

CONNECT  
FORWARD



# RFID Tagging Challenges Enabler

Co-bulid with SAGLab to Champion Your Success



Contact Us for More Information

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QC080000:2012  
H581533 IECQ



ISO14001  
EMS 589628



ISO9001:2008  
FM 59667

V202604-RN

### SAG is the **RFID Tagging Challenges Enabler**

SAG rises to conquer RFID tagging challenges, driven by excellence in tailored antenna design, material science, and self-developed machinery capabilities, connecting the world through digital identification and help our customers to connect forward.



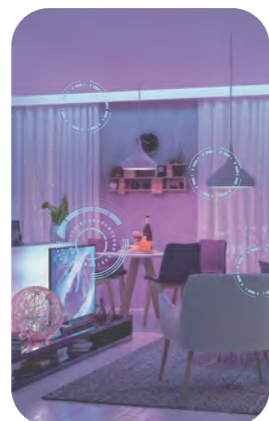
### Our Business and Services

Encompass Full Spectrum of Applications

We focus on the most complex challenges and customize your end-to-end tagging solution across high-end vertical segments.



Smart Healthcare



AIoT



Industrial



Security



RFID+1

### Products and Solutions

SAG leverages consulting strength and integrated process capabilities to deliver specific tagging solutions for your needs. Our diverse form factors cater to application-specific values, enhancing operational efficiency and paving the way for future-proof connectivity.



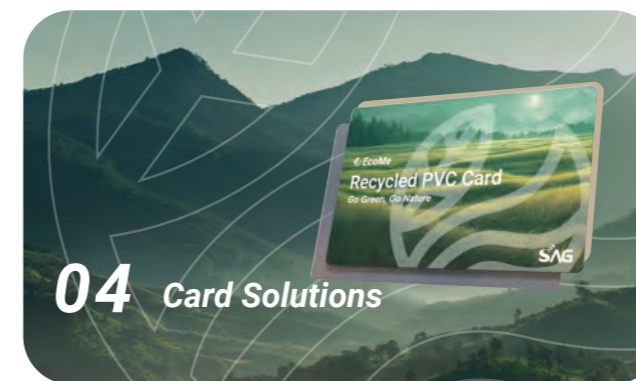
Read more on [page 05](#)



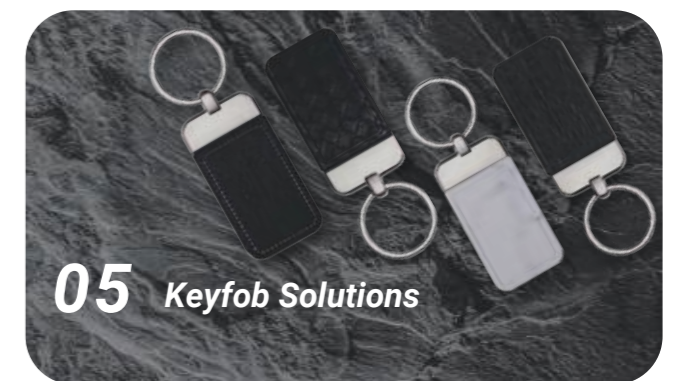
Read more on [page 07](#)



Read more on [page 11](#)

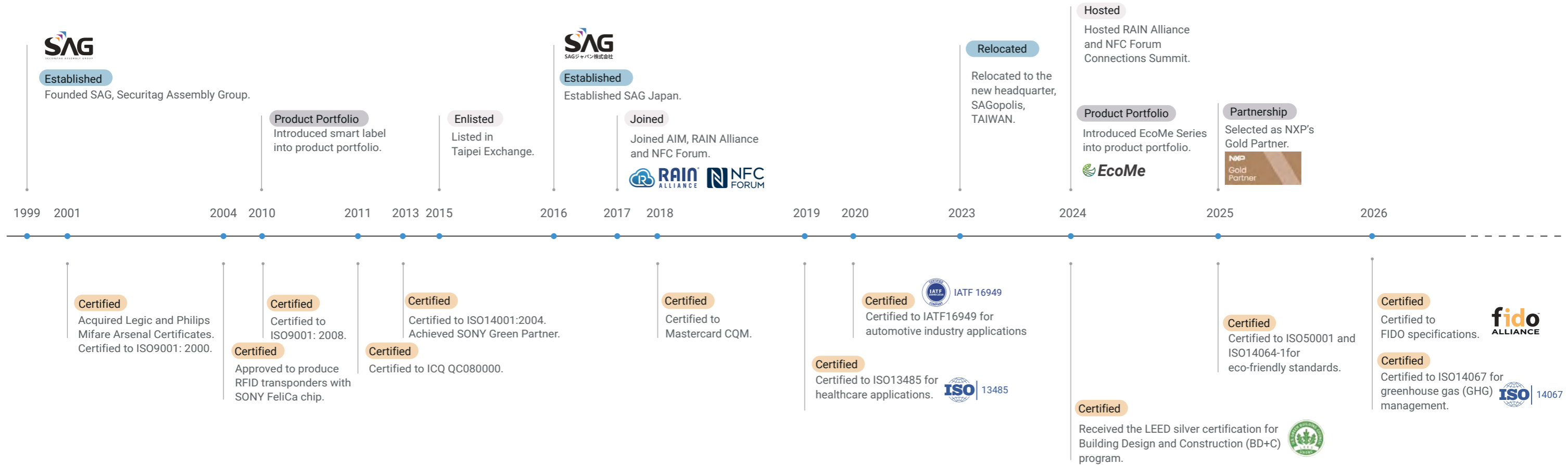


Read more on [page 21](#)



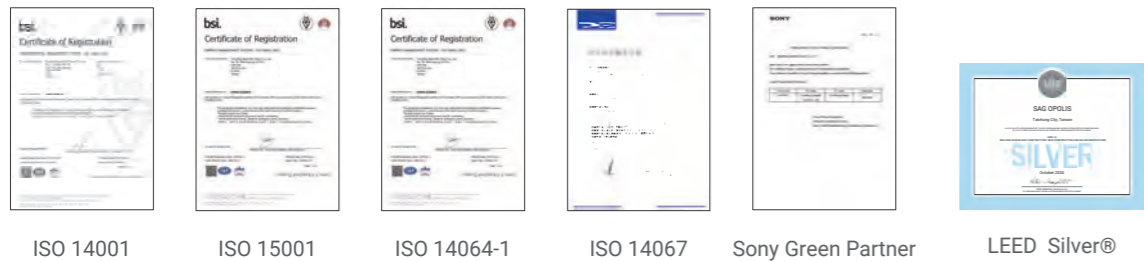
Read more on [page 23](#)

# SAG's journey

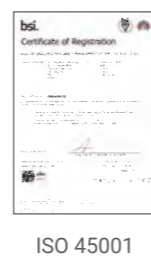


## Certifications

### ECO-FRIENDLY



### OCCUPATIONAL HEALTH & SAFETY



### QUALITY MANAGEMENT



### TECHNOLOGY CERTIFICATION



# 01 RFID+1

## Unlock Scalable IoT Applications by Extending RFID with Sensing, Intelligence, and More

RFID+1 represents a new level of synergy, where RFID technology integrates with advanced sensing and other technologies to unlock scalable IoT applications. It empowers smarter and more connected solutions across industries.



### Temp Tracker HF

SAG Temp Tracker, an NFC-enabled label with App support, measures temperature during the transport of temperature-sensitive substances such as vaccines and perishables.

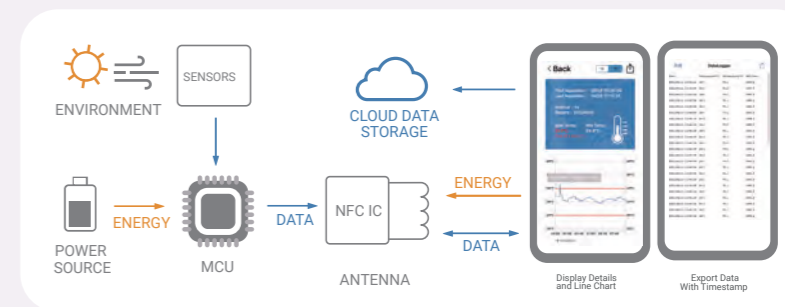
#### Features

1. Plug and Play Solution (App ready on iOS/Android)
2. Temperature accuracy of  $\pm 0.5^{\circ}\text{C}$  from  $-20^{\circ}\text{C}$  to  $60^{\circ}\text{C}$
3. Offers 700 hours of battery life or supports up to 4,000 data records, ensuring reliable performance throughout the product's service life

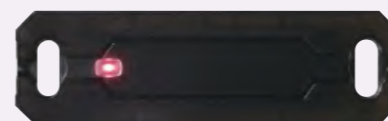
#### Specification:

- ▶ Dimension: L 85.6 x W 54 x T 1 mm
- ▶ Operating Temperature:  $-20^{\circ}\text{C}$  to  $60^{\circ}\text{C}$
- ▶ Storage Temperature:  $-20^{\circ}\text{C}$  to  $60^{\circ}\text{C}$
- ▶ IP Rating: IP54
- ▶ Data Logging: Up to 4,000 records
- ▶ Logging Intervals: Min 60 to Max 630 sec
- ▶ Battery Life: 700 hours after product activation or 6 months under inactive mode in room temperature

#### How Temp Tracker Works:



### LumID - LED Tag



#### Specification:

- ▶ Dimension: L 100 x W 30 x T 9 mm
- ▶ Operating Temperature:  $-30^{\circ}\text{C}$  to  $60^{\circ}\text{C}$
- ▶ Storage Temperature:  $-20^{\circ}\text{C}$  to  $60^{\circ}\text{C}$
- ▶ Battery type: User-replaceable CR2032, 3 volt

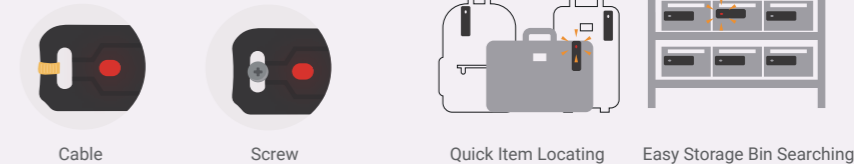
### UHF

The combination of RFID and LED helps light up to indicate what you are looking for from a distance.

