

# SES rfid solutions 2020 Catalog

Distributor: Far East Creation Limited Partnership 2051 Onn Nuch Road. Suanluang, Suanlaung. Bangkok 10250. Thailand. Tel: +668.1750.3837 Email: <u>suvit.suv@fareastcreation.com</u>



# UM200 ®

# SES ISO Card

### HF/UHF

**SES ISO Card**. Our system incorporates three of our specialist technologies – Thin and Flat (TIN) Inlay, Energy Harvesting and our own SES Module. The 300 micron-thin inlay is sandwiched between the outer layers of the card resulting in a perfectly flat surface suitable for high-quality printing.

#### Features

- Material: PVC
- No module impression
- SES patent module



### Applications

#### Access control

- Membership management
- Municipal and ancillary service
- Identification and security system

Photo	Providence			
Product	ISO Card	Special Card	ISC4HVLYNE-000	ISC4HVLYNE-000
Mechanical (mm)	86x54	86x54	ISO7810 ID-1	ISO7810 ID-1
Chip Type	NXP, Infineon,EM, Atmel,Alien,Impinj	NXP, Infineon, EM, Atmel	Mifare 1K 4Byte EV1 NUID (SES Strap)	SL2S2002FUD
Electrical	LF/HF/UHF	LED/LED+LF/LED+HF	HF	HF
Material	PVC / PETG	PVC / PETG	Copper wire antenna and module in laminated PVC	PVC + Overlay
Operating Temperature	-25°C ~50°C	-25°C ~50°C	-25 °C ~ 50 °C	-20°C ~ 50°C
Storage Temperature	-25°C ~50°C	-25°C ~50°C	-25 °C ~ 50 °C	-20°C ~ 50°C
Product Class	IP67	IP67	IP67	IP67

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# UM200®

# SES UM200

### LF/HF/UHF

**UM200** is our patented ultra-thin and ultra-flat antenna technology that can be incorporated into products which require a high-performance. A rugged antenna that does not add to the thickness of the product and does not impede the surface for high quality printing, e.g. ticketing, credit and access cards, casino playing cards. We have developed this patented technology and can now offer durable, high-performance antennas down to a thickness of 200 microns.

### Features

- Material: PVC/PET-G
- No module impression
- SES patent module

### Applications

- Various tickets
- Gaming cards
- Public transportation tickets
- Banking cards
- Loyalty/membership cards



Photo				
Product	TIN1	TIN2	ELM	
Mechanical (mm)	Max 750 x 530	Max 620 x 520	86x54	
Chip Type	NXP, Infineon, EM, Atmel	NXP, Infineon, EM, Atmel	NXP, Infineon, EM, Atmel	
Electrical	LF/HF	HF	HF	
Material	PVC / PETG	PVC / PETG	PVC / PETG	
Operating Temperature	-25°C~50°C	-25°C~50°C	-25°C~50°C	
Storage Temperature	-25°C~50°C	-25°C~50°C	-25°C~50°C	
Product Class	IP67	IP67	IP67	

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# WIRETX®

# **SES** WIRETX

### UHF

**WIRETX** is a unique product in the UHF RFID transponder market. SES's patented WIRETX has waterproof and durable wire forms designed to withstand extremes of temperature and pressure. Characterized by steel wire type, substrate material and durability, WIRETX can be embedded into the tire during the vulcanization process, inserted into molds for asset tracking and as a label on the tire wall for stock control in the after sales market. With products for manufacture and the after sales market, WIRETX allows the tracking of tires from production until end of life.

#### Features

- Automotive-tire industry
- Industry 4.0
- Industrial laundry
- Sport timekeeping



### Applications

- Various tickets
- Gaming cards
- Public transportation tickets
- Banking cards
- Loyalty/membership cards

Photo			×	· · + · + · #
Product	TUBE-S	TUBE-G	TUBE-P	ADHESIVE
Mechanical (mm)	125x12	130x10	138x11	130x15
Chip Type	Impinj, Alien, NXP	Impinj, Alien, NXP	Impinj, Alien, NXP	Impinj, Alien, NXP
Electrical	UHF	UHF	UHF	UHF
Material	Wire antenna, module, UV			
Material	glue, tube	glue, glassfibre	glue, polyimide	glue, PET, 3M adhesive
Operating Temperature	-25°C~60°C	-25°C~80°C	-25°C~80°C	-25°C~65°C
Storage Temperature	-25°C~60°C	-25°C~200°C	-25°C~200°C	-25°C~65°C
Product Class	IP67	IP67	IP67	IP65

