



Global RFID Technology

Smart Card | RFID Tag | UHF Tag

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ABOUT US



Tansoc Smart Technology Co., Ltd is one of the trusted leaders in products, services and solutions related to Asset Tracking, Attendance Taking, Environment Monitoring, Access control and Warehouse Management etc. Product fields covering Smart card, RFID Tag, UHF Tag.

Active in smart industry since 2007, Tansoc Technologies continuously develops and innovates passive RFID manufacturing technologies on Smart card, RFID Tag, UHF Tag. He is recognized by leading technology, robust quality, professional service, as well as the competitive price.

Company profile reference:

1. Factory platform: Covers an area of 12000 square meters, over 300 employees with positive production capacity.

2. Strong technical support: Professional Team with extensive knowledge and experience, dedicated into technical research. They are skilled in special items development as per client's application, such as UHF special tag.

3. Equipment support: Advanced equipments for whole production chains.

4. Quality control: Quality evaluation checked at each chain to ensure each customers' purchasing confidence in performance, value and service.

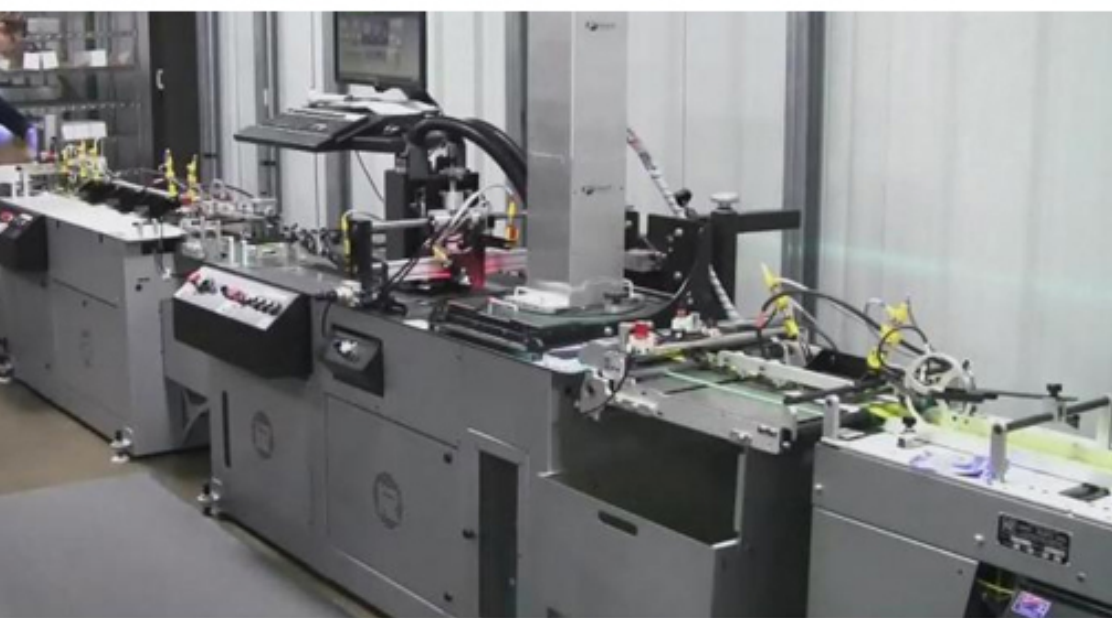
We passed ISO9001, and our products have CE, ROHS certificate.

5. Professional service: The good teamwork makes our response always rapid and in time.

6. Cooperated projects: Our government ID solutions provides governments worldwide, involved in city bus payment solution, telecom, and other significant events.

We commit to maximize customers' benefit and satisfaction, would keep our mission "Create customers value" in mind, keep researching and innovation, keep providing excellent quality and service!

We are an ambitious team with confidence in win-win business, why not join us!



OUR EQUIPMENTS

RFID Smart Card

Physical Specification:

Material: PVC, PET, PETG, ABS, PC
Operating Temperature: -20°C to +50°C (PVC Material)
Waterproof, Dustproof: IP68
Size: CR80, ISO Standard size, 85.5x54mm
Thickness: 0.82+/-0.02mm(HF 13.56MHz) or Custom
Print options: offset print 2 sides, silkscreen print gold or silver
Frequency: 125KHz, 13.56MHz, 860-960MHz
Protocol: ISO14443A, ISO15693, ISO18000-6C, ISO11784/5 etc.