#### Features:

1. Semi-active LED lighting from translucent housing
2. A variety of mounting methods (via screw, cable tie or double-sided tape)

#### Method of Fixation:



### Dynamic Tag Module (Ferrite Type / Molding Type)

#### Ferrite Type



#### Molding Type

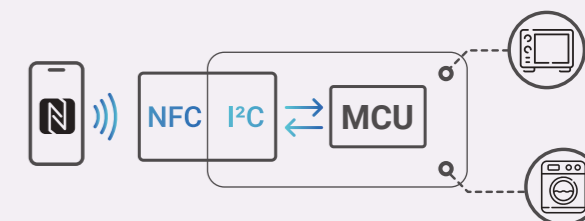


### HF

The Dynamic Tag Module integrates the antenna and IC into a compact unit with a dual-interface design, supporting NFC (NDEF-compliant) and I<sup>2</sup>C communication. It enables seamless integration with sensors and electronics via standard SMT. I<sup>2</sup>C provides direct system connectivity, while NFC enables wireless data access and configuration which is ideal for advanced IoT applications.

#### Specification:

- ▶ Dimension:
  - Ferrite Type:** L 8.0 x W 6.0 x T 1.35 mm
  - Molding Type:** L 8.0 x W 6.0 x T 0.75 mm
- ▶ Material: Ferrite / PCB
- ▶ Operating Temperature:  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$
- ▶ Storage Temperature:  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$



ISO Standard	IC & Application Note
14443	Non-Metal ST M24SR02-Y
15693	ST25DV04K



# 02 Label Solutions

## Achieve Item-Level Tracking and Gain Full Visibility

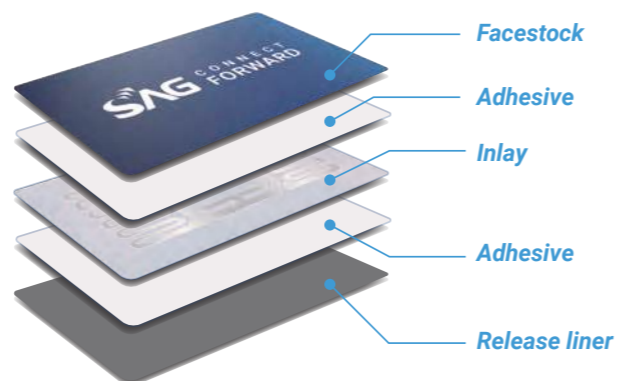
Explore our comprehensive RFID label portfolio, engineered for diverse applications. From asset tracking to supply chain management, our solutions enable businesses to improve efficiency, enhance security, and ensure accurate data capture at scale.

### Production Capability

#### Material and Structure

- ▶ Facestock: art paper, PET/PP synthetic paper with glossy finish
- ▶ Facestock adhesive: permanent adhesive
- ▶ Antenna material: aluminum
- ▶ Antenna substrate: PET
- ▶ Label adhesive: Available options for specific applications, like high-temp resistance or extreme cold environments.
- ▶ Release liner: Glassine

Label Structure



### Production Capability

#### Personalization

Full color pre-printed on facestock. Thermal transfer printing for UID, serial number, barcode/QR code, data encoding service

#### Reliability Test

- Environmental test: heat and cold; thermal shock
- Dynamic durability test: die shear, bending
- Electrical-resistant test: ESD test according to IEC 61000-4-2 contact discharge

#### Quality Control

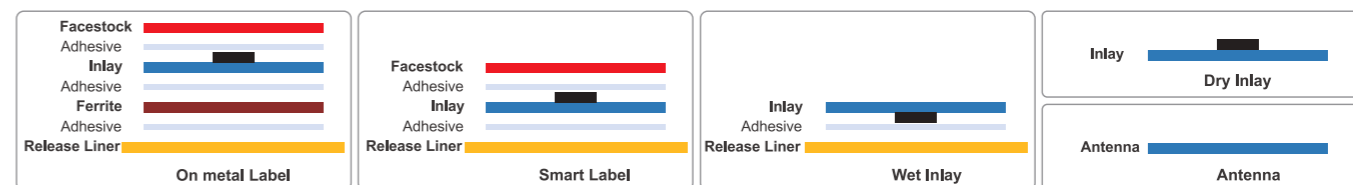
- Antenna: 100% SAG-developed Self Resonance Frequency (SRF) test
- Inlay and Label: 100% reading test
- Cross mark (x) is put onto NG piece (Premium roll is an option for consecutive good labels.)

#### Packaging Options

- Standard package: paper core
- Optional package: PC core for high end application



### Product Format



### Label Value-added Services



#### ShieldX

Glob-top Chip Protection  
Better resistibility to physical impact and environmental stress



#### FreezX

Deep Freeze Application  
Specialized label to survive ultra-low temperature (-80 °C / -112 °F).

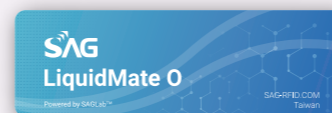
### Special Label Solutions

#### LiquidMate O

UHF

#### UHF Anti-liquid Label Solution

LiquidMate O is a category-defining RFID label designed for scalable pharmaceutical traceability. It overcomes interference across various injectable categories, enabling a single label to be used across multiple products. Meanwhile, it is optimized for curved surfaces, ensuring reliable tagging on glass vials. LiquidMate O also maintains high-density reliability, delivering consistent performance and accurate tracking even in crowded storage environments. Based on anti-liquid technology, we can provide customized product solutions for handling liquid-filled containers in other use cases.



Specification:

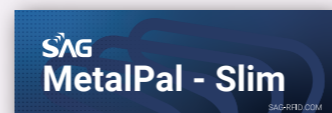
- ▶ Die Cut Dimension: L62 x W20 mm
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 85°C
- ▶ RFID Chip: Impinj M781
- ▶ EPC /User Memory: 128/512 bits
- ▶ Frequency : 902-928(FCC - US)

#### MetalPal - Slim

UHF

#### UHF Metal Label Solution

Built on a ferrite-based structure, MetalPal - Slim is engineered for reliable outdoor operation, maintaining consistent performance even in high-humidity environments. With broadband capability and stable read sensitivity, MetalPal - Slim enables dependable UHF RFID asset tracking across diverse metal surfaces, delivering consistent data capture wherever durability and space efficiency matter most.



Specification:

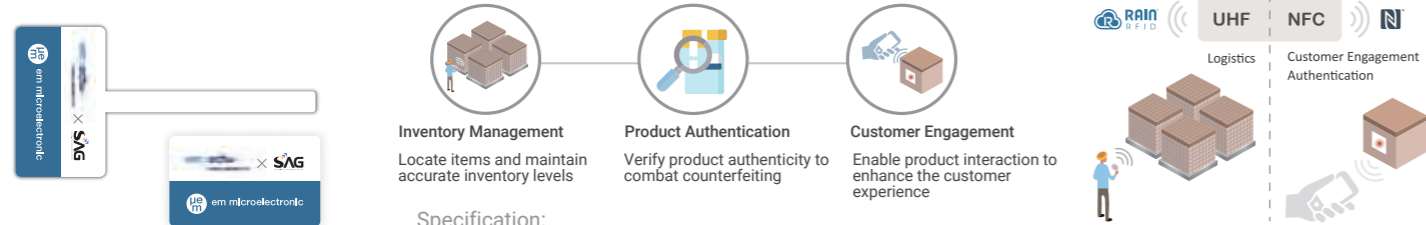
- ▶ Die Cut Dimension: L70 x W25 x T0.66 mm
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 85°C
- ▶ RFID Chip: Impinj M830
- ▶ EPC Memory: 128bits
- ▶ Frequency : 902-928(FCC - US)

# Label Solutions

## Dual Frequency RFID Label

HF UHF

This special label can operate on both NFC and RAIN RFID (UHF) technologies. Powered by em | echo-V chip (EM4425), it provides an application crossover and opens up the possibility to apply just one label to fit all use cases in two domains.



- Specification:
- ▶ Dimension: L 30 x W 50 mm
  - ▶ L 100 x W 50 mm (Tamper Proof)
  - ▶ RFID Chip: EM4425
  - ▶ Operating Temperature: -25°C to 70°C
  - ▶ Storage Temperature: -25°C to 70°C

## Windshield Label

UHF



Applying this label onto windshield to get a hands-free parking experience. The chip area is coated to enhance its UV protection capability when the label is exposed to the direct sunlight. Meanwhile, the label has security cut for tamper evident when removal.