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#### Features

- Automotive-tire industry
- Industry 4.0
- Industrial laundry
- Sport timekeeping



### Applications

- Various tickets
- Gaming cards
- Public transportation tickets
- Banking cards
- Loyalty/membership cards

Photo		•	
Product	WIRETX-S	WIRETX-H	
Mechanical (mm)	140	144	
Chip Type	Impinj, Alien, NXP	Impinj, Alien, NXP	
Electrical	UHF	UHF	
Material	Wire antenna, module, UV glue	Stainless wire antenna, module, UV glue	
Operating Temperature	-25°C~80°C	-25°C~80°C	
Storage Temperature	-25°C~120°C	-25°C~200°C	
Product Class	IP67	IP67	

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# **SES** ZEUSTX

### HF/UHF

**ZEUSTX**, an innovative SES RFID transponder product that covers a wide array of applications such as industrial automation, laundry, manufacturing, logistics, retail and many more. Characterized by durability, water resistance and ruggedness, ZEUSTX offers a variety of compact hard tag product sizes in the HF and HF + UHF bands. Available in an array of standard or customized form factors the ZEUSTX products are designed for harsh and demanding conditions.

#### Features

- Material: FR4
- Water proof
- High-temperature resistance

ZEUSTX®

Various sizes from 8mm-20mm



- Industry 4.0
- Industrial laundry
- Retail
- Assets control
- Inventory / POS management

Photo	9	٢		
Product	ZEUSTX 8.0	ZEUSTX 8.5	ZEUSTX 12	ZEUSTX 20 H
Mechanical (mm)	Ø8+/-0.5	Ø8.5+/-0.5	12x12+/-0.5	Ø 20 ± 0.5
Chip Type	Impinj, Alien, NXP	NXP,Infineon,EM,Sony	EM	NXP,Infineon,EM,Sony
Electrical	UHF	HF	HF+UHF	HF
Material	FR4	FR4	FR4	FR4
Operating Temperature	-25°C~80°C	-25°C~80°C	-25°C~80°C	-25°C~80°C
Storage Temperature	-25°C~200°C	-25°C~200°C	-25°C~200°C	-25°C~200°C
Product Class	IP67	IP67	IP67	IP67

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#### Features

- Material: FR4
- Water proof
- High-temperature resistance

ZEUSTX®

Various sizes from 8mm-20mm



- Industry 4.0
- Industrial laundry
- Retail
- Assets control
- Inventory / POS management

Photo			
Product	ZEUSTX 8.0		
Mechanical (mm)	Ø 20 ± 0.5		
Chip Type	Impinj, Alien, NXP		
Electrical	UHF		
Material	FR4		
Operating Temperature	-25°C~80°C		
Storage Temperature	-25°C~200°C		
Product Class	IP67		

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# PACKTX<sup>®</sup> SES PACKTX/ Eco Flexi

**SESPACKTX** provides supply chain management of goods and assets form 'point of manufacture' to after 'point of sale'. Our new product **ECO-Flexi plastic chip** is only 13 microns thick and produced using thin film transistors. Available with etched aluminum and printed antennas, the chip and inlays are perfect for IoT applications that require a flat surface topology for premium printed surfaces, e.g. smart packaging, collectable sports or trading cards, single use ticketing and product labels. The Eco-Flex NFC compatibility ensures mass appeal through mobile phone applications.

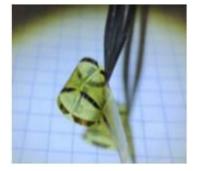
Chip specification

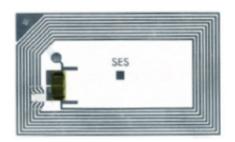
- Chip thickness 13µm
- RF field
- 13.56MHz, , ISO/IEC 14443A
- Total memory
  UID
  128 bits Read-Only Memory
  64 bits (>1019 ID codes)

#### Dry inlay specification

- PET substrate thickness
- Aluminum etching thickness
- Dry inlay total thickness
- Bonding condition
- 38µm 30µm 85µm ACP bonding









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HF

# On Metal Tag<sup>®</sup>

### **SES** On Metal Tag

### HF/UHF

**SES On Metal Tag** is a revolutionary RFID label for smart tagging both metallic and non-metallic assets. It's extremely flexible and has a low profile to fit small assets like. SES on metal tag also can for heavy industry and outdoor applications. This product is capable of surviving long term use in harsh environments including applications that involving high impact and shock.