Personalization:

Hole punching, Embossed, Hologram
Hot-Stamping silver/gold,
Magnetic strip, LoCo 300oe, 650oe, HiCo 2750oe, 4000oe
Thermal print number/barcode
Inkjet print number/barcode
UV inkjet print number/barcode (DOD)
Laser print number
Scratch off



Total thickness 0.82+/-0.02mm for 13.56MHz



Contact Smart Card

Physical Specification:

Material: PVC, PET

Operating Temperature: -20°C to +50°C (PVC Material)

Size: CR80, ISO Standard size, 85.5x54mm

Thickness: 0.82+/-0.02mm

Print options: offset print 2 sides, silkscreen print gold or silver

Personalization:

Hole punching, Embossed, Hologram

Hot-Stamping silver/gold,

Magnetic strip, LoCo 300oe, 650oe, HiCo 2750oe, 4000oe

Thermal print number/barcode

Inkjet print number/barcode

UV inkjet print number/barcode (DOD)

Laser print number

Scratch off

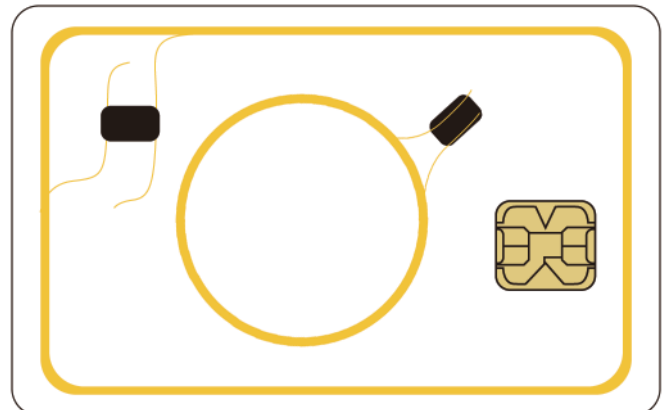


ISSI	ISSI4442	ISO7816-3	256byte
	ISSI4428	ISO7816-3	1k byte
Siemens/ Infineon	SLE5542	ISO7816-3	256byte
	SLE4428	ISO7816-3	1k byte
	SLE4442	ISO7816-3	256byte
	SLE4428	ISO7816-3	1k byte
Atmel	AT24C01	ISO7816-3	1k byte
	AT24C02	ISO7816-3	2k byte
	AT24C04	ISO7816-3	4k byte
	AT24C08	ISO7816-3	8k byte
	AT24C16	ISO7816-3	16kbyte
	AT24C32	ISO7816-3	32kbyte
	AT24C64	ISO7816-3	64k byte
	AT24C128	ISO7816-3	128kbyte
	AT24C256	ISO7816-3	256Kbyte
	AT88SC102		1k byte
	AT88SC0204C		2k bit
	AT88SC0404C		4k bit
	AT88SC0808C		8k bit
	AT88SC1616C		16kbit
	AT88SC1604		16k bit
	AT88SC1608		16k bit

Combo Card

Cards containing two or more embedded chip technologies. such as a contactless chip with its antenna and contact chip.

1. Contact IC +RFID IC
2. LF IC + HF IC
3. LF IC + UHF IC
4. HF IC + UHF IC
5. LF IC + HF IC + UHF IC



RFID Wood Card

Physical Specification:

Material: Recycle Wood

Size: 85.5x54mm , D50mm or customized.

Thickness: 1.5mm+/-0.02mm.

Storage Temp: -15°C to 25°C

Working Temp: -20°C to 50°C.

Frequency: 125KHz, 13.56MHz

Protocol: ISO14443A, ISO15693, ISO11784/5 etc.

Personalization:

Laser Printing serial number

Engrave LOGO

Silkscreen print LOGO

5 different patterns



Wood Material Template:

JCOP – The Core of Your Application

Java Card Operating System provided by one of the leading Smart Card IC vendors.

Field proven Global Platform / Java Card used world-wide for Banking, Mobile Transactions, Secure Identity (e.g.: ePassports, National ID Cards, Digital Signature Applications, Health Cards, Driving License), Transportation and various other applications.

Unique Platform Design: Use one JCOP version to address all market segments and applications independent of the form factor (e.g. cards, mobile phones, tokens) and certification requirements (e.g. CC, EMV, FIPS).

Cost and execution performance optimized solutions based on CMOS14, CMOS 0 and CMOS040 secure SmartMX technology.

Highest security and certification standards: CC EAL 5+/6+ (VAN5), EMVCo Platform, CAST (MasterCard), RISK (VISA) and FIPS.