- Specification:
- ▶ Dimension: L 106.5 x W 28.5 mm
  - ▶ RFID Chip: NXP UCODE 8
  - ▶ Operating Temperature: -40°C to 80°C
  - ▶ Storage Temperature: -40°C to 80°C

## MetalPal - Curved

UHF



MetalPal - Curved is a high-performance RAIN RFID (UHF) smart label engineered for metal items with curved surfaces. Measuring 38 x 10 mm, it offers a versatile tracking solution for items with limited space for tags. Its flexible design delivers exceptional reading range and reliability on pipes, tubes, and tools. Ideal for asset and inventory management, MetalPal - Curved streamlines tracking of complex metal items that standard labels fail to perform.

- Specification:
- ▶ Dimension: L 38 x W 10 mm
  - ▶ RFID Chip: Impinj M781
  - ▶ Operating Temperature: -25°C to 85°C
  - ▶ Storage Temperature: -25°C to 85°C

## MetalPal - Classic

UHF

(Roll to Roll)



This roll-to-roll UHF label provides superior reading performance while offering higher data transfer speeds. It is suitable for asset management and inventory control.

- Specification:
- ▶ Dimension: L 75 x W 25 x T 1.3 mm
  - ▶ RFID Chip: NXP UCODE8
  - ▶ Operating Temperature: -25°C to 70°C
  - ▶ Storage Temperature: -25°C to 70°C

## UHF Metal Label

UHF

(Single Piece)



90x28 On-metal Label provides excellent performance and long read range up to 4 meters. Its performance goes well on metallic objects for various applications.

- Specification:
- ▶ Dimension: L 90 x W 28 x T 0.8 mm
  - ▶ IP Rating: IP68
  - ▶ Operating Temperature: -40°C to 85°C
  - ▶ Storage Temperature: -40°C to 85°C
  - ▶ RFID Chip: Impinj Monza 4QT

## UHF Label

UHF

Label with customized die cut size is upon request.

Model								
Die cut size (mm)	48 x 48	53 x 53	12 x 26	19 x 30	19 x 44	33 x 53	6 x 94	Ø15
Antenna size (mm)	● 44 x 44	51 x 51	● 8 x 22	● 16 x 26	● 15 x 40	● 30 x 50	● 3 x 90	● Ø12
Available chip	Impinj Monza 4	Impinj Monza 4QT	Impinj Monza 4	Impinj Monza 4QT	NXP UCODE 8	NXP UCODE 8	Impinj Monza 4	Impinj Monza 4E

● library ● apparel ● near-field ● logistics, asset management

Die cut size (mm)	Tamper Proof Label		
	30 x 45	52 x 52	42 x 26.5
Antenna size (mm)	Embedded Antenna by IC type		37 x 21
Mifare Classic EV1	●	●	
Mifare DESFire EV1 (4K/8K)	●	●	
Mifare Ultralight EV1	●	●	
Mifare Ultralight C	●	●	
NTAG213	●	●	
ICODE SLIX	●	●	
Legic MIM256	●	●	
Legic ATC1024 / ATC256	●	●	
ST25TV02KC-T			●

- for non-metal application (all in reel format)
- for on-metal application (all in reel format)
- provided in single piece

Die cut size (mm)	CD/DVD Label										
	Φ15	Φ18	Φ25	Φ27	Φ27	Φ28	Φ29	Φ38	29 x 29	Φ35 center hole 16	Φ38 center hole 16
Antenna size (mm)	Φ13	Φ16	Φ23	Φ23	Φ24.2	Φ25	Φ25	Φ34	Φ25	coil antenna	Φ35
EM4102							●			●	
EM4332							●				
Mifare Ultralight EV1				●			●				
Mifare Ultralight C							●				
Mifare Classic EV1 1K			●	●							
Mifare Classic EV1 256B							●				
NTAG 213	●						●	●	●		●
NTAG 215			●	●			●	●			
NTAG 216			●	●			●	●			
NTAG 424 DNA	●	●					●				
ICODE SLIX							●	●			●
ICODE SLIX 2			●	●			●				
FeliCa RC-S966							●	●			
ST25TA02KB	●						●				
ST25TV512							●				
ST25TV02K			●				●				
ST25TV512C			●			●	●				
ST25TN01K	●						●				
Tag-it HF-I Plus/ I Pro					●						

Die cut size (mm)	Cube										
	10 x 10	12.5 x 12.5	14 x 14	14.5 x 14.5	16 x 16	18 x 18	19 x 19	18 x 35	26.5 x 42	54 x 86	50.8 x 50.8
Antenna size (mm)	8.5 x 8.5	10.5 x 10.5	12 x 12	10.5 x 10.5	12 x 12	14.5 x 14.5	15 x 15	14 x 31	22.5 x 38	45 x 76	45 x 45
Mifare Ultralight EV1									●	●	
Mifare Ultralight C									●	●	
Mifare Classic EV1 1K									●	●	
NTAG 213			●		●		●	●	●	●	
NTAG 213 TT									●	●	
NTAG 215					●		●		●	●	
NTAG 216					●		●		●	●	
NTAG 424 DNA / TT					●		●		●	●	
ICODE SLIX	●	●		●			●	●	●	●	●
ICODE SLIX-S									●	●	
ICODE SLIX 2								●	●	●	
ICODE ILT-M								●			
FeliCa RC-S966							●				
ST25TA02K		●									
ST25TA02KB					●						
ST25TV512								●			
ST25TV02K		●		●		●					●
ST25TV02KC						●			●	●	●
Tag-it HF-I Plus									●	●	●
Tag-it HF-I Pro									●	●	●



# 03 Tag Solutions

## Enable the Full Potential of RFID with Versatile Tag Form Factors

Designed for demanding environments, our hard tags deliver stable performance under extreme temperatures, high humidity, and metal interference. With a wide range of sizes and designs, they ensure reliable deployment across diverse surfaces and industrial applications.

## UHF Specialty Tag Solutions

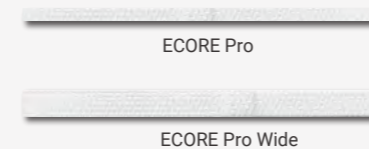
Beyond standard RFID tags, SAG offers a range of specialty tags designed for unique applications and challenging environments. From visual indicators to form-specific designs, these tags demonstrate how RFID can go further—enabling smarter, more interactive, and highly customized solutions.



### ECORE Pro / Wide

UHF

Discover how ECORE Pro delivers unmatched flexibility and durability for industrial applications. Built for demanding environments, it enables real-time visibility, IoT integration, and a smarter path to Industry 4.0.



#### Specification:

- Dimensions:
  - ECORE Pro: L 76 x W 2.5 x T 1.5 mm
  - ECORE Pro Wide: L 90 x W 5.4 x T 1.5 mm
- Operating Temperature: -40°C to 85°C
- Storage Temperature: -40°C to 85°C



Flexible

Resistance to Damage by Flexing  $\geq$  1,000 times (ISO 7854)



Industrial Laundry-resistant

Proven for  $\geq$  100 wash cycles (AATCC 135)



High Temp Resistance

Peak Temperature 210 °C for 2 mins (FTTS-YA-186)



Chemical Resistance

Acid - pH 4.0: 105°C for 6 hrs  
Alkali - pH 12.0: 135°C for 4 hrs (FTTS-YA-186)

### Ring Tag

UHF

Ring Tag requires no adhesive or screws. Instead, it is effortlessly press-fitted and drilled into a metal item to ensure a seamless and sleek finish.



D20 mm



D30 mm

#### Specification:

- Dimension: D 30 x T 2.4 / D 20 x T 2.3 mm
- Applicable Surface: In-metal
- RFID Chip: NXP UCODE 8
- Operating Temperature: -40°C to 85°C
- Storage Temperature: -40°C to 85°C
- Frequency: 865-868 MHz(ETSI - EU), 902-928(FCC - US)

# UHF Tag Solutions

From overmolded industrial tags to flexible on-metal options, our UHF lineup supports logistics, asset tracking, RTIs, and tool management— ensuring durable and consistent performance in demanding environments.



## MetalEvo

UHF

MetalEvo's slim design fits narrow structures. With versatile mounting options and durable housing, it performs reliably on metal surfaces and withstands harsh outdoor environments.



Specification:

- ▶ Dimension: L 78 x W 21 x T 11 mm
- ▶ Material: Nylon
- ▶ Applicable Surface: On-metal
- ▶ RFID Chip: NXP UCODE 8 / UCODE 9xm
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 120°C
- ▶ IP Rating: IP68
- ▶ Frequency: 865-868 MHz(ETSI - EU), 902-928(FCC - US)

## Overmolded Brick Mini Metal Tag

UHF

Powered by NXP UCODE 8/9xm, Overmolded Brick Mini Metal Tag fits small spaces while providing superior reading performance for its size.