### Features

- Small Size
- Waterproof
- High-temperature resistance
- Performs reliably on and off metal



Tool tracking

Applications

- IT asset identification
- Medical device management

Photo	A FRONT			
Product	TAG8KTE1BK-000	UHF On Metal Tag 79*31	UHF On Metal Tag87*24	PICO ON PLUS-ON METAL TAG
Mechanical (mm)	135 * 21.5 ± 0.5	79*31	87*24	12.8*7.08*3.08
Chip Type	Alien H3	Alien H3	Impinj Monza R6-P	Alien Higgs 3
Electrical	UHF	UHF	UHF	UHF
Material	ABS housing with UHF Inlay	ABS	PC	-
Operating Temperature	-40 °C ~ 65 °C	-40 °C ~ 65 °C	-30 °C ~ 70 °C	-30°C ~ 85°C
Storage Temperature	-55 °C ~ 85 °C	-55 °C ~ 85 °C	-30 °C ~ 70 °C	-
Product Class	IP67	IP67	IP67	IP68



Bangkok 10250. Thailand.





#### ® On Metal Tag

### **SES** On Metal Tag

SES On Metal Tag is a revolutionary RFID label for smart tagging both metallic and non-metallic assets. It's extremely flexible and has a low profile to fit small assets like. SES on metal tag also can for heavy industry and outdoor applications. This product is capable of surviving long term use in barsh environments including applications that involving high impact and shock.

### Features

- Small Size
- Waterproof
- High-temperature resistance
- Performs reliably on and off metal



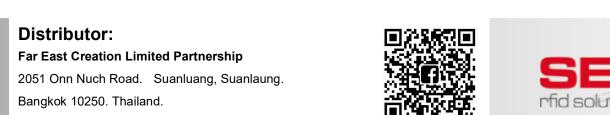
Tool tracking

• IT asset identification

Applications

Medical device management

Photo		XERREY" VETALSKN"	
Product	Flexible Metal Tag	Titanium Metal Skin	
Mechanical (mm)	60*25*1	45 * 5.6 * 0.86	
Chip Type	Impinj MR 6-P	Impinj Monza 5	
Electrical	UHF	UHF	
Material	PET	White thermal transfer face stock	
Operating Temperature	-20°C ~ 85 C	-40°C ~ 85°C	
Storage Temperature	-20°C ~ 85 C	-40°C ~ 85°C	
Product Class	IP68	1071	





# Laundry Tag®

## **SES** Laundry Tag

### HF/UHF

**SES Laundry Tag** is small and unobtrusive, sewn into textile products either in the hem, inside a fabric pouch or heat sealed under a patch. It is multiread and performs very fast even with high temperature, providing a reliable solution when clean items have to be read just after the ironing process. SES laundry tag s highly resistant to tunnel washers, water extractors (up to 60 bars), tunnel finishers, tumblers and calendars

### Features

- Small Size
- Waterproof
- High-temperature resistance



Applications

Garment tracking

Cloths identification

Photo			
Product	Blue Tag	Lintrak C15	
Mechanical (mm)	15	15*67	
Chip Type	NXP, EM, Customer consigned chip	Impinj Monza 5	
Electrical	HF	UHF	
Material	PPS	Polyester, Epoxy	
Operating Temperature	-25°C ~80°C	220ºC	
Storage Temperature	-25°C ~100°C	21ºC (+/-10ºC)	
Product Class	IP65		





# e-TAG

®

# SES e-TAG

**SES e-TAG**. The e-TAG electronic tolling is based on radio-frequency identification (RFID) transponders using the DSRC protocol. The system uses electronic transponders (called e-TAGs) mounted on the inside of the vehicles' windscreen. Moreover, e-TAG also can be put on the window or headlamp. Our e-TAG allows the reader to read it even in the speed of 120.