Applet solutions for Banking, Mobile Transactions and Secure Identity with certified Applets in ROM. Additionally NXP offers service to 'ROMize' customer Applets.

Applet Information

- 1) All JCOP products offer the possibility of ROM mask customization with Applets provided by the customer for high volume projects.
- 2) Generic JCOP products are delivered by NXP without Applets in ROM,EEPROM or FLASH.
– These products can be customized by downloading Applets to the EEPROM or FLASH by the customer to adopt them for any application / market.
- 3) NXP offers a market tailored range of products with Applets included in ROM mask
– The specific applets offered by NXP are shown in the Product Portfolio sections of this roadmap.
– Products including NXP provided applets are approved according to corresponding approval processes (e.g.: BAC, EAC, SAC, VISA and MCW).
– Additional customer applets can be added into the EEPROM or FLASH.



NXP JCOP Product Range

JCOP Version	JCOP 2.3.1	JCOP 2.3.2	JCOP 2.4.1 R2	JCOP 2.4.1 R3
JCOP Type	4x	1x	2x	3x
Communication				
ISO 7816, T=0, T=1 (communication speed, kbit/s)	223.2	223.2	223.2	223.2
ISO 14443 T=CL (communication speed, kbit/s)	424	-	-	424
USB 2.0 LS	yes	-	-	-
NFC	S2C	-	-	-
Memory				
Available EEPROM Options KByte	72	10/18	10/18/36	12/36/72
ROM (free for Applets, up to KBytes)	65	17	13	46
APDU Buffer (RAM/Bytes)	261	261	261	261
JC&GP				
Java Card Version	2.2.1	2.2.1	2.2.1	2.2.1
Java Card STATIC Option (EEPROM versions)	-	-	-	-
VGP CIR	2.0.1	2.1.1	2.1.1	2.1.1
Global Platform	2.1.1	2.1.1	2.1.1	2.1.1
SCP Secure Channel Protocol	SCP01, SCP02	SCP01, SCP02	SCP01, SCP02	SCP01, SCP02
Cryptography				
DES/DES [bit]	56/112/168	56/112/168	56/112/168	56/112/168
AES [bit]	-	-	256*	-
RSA [bit]	2432	-	2432	2048
ECC GF(p) [bit]	-	-	-	320
ECC GF(2n) [bit]	239	-	239	-
SEED [bit]	128	-	128	128
SHA	SHA-1	-	SHA-1	SHA-1 / 2
MD5	yes	-	yes	yes
Random Number Generation	yes	yes	yes	yes
RSA Key Generation	yes	-	yes	yes
Additional Features				
Logical Channels	1	1	1	1
RMI Remote Method Invocation	yes	yes	yes	yes
SSD Supplementary Security Domain support	yes	-	yes	yes
Mifare™ API	yes	-	-	yes
Extended Length APDU	-	-	-	yes
Random UID	yes	-	-	yes
Custom ROM Masking	yes	yes	yes	yes
Technology	0.18 µm	0.18 µm	0.18 µm	0.14 µm
All Delivery Types Wafer and Module (as available for SmartMX Family)	yes	yes	yes	yes
eGov + Banking Features				
BAC Support (ICAO9303)	yes	-	-	yes
EAC Support (ICAO9303, BSI TR 03110 v1.1.1)	-	-	-	yes
BAC/EAC Accelerator API	-	-	-	yes
BAC Performance (20KByte Read)	7s	-	-	1.2s
EAC Performance (38KByte Read)	-	-	-	< 5s
PACE Support (BSI TR 03110 v2.0.3)	-	-	-	-
eGov + Banking Applets				
EAC / BAC Applet	-	-	-	EAC v1.0
VISA VSDC	-	v2.7.1	v2.7.1	-
MCW MChip (Contact)	-	-	4 v1.1	-
MCW PayPass MChip (Dual Interface)	-	-	-	4 v1.3.1
MCW Lite & Select (SDA & DDA)	-	-	-	yes
MCP Paypass Magstripe transaction support	-	-	-	yes
Certification & Approvals				
EMVCo (HW approval)	yes	yes	yes	yes
VISA	-	yes	yes	-
MasterCard PIC+CAST	-	-	yes	-
Common Criteria (EAL)	-	-	-	5+