Specification:

- ▶ Dimension: L 50 x W 25 x T 6 mm
- ▶ Material: Nylon
- ▶ Applicable Surface: On-metal
- ▶ RFID Chip: NXP UCODE 8 / UCODE 9xm
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 120°C
- ▶ IP Rating: IP68
- ▶ Frequency: 865-868 MHz(ETSI - EU)  
Frequency: 902-928(FCC - US)

## Overmolded Square Metal Tag

UHF Dual

Overmolded Square Metal Tag features its global band with robust housing for on-metal applications such as returnable containers and reusable logistics assets.



Specification:

- ▶ Dimension: L 53 x W 44 x T 11 mm
- ▶ Material: Nylon
- ▶ Applicable Surface: On-metal
- ▶ RFID Chip: NXP UCODE 8 / UCODE 9xm  
EM4425
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 120°C
- ▶ IP Rating: IP68
- ▶ Frequency: Global 860-960 MHz

## Overmolded Uni Metal Tag

UHF

Overmolded Uni Metal Tag is designed to be read in the rear of a metallic object. It helps realize applications where a traditional metal tag sees a challenge. This tag sees no obstacles and makes front reading not the only choice.



Specification:

- ▶ Dimension: L 52 x W 23 x T 5.7 mm
- ▶ Material: Nylon
- ▶ IP Rating: IP68
- ▶ Applicable Surface: On-metal
- ▶ RFID Chip: NXP UCODE 8  
IMPINJ M830
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 125°C
- ▶ Peak temperature resistant 200°C/1Hr
- ▶ Frequency: 865-868 MHz (ETSI-EU)  
902-928 MHz (FCC-US)

## HeatX Brick Metal Tag-PPS

UHF

HEAT

HeatX - Brick is a RAIN RFID (UHF) tag built with durable PPS plastic, delivering reliable performance in harsh or chemical environments.

Specification:

- ▶ Dimension: L 54 x W 36 x T 13 mm
- ▶ Material: PPS
- ▶ Applicable Surface: On-metal
- ▶ RFID Chip: NXP UCODE 8 / UCODE 9xm
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -55°C to 150°C
- ▶ IP Rating: IP68
- ▶ Frequency: 865-868 MHz(ETSI - EU), 902-928(FCC - US)



### Chemical Resistance Remark

#### PPS Standard

H2SO4 10%	168 hours	NaOH 10%	168 hours
HNO3 40%	168 hours	Acetic Acid 100%	5 mins



## On-metal Stick Tag

LF HF UHF

On-metal Stick Tag is built with industrial grade plastic to withstand harsh conditions. The tag can be mounted on items with metal surface by using adhesive or screw in the 4.5mm central hole. The flat surface can be laser-marked with logo or numbering to assist visual identification.



Specification:

- ▶ Dimension: OD 34 x ID 4.5 x T 6 mm
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 100°C
- ▶ Frequency: 865-868 MHz (ETSI-EU) / 902-928 MHz (FCC-US)
- ▶ Material: Nylon
- ▶ Applicable Surface: On-metal
- ▶ IP Rating: IP68
- ▶ Color Options:  
▶ Yellow / Green / Blue / Red / Black

## TPV Flexible Tag

UHF

RAIN RFID (UHF) TPV Flexible Tag, made of thermoplastic vulcanizate (TPV), is ideal to fit a curved surface on a non-metal item. This tag can also go to metal items by fixing the yellow tag with Panduit cable tie to one hole. It ideally acts as an inspection tag when placed on equipments or machines.



Specification:

- ▶ Dimension: L 25.5 x W 83 x T 3 mm
- ▶ Material: TPV
- ▶ IP Rating: IP68
- ▶ Applicable Surface: Non-metal
- ▶ RFID Chip: Impinj Monza 4QT
- ▶ Operating Temperature: -40°C to 70°C
- ▶ Storage Temperature: -40°C to 70°C
- ▶ Frequency: Global 860-960 MHz

## Overmolded Stick Tag

LF HF UHF

With a central hole, Overmolded Stick Tag can be easily fixed on non-metal objects for warehouse management, process control and asset tracking.

Specification:

- ▶ Dimension: OD 22 x ID 3 x T 3.1 mm HF
- ▶ Dimension: OD 30 x ID 5 x T 2.5 mm LF HF
- ▶ Dimension: OD 30 x ID 5 x T 3 mm HF UHF
- ▶ Dimension: OD 50 x ID 5x T3 mm LF HF
- ▶ Material: Nylon
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 120°C
- ▶ IP Rating: IP68
- ▶ Applicable Surface: Non-metal
- ▶ Frequency: 865-868 MHz (ETSI-EU)  
902-928 MHz (FCC-US)



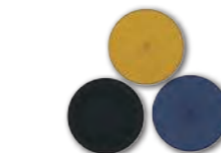
## Token Tag

LF HF UHF

Token Tag is created by polycarbonate into a coin shape. It is popular for vending machine and toll collection application.

Specification:

- ▶ Dimension: D 30 x T3 mm
- ▶ IP Rating: IP68
- ▶ Applicable Surface: Non-metal
- ▶ Material: PC / ABS+PC
- ▶ Operating Temperature: -25°C to 70°C/-10°C to 50°C
- ▶ Storage Temperature: -40°C to 90°C/-20°C to 50°C





## CoreX Series Embeddable Tag Solutions

With a compact form factor, embeddable tags fit seamlessly into space-constrained products while maintaining durability and performance. Ideal for tool tracking, medical instruments, industrial equipment, and brand protection, they deliver reliable performance in harsh environments and extreme temperatures—providing secure, space-efficient identification where it matters most.

### CoreX NFC Ferrite Tag

HF

HEAT

NFC Ferrite tag 0503 and 0402 (the smallest in the category) are designed to empower a device with NFC function. Crafted for operation in free-air and on-metal environments respectively, they are also suitable for SMT process.

#### 0503 Specification:

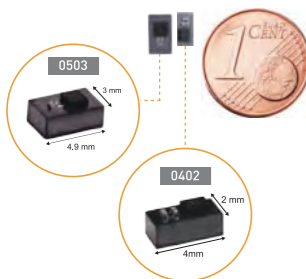
ISO Standard	IC & Application Note	
	On-Metal	Non-Metal
14443	NTAG213	NTAG213
	ST25TA02K	ST25TA02K
	ICODE SLIX 2	ICODE SLIX 2
15693	ST25TV02K	ST25TV02K
	MB89R118	MB89R118

- ▶ Dimension:  
0503: L 4.9 x W 3.0 x T 2.4 mm  
0402: L 4.0 x W 2.0 x T 2.0 mm

- ▶ Material: Ferrite
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -80°C to 220°C

#### 0402 Specification:

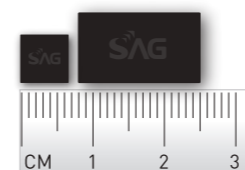
ISO Standard	IC & Application Note	
	On-Metal	Non-Metal
15693	ICODE SLIX 2	ICODE SLIX 2
	ST25TV02K	ST25TV02K



### NFC Chip

IC Type	Type 2 IC	Type 3 IC	Type 4 IC	Type 5 IC
Standards	ISO/IEC14443A	ISO/IEC 18092 JISX 6319-4 Felica	ISO/IEC14443A/ IEC14443B	ISO/IEC15693
Read/Write Speed	106 Kbit/s	212 Kbit/s - 424 Kbit/s	106 Kbit/s	26 Kbit/s (up to 53)
Anti-collision	Yes	Yes	Yes	Yes
Dynamic NFC ICs	NXP NTAG IC		M24SR02-Y	ST25DV04K
NFC ICs	NXP NTAG213 NXP NTAG213TT (Tag Tamper) NXP NTAG215 NXP NTAG216 NXP MIFARE Ultralight EV1 NXP MIFARE Ultralight C ST25TN EM4332	Sony Felica RC-S966	ST25TA02K/16K/64K-P ST25TB512/04K NXP DESFire EV1/EV2/EV3 NXP NTAG424 DNA NXP NTAG424 DNA TT	ST25TV512C/02KC ST25TV512/02K EM4425 NXP ICODE SLIX2

### CoreX Molding Tag



HF UHF

HEAT

Molding Tag is an embeddable RFID tag. With enhanced protection to the chip and antenna, this tag can withstand higher temperature and environmental impact than PCB Tag.

Specification:

- ▶ Dimension: L 6.7 x W 6.7 x T 0.75 mm HF UHF  
L 17 x W 9.8 x T 0.75 mm UHF
- ▶ Material: PCB + Compound
- ▶ IP Rating: IP67
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -80°C to 200°C
- ▶ Peak Temperature: 250°C for 24 hrs HF  
200°C for 240 hrs UHF

### CoreX Molding Metal Tag



HF

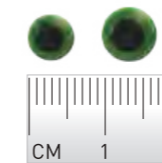
HEAT

Molding Metal Tag is a hassle-free tag solution in a miniaturized form factor for on-metal applications. With enhanced protection to the chip and antenna to guarantee its resistibility under harsh environment.

Specification:

- ▶ Dimension: D 6 x T 0.9 mm
- ▶ Material: PCB + Compound
- ▶ IP Rating: IP67
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -80°C to 200°C

### CoreX PCB Tag



HF

PCB Tag is ideal for small containers or applications that require a small RFID tag when there is limited tagging space. We also provide smallest-ever metal tag with tuned frequency to fit your on-metal application.

