicalized electronics, the MS2 is highly resistant to water and dust. It can be integrated perfectly into your outdoor identification applications.

## SPECIFICATIONS

Operating frequency/Standards	13.56 MHz: ISO14443A types A & B, ISO18092
Chip compatibility	MIFARE® Ultralight® & Ultralight® C, MIFARE® Classic & Classic EV1, MIFARE Plus® (S/X) & Plus® EV1, MIFARE® DESFire® 256, EV1 & EV2, CPS3, NFC (HCE), PicoPass® (CSN only), iCLASS™ (CSN only*)
Functions	Read only: CSN or private ID (sector/file) / Secure Protocol (Secure Plus) / Secure Read Write
Antenna	Integrated
Communication interfaces & protocols	TTL protocol Data Clock (ISO2) or Wiegand (ciphered mode S31) Asynchronous RS232 serial output with TTL levels (encrypted option - S31) with secure SSCP v1 and v2 communication protocols
Reading distances**	Up to 5 cm / 1.97" with a MIFARE® DESFire® EV2 or Classic badge
Light indicator	One RGB two-color LED - Indication of the power supply / firmware version / communication / configuration recognition Configurable by card (standard) or by SSCP v1 and v2 controls
Power requirement	180 mA max / 5 VDC
Power supply	4.5 VDC to 9 VDC
Connectors	7-point HE14 male connector
Dimensions (h x w x d)	60 x 35 x 5 mm / 2.4 x 1.4" x 0.2"
Operating temperatures	- 30°C to + 70°C / - 22°F to + 158°F / Humidity: 0 - 95%
Protection / Resistance	IEC F EN 61086-compliant tropicalized electronic PCB - Weatherproof, water and dust resistant (apart from the connectors)
Mounting	5 mm / 0.2" diameter fastening hole
Certifications	CE, FCC & UL
Part numbers	Read only CSN - TTL .....MS2-R31-A/103-xx/0 Secure read only - TTL .....MS2-R31-A/PH5-xx/0 Secure read only - Secure Plus - TTL .....MS2-S31-A/PH5-xx/0 Secure read only - RS232 - TTL .....MS2-R31-A/PH5-5AB/0 Secure read only - Secure Plus - RS232 - TTL .....MS2-S31-A/PH5-5AB/0 Secure read write SSCP - RS232 - TTL .....MS2-W31-A/PH5-5AA/0 Secure read write SSCP v2 compliant CSPN - RS232 - TTL .....MS2-W31-A/PH5-5AD/0

## A DESIGNER OF MADE-TO-MEASURE MODULES

STid develops OEM modules adapted to your specific integration projects: support with the specifications, engineering, design, prototyping, standardization and industrial production.



## DISCOVER OUR CREDENTIALS



13.56 MHz  
ISO cards & key holders



NFC smartphones using  
STid Mobile ID® application

## USER-FRIENDLY MANAGEMENT TOOL



SECARD  
SECard configuration kit and  
SSCP & SSCP2 protocols

\*Our readers only read the serial number / UID of the iCLASS™ chip. They do not read HID Global iCLASS™ cryptographic protection. \*\*Caution: information on communication distances; they are measured at the center of the antenna, depend on the configuration of the antenna, the installation environment of the reader, the temperature, the supply voltage and the read mode (secure or not). External interference can reduce the reading distances.

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