#### Features

- Material: Inlay
- Thin and flat
- Reading availability: under speed 120

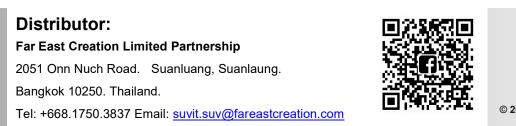
### Applications

Pay the toll

Smart parking lot

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Photo			Curtine 1	HERE IN HERE IN HER
Product	E-Tag-Window	E-Tag-Window	E-Tag-Lamp	E-Tag-Lamp
Mechanical (mm)	67*16*0.27	67*25	100*12*0.55	97*12
Chip Type	Alien Higgs 3	Alien Higgs 3	Alien Higgs 3	Alien Higgs 3
Electrical	UHF	UHF	UHF	UHF
Material	inlay	inlay	inlay	inlay
Operating Temperature	-40°C~200°C	-40°C~65°C	-40°C~75°C	-40°C~85°C
Storage Temperature	-40°C ~ 100°C	-40°C~85°C	-40°C ~ 100°C	-40°C~100°C
Product Class	IP68	-	IP65	-





### Wristband

# SES RFID Wristband LF/HF/UHF

**SES RFID Wristband**. When scanning the wristband, the RFID scanner will transmit an encoded radio signal which identifies a tag. Most RFID wristbands use passive tags that operate at high frequency; therefore, it is impossible to track a wearers location as the tags are limited to very short distances. Nevertheless, RFID can record the last location of a person. This can be important and useful information for understanding traffic flow and security risks at future events.

#### Features

- Material: PVC
- Very flexible
- waterproof
- High resistance in water environment



Applications

- ID identification
- Entertainment ticket
- Exhibition management
- Access control

Photo	0	0	O.	
Product	Hotel Access Wirstband	Access Wirstband	Ticket Wirstband	Identification Wirstband
Mechanical (mm)	Customized	Customized	Customized	Customized
Chip Type	EM4200, Ultralight, ALIEN H3	NTAG203, ALIEN H3	EM4200, NTAG203, IMPINJ M4	TK4100, I CODE 2
Electrical	LF/HF/UHF	HF/UHF	LF/HF/UHF	LF/HF
Material	PVC	PVC	PVC	PVC
Operating Temperature	-30°C~75°C	-30°C~75°C	-30°C~75°C	-30°C~220°C
Storage Temperature	-30°C ~75°C	-30°C~75°C	-30°C~75°C	-30°C~220°C
Product Class	121	-	<u> </u>	-

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### Shoes

®

# **SES** RFID Shoes Tag

SES RFID Shoes Tag. More and more footwear industry using RFID in their shoe's production. The footwear industry is link with inventory control issues. RFID allows visibility into your products and inventory as it moves through each stage of the supply chain. Using RFID shoes tag can benefit the company by lowering costs and increasing visibility.

### Features

- Small Size
- Customized
- High-temperature resistance
- Embedded in non-metallic objects



UHF

Applications Anti-counterfeiting

- Logistic status tracking
- Assets tracking management
- Production management

Photo			
Product	Shoes Tag		
Mechanical (mm)	83.5* 20*0.25		
Chip Type	Alien Higgs3		
Electrical	UHF		
Material	Aluminum / P I		
Operating Temperature	-20°C~150°C		
Storage Temperature	-20°C~150°C		
Product Class	50		





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# Other Tag<sup>®</sup>

# **SES** Other Function Tag

SES other function tags. RFID animal Tag is not only designed for sheep and pigs, but also suitable for large animals. The RFID animal tags enable users such as livestock farmers and breeders to track livestock or identify pets. Fully automated production processes ensure dependable attachment of the IC to the antenna for finished product reliability.

### Features

- Small Size
- Waterproof
- Customized



### Applications

- Population breeding
- Animal Management
- Asset control, logistic management

Photo				
Product	Animal Tag	Nail Tag	Cable tie Tag	
Mechanical (mm)	29.8*13	28*41	60*28*4	
Chip Type	Impinj Monza 5	RF08	TK4100, RF08, ICODE, H3	
Electrical	UHF	UHF	LF/HF/UHF	
Material	Nylon, TUP	ABS	ABS	
Operating Temperature	-20°C~80°C	-40°C ~85°C	-40°C ~ 65°C	
Storage Temperature	-20°C~80°C	-40°C ~85°C	-40°C ~ 85°C	
Product Class		IP67	-	