Specification:

- ▶ Dimension:  
D 6 x T 1.1mm (on metal)  
D 6.75 / 7.5 x T 0.9 mm (non-metal)
- ▶ Material: PCB
- ▶ Operating Temperature: -25°C to 55°C
- ▶ Storage Temperature: -25°C to 85°C
- ▶ IP Rating: IP65

### CoreX Plug Metal Tag



HF

Plug Metal Tag resembles a metric bolt (M7 x P1.0) to be screwed or plugged into a metallic item. It works with an inductive coupler or NFC-enabled device from reading inside metal. Ideal for production control or asset management.

Specification:

- ▶ Dimension: M 7 x P 1 x H 4 mm
- ▶ Material: Nylon
- ▶ Applicable Surface: In-metal
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 120°C
- ▶ IP Rating: IP68

# LF / HF Tag Solutions

With versatile formats including cable tie, stick-on, and screw-mount designs, these tags integrate easily into tools, machinery, cables, and reusable assets. Compatible with LF, HF and NFC standards, they're ideal for access control, asset authentication, and industrial tracking scenarios.

## HeatX HeatX - SQ51



LF HF

HEAT

HeatX - SQ51 is designed to meet industrial and automotive applications with harsh working conditions. Made from PPS, this robust tag offers great resistance to high-temperature, mechanical stress and most chemicals. The high-temperature tags have been successfully tested to sustain 220°C for 1000 hours. Meanwhile, HeatX-SQ51 features a user-friendly screw mount design, making installation quick and hassle-free.

Specification:

- ▶ Dimension: L 51 x W 51 x T 6.4 mm
- ▶ Material: PPS
- ▶ IP Rating: IP68
- ▶ Storage Temperature: -20°C to 85°C
- ▶ Operating Temperature: -20°C to 85°C
- ▶ Peak Temperature: 220°C / 1000hrs

## HeatX On-metal Stick Tag - PPS



HF

HEAT

The HeatX On-metal Stick Tag-PPS utilizes PPS plastic for peak performance in high-temperature and corrosive environments. Designed for metal surfaces, this rugged RFID tag offers screw, adhesive, or zip-tie mounting to accelerate installation across industrial, automotive, and logistics sectors.

Specification:

- ▶ Dimension: OD 34 x ID 4.5 x T 6 mm
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 100°C
- ▶ Peak Temperature (PPS): 200°C / 50 hrs
- ▶ Material: PPS
- ▶ Applicable Surface: On-metal
- ▶ IP Rating: IP68
- ▶ Frequency: 865-868 MHz (ETSI-EU) / 902-928 MHz (FCC-US)
- ▶ Peak Temperature (PPS): -55°C / 72hrs

### Chemical Resistance Remark

#### PPS Standard

H <sub>2</sub> SO <sub>4</sub> 10%	168 hours	NaOH 10%	168 hours
HNO <sub>3</sub> 40%	168 hours	Acetic Acid 100%	5 mins



## Cable Tie Tag



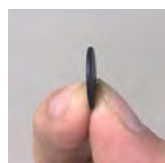
HF

Cable Tie Tag fastens items securely for tracking and workflow control. One-time use ensures tamper resistance with NFC support; black version additionally offers UV resistance and laser marking.

Specification:

- ▶ Dimension: L 195 x W 8.3 x T 1.3 mm
- ▶ Material: Nylon
- ▶ Flammability Classification: UL94 V-2
- ▶ Min: Tensile Strength: 215 Nm
- ▶ Storage Temperature: -20°C to 85°C
- ▶ Operating Temperature: -20°C to 85°C
- ▶ IP Rating: IP68

## Button Tag



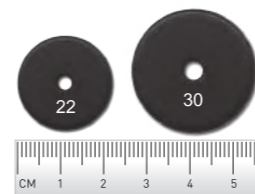
LF HF

Button Tag is available in a range of small sizes. It is ideal for a size-constrained object or a limited area where RFID is needed.

Specification:

- ▶ Dimension: D 10 x T 1.8 mm
- ▶ Dimension: D 14.5 x T 3 mm
- ▶ Material: Nylon
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 90°C
- ▶ IP Rating: IP68
- ▶ Applicable Surface: Non-metal
- ▶ Dimension: D 12.4 x T 2mm
- ▶ Dimension: D 20 x T 2.5 mm
- ▶ Material: Nylon
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 90°C
- ▶ IP Rating: IP68 / IP69K
- ▶ Applicable Surface: Non-metal
- ▶ Dimension: D 16 x T 1.3 mm
- ▶ Material: Nylon
- ▶ Operating Temperature: -25°C to 80°C
- ▶ Storage Temperature: -25°C to 80°C
- ▶ IP Rating: IP68
- ▶ Applicable Surface: Non-metal
- ▶ Dimension: D 22 x T 3 mm
- ▶ Material: Nylon
- ▶ Operating Temperature: -25°C to 85°C
- ▶ Storage Temperature: -40°C to 120°C
- ▶ IP Rating: IP68
- ▶ Applicable Surface: Non-metal

## Overmolded Metal Stick Tag



HF

Overmolded Metal Stick Tag (size 22/30mm in diameter) has a slim but robust housing for industrial applications. The tag can be mounted to items with metal surface by using adhesive or screw in the 3.1/5mm central hole. The flat surface can be laser marked with logo or numbering to assist visual identification.

Specification:

- ▶ Dimension: OD 22 x ID 3.1 x T 3 mm
- ▶ Dimension: OD 30 x ID 5 x T 3 mm
- ▶ Operating Temperature: -40°C to 85°C
- ▶ Storage Temperature: -40°C to 120°C
- ▶ Material: Nylon
- ▶ Applicable Surface: On-metal
- ▶ IP Rating: IP68

## GF Stick Tag



LF HF

GF Stick Tag can be put on non-metallic surface for tracking, data recording or regular patrol purpose.

Specification :

- ▶ Dimension: OD 20 x ID 3 x T 1.6 mm
- ▶ Dimension: OD 30 x ID 3.2 x T 1.6 mm
- ▶ Dimension: OD 50 x ID 3 x T 1.6 mm
- ▶ Dimension: OD 50 x ID 4.3 x T 1.6 mm
- ▶ Material: GF
- ▶ Operating Temperature: -25°C to 85°C
- ▶ Storage Temperature: -25°C to 120°C
- ▶ IP Rating: IP67
- ▶ Applicable Surface: Non-metal

## ABS Stick Tag



LF HF

The simple and conventional tag offers a quick and easy tagging function for asset management or process control.

Specification:

- ▶ Dimension: OD 30 x ID 3.3 x T 2.3 mm
- ▶ Material: ABS
- ▶ Applicable Surface: Non-metal
- ▶ Operating Temperature: -10°C to 50°C
- ▶ Storage Temperature: -20°C to 70°C
- ▶ IP Rating: IP66

## Overmolded Square Tag



HF

Produced by overmolded process, it can resist the heat, pressure and chemical in harsh environment. It is also ideal for industrial applications where a robust and durable tag is needed.

Specification:

- ▶ Dimension: L 13 x W 13 x T 2 mm
- ▶ Material: Nylon
- ▶ Applicable Surface: Non-metal
- ▶ Operating Temperature: -30°C to 90°C
- ▶ Storage Temperature: -40°C to 120°C
- ▶ IP Rating: IP68

## PVC Stick Tag



LF HF

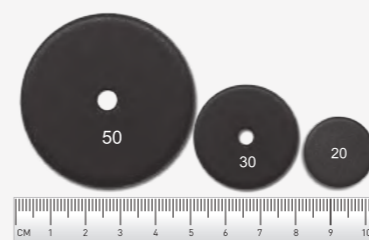
PVC Stick Tag is a coin-shaped RFID transponder designed for use on non-metal surface. This waterproof RFID Tag (IP68) can be fixed to an item with a screw.

Specification:

- ▶ Dimension: OD 35 x ID 3.3 x T 1.8 mm
- ▶ Material: PVC
- ▶ Applicable Surface: Non-metal
- ▶ Operating Temperature: -15°C to 55°C
- ▶ Storage Temperature: -15°C to 75°C
- ▶ IP Rating: IP68

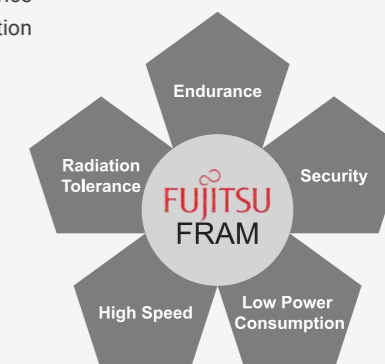
## Overmolded Type Tag Embedded with FRAM Technology

Discover our range of specialty RFID tags featuring radiation hardness to facilitate medical device sterilization in the irradiation process. With fast writing capabilities, these tags excel in tool identification and management, elevating operational precision in factory automation.



### Comparison of FRAM with EEPROM

	FRAM	EEPROM
Type	Non-volatile	Non-volatile
Writing Method	Overwriting	Erase(byte)+write
Write Cycle Time	150ns	3ms
Endurance	10 billion	1 million



## Disc Tag

LF HF

Disc Tag is a coin-shaped RFID transponder designed for use on non-metal surface. It is a waterproof RFID Tag (IP68) and can be profiled into different sizes.

Disc Patch Tag is Disc Tag with a sticker so that it can be attached to an item in a quick and easy way.

Stick Patch Tag has both a sticker and a hole in the middle for easy attachment.



Specification:

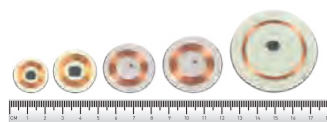
- ▶ Dimension: D 20 / 25 / 30 / 35 / 50 x T 1.1 mm (without adhesive T 0.8 mm)
- ▶ Material: PVC
- ▶ Applicable Surface: Non-metal
- ▶ Operating Temperature: -15°C to 55°C
- ▶ Storage Temperature: -15°C to 75°C
- ▶ IP Rating: IP68

## Clear Disc Tag

LF HF

Clear Disc Tag is designed for use on non-metal surface. It is a cost-effective RFID Tag due to its simple form factor and it can be made in different sizes.

Clear Disc Patch Tag is Clear Disc Tag with a sticker so that it can be attached to an item in a quick and easy way.



Specification:

- ▶ Dimension: D 20 / 25 / 30 / 35 / 50 x T 1.0 mm (without adhesive)
- ▶ Material: PET
- ▶ Applicable Surface: Non-metal
- ▶ Operating Temperature: -15°C to 55°C
- ▶ Storage Temperature: -15°C to 75°C
- ▶ IP Rating: IP65

## GF Disc Tag

LF HF

GF Disc Tag can be put on non-metallic surface for tracking, data recording or regular patrol purpose.

Specification:

- ▶ Dimension : D 20 x T 1.6 mm LF
- ▶ D 25 x T 1.6 mm LF
- ▶ D 30 x T 1.6 mm LF HF
- ▶ D 50 x T 1.6 mm LF
- ▶ Material: GF
- ▶ Operating Temperature: -25°C to 85°C
- ▶ Storage Temperature: -25°C to 120°C
- ▶ IP Rating: IP67
- ▶ Applicable Surface: Non-metal

## On-Metal Tag

LF HF

On-Metal Tag has a hard PVC substrate topped with soft Epoxy. With adhesive, it can be attached to any metallic surface.



Specification:

- ▶ Dimension: L 65 x W 25 x T 3.5 mm
- ▶ Material: PVC + Epoxy
- ▶ Applicable Surface: On-metal
- ▶ Operating Temperature: -25°C to 55°C
- ▶ Storage Temperature: -25°C to 75°C
- ▶ IP Rating: IP68

## Screw Tag

HF

Screw Tag resembles a metric bolt (M10x1.5). This tag is designed to be screwed into a metallic object (tapped with thread) and work with inductive couplers. Ideal for production control and asset management.

Specification:

- ▶ Dimension: M 10 x P1.5 x H6 mm
- ▶ Material: Nylon
- ▶ IP Rating: IP68
- ▶ Applicable Surface: In-metal
- ▶ Operating Temperature: -25°C to 85°C
- ▶ Storage Temperature: -25°C to 85°C
- ▶ RFID Chip: Fijitsu MB89R118



## Wristband Solutions

### Adjustable Wristband

HF UHF



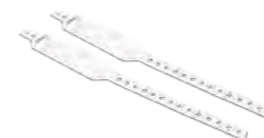
Human body is composed of water which causes interference to the wristband's reading performance when people wear it. This hands-free solution helps you get access into a place without the need to reach your keyfob or card to the reader . It brings convenience and comfort for your access control .

Specification:

- ▶ Dimension: L 40.5 x W 44 x T 11 mm
- ▶ Material: ABS
- ▶ Applicable Surface: Wearable
- ▶ RFID Chip: NXP UCODE 8
- ▶ Operating Temperature: -25°C to 55°C
- ▶ Storage Temperature: -25°C to 65°C
- ▶ IP Rating: IP67
- ▶ Frequency : 865-868 MHz(ETSI - EU), 902-928(FCC - US)

### Disposable Wristband

HF UHF



It features disposable use and lower cost to be an economical choice for some temporary applications. The button provides the band with tamper proof function.

Specification:

- ▶ Dimension: L 270 x W 34 mm
- ▶ Material: PP
- ▶ Operating Temperature: -25°C to 50°C
- ▶ Storage Temperature: -25°C to 50°C
- ▶ Frequency: 865-868 MHz (ETSI-EU), 902-928 MHz (FCC-US)

### S<sup>Band</sup>



HF

S<sup>Band</sup> has a slim and stylish design of its kind. A variety of colors are available. Custom logo and numbering can be done to make it more attractive.

Specification:

- ▶ Dimension:
  - C 220 x H 16 x T 7.5 mm (Xtra Large)
  - C 196 x H 16 x T 7.5 mm (Adult)
  - C 180 x H 16 x T 7.5 mm (Young)
  - C 152 x H 16 x T 7.5 mm (Child)
- ▶ Material: Silicone
- ▶ Operating Temperature: -25°C to 85°C
- ▶ Storage Temperature: -25°C to 140°C
- ▶ IP Rating: IP68

Color Options:

- ▶ Red / Pink / Yellow / Light Green / Dark Green / Grey
- ▶ Light Blue / Dark Blue / Purple / White / Black / Orange

### Silicone Wristband

LF HF



Silicone Wristband Tag is another tag solution to deal with water or high humidity environment. It has been widely adopted in gym, swimming pool, and waterpark.

Specification:

- ▶ Dimension:
  - C 210 x H 16 x T 7.5 mm (Xtra Large)
  - C 195 x H 16 x T 7.5 mm (Adult)
  - C 180 x H 16 x T 7.5 mm (Young)
  - C 152 x H 16 x T 7.5 mm (Child)
- ▶ Material: Silicone
- ▶ Operating Temperature: -25°C to 85°C
- ▶ Storage Temperature: -25°C to 140°C
- ▶ IP Rating: IP68

Color Options:

- ▶ Red / Pink / Yellow / Light Green / Dark Green
- ▶ Light Blue / Dark Blue / Purple / White / Black

# 04 Card Solutions

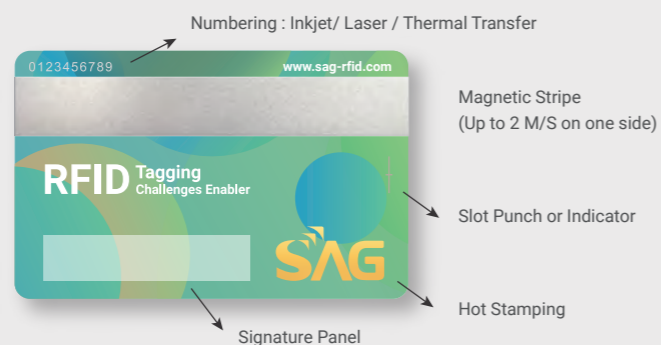
## Built for Secure Access Across Commercial and Residential Environments

Our RFID cards are engineered with PVC, PETG, or PETF materials, offering enhanced durability and heat resistance up to 110°C. With flexible printing options, surface finishes, and numbering features, we enable fully customized card solutions tailored to your application needs.

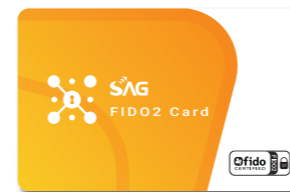
### Card Structure

Printing Options:  
- Offset  
- Silk Screen  
- Thermal Re-transfer

\*Customized shape  
\*Thickness upon request



### FIDO2 Card



HF

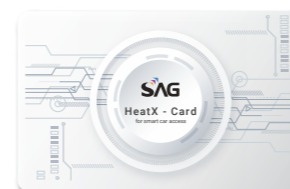
The FIDO2 Card is a unified corporate credential that combines passwordless digital authentication, physical access control, and on-card employee identification in a single secure card. Built on the global FIDO2 standard, it enables phishing-resistant authentication through proven cryptographic protocols, binding high-security digital identity directly to a physical card.

Specification:

- ▶ Dimension: L 85.6 x W 54 x T 0.8 mm
- ▶ Material: PVC
- ▶ IP Rating: IP68
- ▶ Operating Temperature: -25°C to 50°C
- ▶ Storage Temperature: -25°C to 50°C
- ▶ RFID Chip: NXP JCOP4.5 + DESFire EV3C

Certified to FIDO specifications  
**fido**  
ALLIANCE

### HeatX PC Card



HF

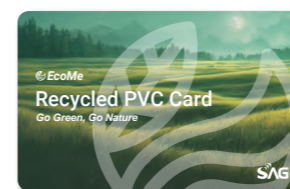
Designed for harsh automotive environments, the PC Card is an industrial-grade credential built with high-temperature-resistant polycarbonate and CCC-approved MIFARE DESFire EV3.

Specification:

- ▶ Dimension: L 85.6 x W 54 x T 0.88 mm
- ▶ Material: PETF + PC
- ▶ IP Rating: IP68
- ▶ Operating Temperature: -40°C to 110°C
- ▶ Storage Temperature: -30°C to 90°C
- ▶ RFID Chip: NXP MIFARE DESFire EV3

HEAT

### EcoMe Recycled PVC Card



LF HF UHF

Recycled PVC Card is an eco-friendly solution using recycled PVC (UL2809 compliant) to give plastics a second life. Built for achieving your sustainable strategy to security systems, this card is also certified to ISO10373 without compromising its durability and robustness.

Specification:

- ▶ Dimension: L 85.6 x W 54 x T 0.8 mm
- ▶ Material: Recycled PVC
- ▶ Operating Temperature: -25°C to 50°C
- ▶ Storage Temperature: -25°C to 50°C

**Material Certification**  
Made of 100% recycled plastics and complied with UL2809



**Quality Certification**  
Complied with ISO 10373



### ISO Card



LF HF UHF

ISO Card is the most commonly used and popular form factor in RFID transponders. SAG can build ISO Card with a variety of materials and bring out elegant printing surface finishing.

Specification:

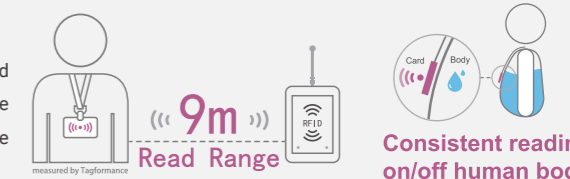
- ▶ Dimension: L 85.6 x W 54 x T 0.8 mm
- ▶ Material: PVC / NPETG / PETF Composite
- ▶ Operating Temperature:
  - PVC: -25°C to 50°C
  - PVC+NPETG: -25°C to 50°C
  - PVC+PETF: -30°C to 70°C
- ▶ IP Rating: IP68
- ▶ Storage Temperature:
  - PVC: -25°C to 50°C
  - PVC+NPETG: -25°C to 60°C
  - PVC+PETF: -40°C to 100°C

SAG PETF Composite card can be printed on direct-to-card or thermal retransfer card printer. We have excellent printing surface finishing on these top models.

- ▶ Brand (Model #): Fargo (HDP5000) / Zebra (ZXP8) / Datacard (CD8000) / Matica (xID8300)

### UHF ISO Card UHF Hands-free Solution

SAG overcomes the seemingly inevitable read range drop when UHF Card is placed near human body and affected by the interference. This card features both the unique SAG antenna design and NXP UCODE 8 technology, making hands-free access control a real thing.



### Clamshell Card



LF HF

Clamshell Card is a cost-effective solution. Also, the robust housing makes no easy damage by bending or torsion.

Specification:

- ▶ Dimension: L 85.6 x W 54 x T 1.9 mm
- ▶ Material: ABS Housing+ PVC Sticker
- ▶ IP Rating: IP66
- ▶ Operating Temperature: -10°C to 50°C
- ▶ Storage Temperature: -10°C to 50°C

# 05 Keyfob Solutions

## Crafting Distinctive Access with RFID Keyfobs

Designed to combine aesthetics with functionality, our RFID keyfobs bring a refined touch to everyday access. Offered in a range of styles and colors, they can be customized with vibrant artwork or corporate branding to create a distinctive and professional look.

### Utopia



HF

Utopia blends craftsmanship and elegance into an all-matte, affordable luxury design with advanced RFID security. With IP68 durability and customizable branding, it elevates both style and protection.

Specification: ▶ Dimension: L 56 x W 26 x T 3.2 mm ▶ Operating Temperature: -25°C to 85°C  
▶ IP Rating: IP68 ▶ Storage Temperature: -25°C to 85°C

Color Options: White / Grey / Black

### Ultra Keyfob

Ultra Keyfob is crowned with a metal part which gives a great volume in your hand and conveys a sense of refinement from its matte texture. This keyfob is designed to perfectly fit your taste to a high end life while making access control just a simple tap.

### Ultra Eternity



LF HF

Specification:

▶ Dimension: L 56 x W 26 x T 3.2 mm  
▶ IP Rating: IP68

Surface Texture:

▶ Leather / Marble / Alligator / Woven Leather

### Ultra Classic



LF HF

Specification:

▶ Dimension: L 56 x W 26 x T 3.2 mm  
▶ IP Rating: IP68  
▶ Operating Temperature: -25°C to 85°C  
▶ Storage Temperature: -25°C to 85°C

Color Options:

▶ Red / Orange / Blue / Navy Blue  
▶ Purple / White / Grey / Black



### Overmolded Pear Keyfob(OPK)

LF HF



Overmolded Pear Keyfob is 100% waterproof with an array of colors for selection, and sharp laser marking effect, making it more than just a keyfob.

Specification:

▶ Dimension: L 45 x W 30 x T 2.2 mm ▶ Operating Temperature: -25°C to 85°C  
L 45 x W 30 x T 2.6 mm (Dual chip type) ▶ Storage Temperature: -25°C to 85°C  
▶ IP Rating: IP68  
Color Options:  
▶ Red / Orange / Yellow / Green / Blue / Navy Blue / Purple / White / Grey / Black

EcoMe

### Ocean-recycled Plastic Keyfob

HF

ECO



The iconic Overmolded Pear Keyfob comes with a new version, made of post-consumer recycled material (PCR) for a greener future. Built for achieving your sustainable strategy to access control systems, the eco-friendly keyfob not only reduces environmental impact but also maintains high performance and durability.

Specification:

▶ Dimension: L 45 x W 30 x T 2.2 mm ▶ Operating Temperature: -25°C to 85°C  
▶ IP Rating: IP68 ▶ Storage Temperature: -25°C to 85°C

Color Options:

▶ Black

Material Certification

Made of 100% recycled post-consumer plastics and complied with GRS and OBP Certification



EcoMe

### OPK Slim

HF

ECO



The OPK Slim features an ultra-slim 1.8 mm form factor, engineered for high-performance access control. Available in 100% rPCR, it reduces carbon emissions while maintaining the industrial-grade reliability.

Specification:

▶ Dimension: L 45 x W 30 x T 1.8 mm ▶ Operating Temperature: -25°C to 85°C  
▶ IP Rating: IP68 ▶ Storage Temperature: -25°C to 85°C

Color Options:

▶ Black / White

Material Certification

Made of 100% recycled post-consumer plastics and complied with GRS and OBP Certification



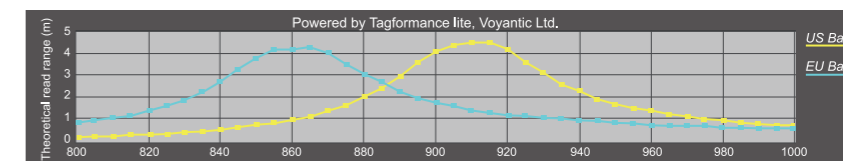
### OPK UHF

UHF



UHF Overmolded Pear Keyfob helps the user get access without having to reach out a keyfob to tap and go, realizing the hands-free solution and offers great efficiency.

RFID Chip: ▶ Impinj M781 Color Options: ▶ Red / Yellow / Green / White



### Palette Keyfob



LF HF

Palette Keyfob features unique plays of color in inspiring contrast. The two-tone keyfob is crafted with a matte texture finish.

Specification:

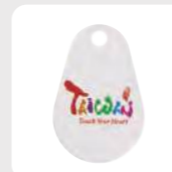
▶ Dimension: L 45 x W 30 x T 3.5 mm ▶ Operating Temperature: -10°C to 50°C  
▶ IP Rating: IP68 ▶ Storage Temperature: -10°C to 50°C

Color Options:

▶ Red / Orange / Yellow / Pink / Green / Blue / Purple / Grey / Black / White



### Customization Option



▶ UV Inkjet Printing:  
Print colorful design or even texture to get a more vibrant finish.



▶ Laser Engraving:  
Mark clear UID or numbers in good contrast or decorate with graphic design to improve visual appeal.

### Tear Keyfob



LF HF

Specification: ▶ Dimension: L 40 x W 31 x T 5 mm ▶ Operating Temperature: -25°C to 55°C  
▶ IP Rating: IP66 ▶ Storage Temperature: -25°C to 75°C

Color Options: ▶ Red / Pink / Yellow / Green / Blue / Purple / White / Black / Orange / Grey

### Tumbler Keyfob



LF HF Dual

Specification: ▶ Dimension: L 36.2 x W 30 x T 7.5mm ▶ Operating Temperature: -25°C to 55°C  
▶ IP Rating: IP66 ▶ Storage Temperature: -25°C to 75°C

Color Options: ▶ Red / Green / Yellow / Dark Blue / Grey / White / Black / Orange / Blue

### Translucent Keyfob



LF HF UHF

Specification: ▶ Dimension: L 55.5 x W 31 x T 8 mm ▶ Operating Temperature: -25°C to 55°C  
▶ IP Rating: IP66 ▶ Storage Temperature: -25°C to 75°C

Color Options: ▶ Green / Blue / Red / Black

### Water Drop Keyfob



LF HF Dual

Specification: ▶ Dimension: L 50.5 x W 31.5 x T 9.5 mm ▶ Operating Temperature: -25°C to 55°C  
▶ IP Rating: IP66 ▶ Storage Temperature: -25°C to 75°C

Color Options: ▶ Grey

### Pear Keyfob



LF HF Dual

Specification: ▶ Dimension : L 45 x W 30 x T 1.6 mm ▶ Operating Temperature: -25°C to 55°C  
▶ IP Rating: IP67 ▶ Storage Temperature: -25°C to 120°C

Color Options: ▶ Black

### Thumb Keyfob



LF HF

Specification: ▶ Dimension: L 49.6 x W 33 x T 7.05 mm ▶ Operating Temperature: -25°C to 55°C  
▶ IP Rating: IP66 ▶ Storage Temperature: -25°C to 75°C

Color Options: ▶ Blue / Grey

### Arch Keyfob



LF HF UHF

Specification: ▶ Dimension: L 54 x W 28 x T 1.8 mm ▶ Operating Temperature: -10°C to 50°C  
▶ IP Rating: IP68 ▶ Storage Temperature: -10°C to 50°C

Color Options: ▶ PVC blank white

### Epoxy Keyfob



LF HF Dual

Specification: ▶ Dimension: L 50 x W 30 x T 6mm (Rectangle Epoxy Keyfob)  
L 65 x W 25 x T 6mm (Slender Epoxy Keyfob)  
L 53 x W 26 x T 6mm (Oval Epoxy Keyfob)  
L 45 x W 30 x T 6mm (Pear Epoxy Keyfob)  
L 25 x W 19 x T 6mm (Mini Epoxy Keyfob)

▶ Operating Temperature: -10°C to 50°C  
▶ Storage Temperature: -10°C to 50°C  
▶ IP Rating: IP68

Color Options: ▶ PVC blank white

## RFID IC LIST

Brand	IC Name	Frequency	UID / Memory	Remark	
UHF	NXP	UCODE X	860~960MHz	TID 96 Bit ; EPC 96~208 bit ; Configurable 0~32bit	ISO 18000-63 / EPC Gen2 V2
		UCODE 9xm	860~960MHz	TID 96 Bit ; EPC up to 496 Bit ; User up to 752 Bit	ISO 18000-63 / EPC Gen2 V2
		UCODE 9	860~960MHz	TID 96 Bit ; EPC up to 96 Bit	ISO 18000-63 / EPC Gen2 V2
		UCODE DNA	860~960MHz	TID 96 Bit ; EPC up to 448 Bit ; User 3027 Bit	ISO 18000-63 / EPC Gen2 V2
		UCODE 8	860~960MHz	TID 96 Bit ; EPC up to 128 Bit	ISO 18000-63 / EPC Gen2 V2
	IMPINJ	M830	860~960MHz	TID 96 Bit ; EPC 128 Bit	ISO 18000-63 / EPC Gen2 V2
		M781	860~960MHz	TID 96 Bit ; EPC 496 Bit ; 128 Bit	ISO 18000-63 / EPC Gen2 V2
		M750	860~960MHz	TID 96 Bit ; EPC 96-128 Bit ; 0-32 Bit	ISO 18000-63 / EPC Gen2 V2
		Monza 4QT	860~960MHz	TID 96 Bit ; EPC 128 Bit ; User 512 Bit	ISO 18000-63 / EPC Gen2 V2
		µm	EM4325	860~960MHz	TID 48 Bit ; EPC 4096 Bit
NXP	NTAG X DNA	13.56MHz	UID 7 Byte ; Up to 16kB	ISO/IEC 14443A	
	NTAG 223 / 224 DNA StatusDetect	13.56MHz	UID 7 Byte ; 144 / 208 Byte	ISO/IEC 14443A	
	ICODE DNA	13.56MHz	UID 8 Byte ; 2048 bits	ISO/IEC 15693	
	NTAG 213 / 215 / 216	13.56MHz	UID 7 Byte ; 144 / 504 / 888 Byte	ISO/IEC 14443A	
	NTAG 424 DNA / 424 DNA TT	13.56MHz	UID 7 Byte ; 416 Byte	ISO/IEC 14443A	
	MIFARE DUOX	13.56MHz	UID 7 Byte ; 2 / 4 / 8 / 16 K Byte	ISO/IEC 14443A	
	MIFARE Ultralight AES	13.56MHz	UID 7 Byte ; 144 Byte	ISO/IEC 14443A / AES encryption	
	MIFARE Ultralight EV1	13.56MHz	UID 7 Byte ; 384 Bit	ISO/IEC 14443A	
	MIFARE Ultralight C	13.56MHz	UID 7 Byte ; 1152 Bit	ISO/IEC 14443A	
	MIFARE Plus EV2 2K/4K	13.56MHz	NUID 4 / UID 7 Byte ; 2K/4K Byte	ISO/IEC 14443A / AES encryption	
	MIFARE Classic EV1 1K	13.56MHz	NUID 4 / UID 7 Byte ; 1K Byte	ISO/IEC 14443A	
	MIFARE Classic EV1 4K	13.56MHz	NUID 4 / UID 7 Byte ; 4K Byte	ISO/IEC 14443A	
	MIFARE DESFire EV1 / EV2 / EV3	13.56MHz	UID 7 Byte ; 2K / 4K / 8K Byte	ISO/IEC 14443A	
	MIFARE DESFire light	13.56MHz	UID 7 Byte ; 640 Byte	ISO/IEC 14443A	
	ICODE 3	13.56MHz	UID 8 Byte ; 2400 Bit	ISO/IEC 15693	
	ICODE SLIX / SLIX2	13.56MHz	UID 8 Byte ; 896 / 2528 Bit	ISO/IEC 15693 & 18000-3	
	ICODE SLIX-L / SLIX-S	13.56MHz	UID 8 Byte ; 256 / 1280 Bit	ISO/IEC 15693 & 18000-3	
	HITAG 1/ HITAG 2	125 KHz	UID 4 Byte ; 2048 / 256 Bit	ISO/IEC 11784 & 11785	
	HITAG S	125 KHz	UID 4 Byte ; 2048 / 2048 Bit	ISO/IEC 11784 & 11785 & 14223	
	ST25TAE	13.56MHz	UID 7 Byte ; 2KBit	ISO/IEC 14443A	
	ST25DV04K	13.56MHz	UID 8 Byte ; 4K Bit	ISO/IEC 15693	
	ST25TV512/ 02K/ 512C/ 02KC	13.56MHz	UID 8 Byte ; 512/ 2K/ Bit	ISO/IEC 15693	
	ST25TN01K	13.56MHz	UID 7 Byte ; up to 1.6Kbit EEPROM memory	ISO/IEC 14443A	
	ST25TA512/ 02K	13.56MHz	UID 7 Byte ; 512/ 2K/ Bit	ISO/IEC 14443A	
	ST25TA16K	13.56MHz	UID 7 Byte ; 16K/ 64K Bit	ISO/IEC 14443A	
	ST25TB512/ 04K	13.56MHz	UID 7 Byte ; 512/ 4K Bit	ISO/IEC 14443B	
	EM4305	125 KHz	UID 32 Bit ; User 512 Bit	ISO/IEC 11784/85 Compatible	
	EM4450 / EM4550	125 KHz	UID 64 Bit ; User 1K Bit	ISO/IEC 11784/85 Compatible	
	EM4102 / EM4200	125 ~ 134.2 KHz	UID 64 Bit ; Read only	ISO/IEC 11784/85 Compatible	
	EM4332	13.56MHz	UID 7Byte ; 308 Byte EEPROM	ISO/IEC 14443A	
	EM4427	13.56 MHz 860~960 MHz	[NFC interface] UID 64 Bit [UHF interface] TID 96 Bit EPC up to 480 Bit Shared Memory 2048 Bit	ISO/IEC 14443A ISO 18000-6C / EPC Gen2 V2	
	EM4425	13.56 MHz 860~960 MHz	[NFC interface] UID 8 Byte [UHF interface] TID 96 Bit EPC up to 480 Bit Shared Memory 2048 Bit	ISO/IEC 14443A ISO 18000-6C / EPC Gen2 V2	
	EM4423	13.56 MHz 860~960 MHz	[NFC interface] UID 7 Byte [UHF interface] TID 96 Bit EPC 96 Bit User 2080 Bit	ISO/IEC 14443A ISO 18000-6C / EPC Gen2 V2	
	ATA5577	125 KHz	Memory 363 Bit	ISO/IEC 11784/85 Compatible	
	MB89R118 / 119 / 112	13.56MHz	UID 8Byte ; 2K / 256 / 8K Byte FRAM	ISO/IEC 15693	
	RC-S966 (Felica Lite-S)	13.56MHz	UID 8Byte ; 432 Byte EEPROM	ISO/IEC 18092	
	RC-SA00 / 01	13.56MHz	UID 8Byte ; 6K/4K Byte FRAM	ISO/IEC 15408	
	MIM256 / MIM1024	13.56MHz	UID 16 Byte ; 256/1024 Byte	ISO/IEC 14443A	
	ATC 256MV / ATC 1024MV	13.56MHz	UID 8 Byte ; User 224 / 912 Byte	ISO/IEC 15693 & 14443A (MV010)	
	ATC4096MP	13.56MHz	UID 7 Byte ; 4096 Byte	ISO/IEC 14443A	
MAX 66240	13.56MHz	UID 64 Bit ; 512 Byte	ISO/IEC 15693 & 18000-3		
Tag-it HF-I Pro / Plus	13.56MHz	UID 8 Byte ; 256 / 2048 Bit	ISO/IEC 15693 & 18000-3		
SLE 66R01P	13.56MHz	UID 7 Byte ; 128 Byte	ISO/IEC 14443A		
SRF55V10S	13.56MHz	UID 8 Byte ; User 992 Byte	ISO/IEC 15693		
SRF55V10P	13.56MHz	UID 8 Byte ; User 992 Byte	ISO/IEC 15693		