* Available on 72 K version only ** EMV compliant

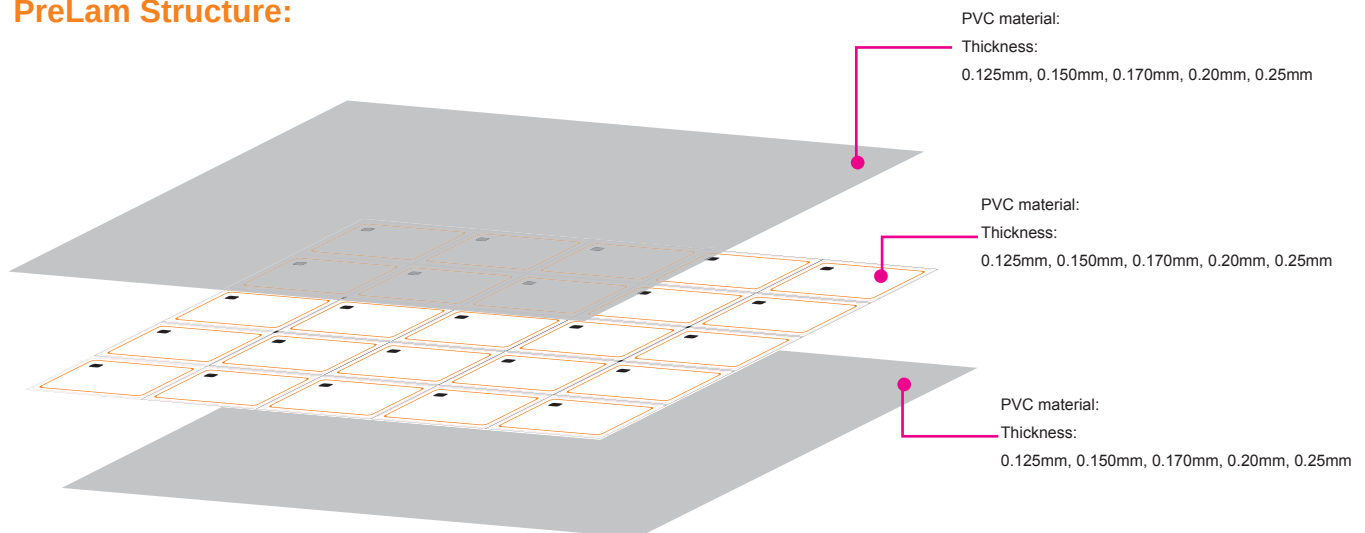
RFID PreLam Sheet

TANSOC Technologies manufactures semi-product for the manufacture of finished contactless cards, Prelam stands for Pre-laminated. TANSOC RFID prelam could incorporate pre-winding coil or ultrasonic embedding copper antenna, even FLIP chip etching antenna upon the customer's requirements. The prelam can be made of material PVC, PET, etc. We could develop any size and shape of antenna that can be adapted to the specific requirements of the customer. Reliability, durability and perfect electrical performance, compliant with diverse standards.

Frequency	Dimension	Thickness	Operating Temperature	Available IC
125KHz	Dimension: 310mm x 468mm, Max. size 600mm x 700mm, A4 210mm x 297mm Layout: 3x7, 5x5, 3x8, 4x8, 4x6, 2x5, 2x4,	0.5mm+-0.03	-25°C ~ +55°C	Atmel EM Martin NXP
13.56MHz	Dimension: 310mm x 468mm, Max. size 600mm x 700mm, A4 210mm x 297mm Layout: 3x7, 5x5, 3x8, 4x8, 4x6, 2x5, 2x4,	0.42mm+-0.03	-25°C ~ +55°C	Infineon Inside LEGIC NXP ST
865-954MHz	Dimension: 310mm x 468mm, Max. size 600mm x 700mm, A4 210mm x 297mm Layout: 3x7, 5x5, 3x8, 4x8, 4x6, 2x5, 2x4,	0.42mm+-0.03	-25°C ~ +55°C	Impinj Alien NXP

Other thicknesses are available upon request

PreLam Structure:



HF Antenna size List

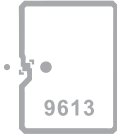
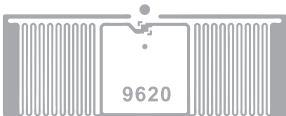
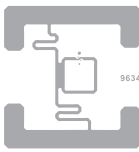
	Antenna size (mm)	Mifare 1k	Mifare Ultralight	FM1108	ICODE SLI	ICODE SLIS	NTAG21X Series	TI2048 Series
1	D20	Y	Y	Y	Y	Y	N	N
2	D21	N	N	N	N	N	Y	N
3	D22	Y	Y	Y	Y	Y	Y	Y
4	D25	Y	Y	Y	Y	Y	N	N
5	15x15	Y	Y	Y	Y	Y	Y	N
6	22.5x38	Y	Y	Y	N	N	N	Y
7	D30	Y	Y	Y	N	N	Y	N
8	D33	N	N	N	Y	Y	N	N
9	40x40	Y	Y	Y	N	N	Y	N
10	22x37	Y	Y	Y	Y	Y	Y	N
11	45x45	Y	Y	Y	Y	Y	N	N
12	D40	Y	Y	Y	Y	Y	Y	N
13	52x15	Y	Y	Y	Y	Y	N	N
14	32x32	Y	Y	Y	Y	Y	N	N
15	45x76	Y	Y	Y	Y	Y	N	N
16	26x11	Y	Y	Y	Y	Y	Y	N
17	D27	Y	Y	Y	Y	Y	N	N
18	D34	Y	Y	Y	Y	Y	N	N
19	22x35	N	N	N	Y	Y	N	N
20	22x34	N	N	N	Y	Y	N	N
21	D22+5	Y	Y	Y	Y	Y	N	N
22	D35 Metal Label	Y	Y	Y	N	N	N	N
23	26x11 Jewelry Label	Y	Y	Y	Y	Y	Y	N

1.The listed sizes are antenna size.

2.The length and width of dry inlay,wet inlay,lable must be 4mm longer than antenna size.

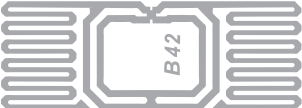
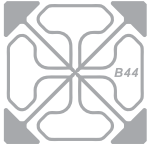
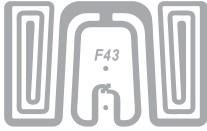
3. we supply OEM service for custom antenna size.

Alien UHF Antenna size List

	Alien 9610 size: 44.45x10.33mm, IC: Alien Higgs-3		Alien 9613 size: 12x9mm, IC: Alien Higgs-3
	Alien 9620 size: 27x9.7mm, IC: Alien Higgs-3		Alien 9629 size: 22.5x22.5mm, IC: Alien Higgs-3
	Alien 9630 size: 70x9.5mm, IC: Alien Higgs-3		Alien 9627 size: 30x45mm, IC: Alien Higgs-3
	Alien 9730 size: 70x9.5mm, IC: Alien Higgs-4		Alien 9634 size: 44x46mm, IC: Alien Higgs-3
	Alien 9662 size: 70x17mm, IC: Alien Higgs-3		
	Alien 9762 size: 70x17mm, IC: Alien Higgs-4		
	Alien 9640 size: 94.8x8.2mm, IC: Alien Higgs-3		
	Alien 9740 size: 94.8x8.2mm, IC: Alien Higgs-4		
	Alien 9654 size: 93x19mm, IC: Alien Higgs-3		

- 1.The listed sizes are antenna size.
- 2.The length and width of dry inlay,wet inlay,lable must be 4mm longer than antenna size.
3. we supply OEM service for custom antenna size.

Impinj UHF Antenna size List

	Impinj B41 size: 22x8mm, IC: Monza 4D,4E,4QT		Impinj E51 size: 95x8mm, IC: Monza 5
	Impinj B42 size: 22x8mm, IC: Monza 4D,4E,4QT		Impinj E52 size: 68x14mm, IC: Monza 5
	Impinj B43 size: 24x24mm, IC: Monza 4D,4E,4QT		Impinj E53 size: 44x18mm, IC: Monza 5
	Impinj B44 size: 24x24mm, IC: Monza 4D,4E,4QT		Impinj F43 size: 26x16mm, IC: Monza 4D, 4E, 4QT
	Impinj B45 size: 20x20mm, IC: Monza 4D,4E,4QT		Impinj H41 size: 30x46mm, IC: Monza 4D, 4E, 4QT
	Impinj E41 size: 94x8mm, IC: Monza 4D,4E,4QT		Impinj H42 size: 44x44mm, IC: Monza 4D, 4E, 4QT
	Impinj E41b size: 95x8mm, IC: Monza 4D,4E,4QT		Impinj H47 size: 44x44mm, IC: Monza 4D, 4E, 4QT
	Impinj E41c size: 95x8mm, IC: Monza 4D,4E,4QT		Impinj J41 size: D12mm, IC: Monza 4D, 4E, 4QT
	Impinj E42 size: 68x19mm, IC: Monza 4D,4E,4QT		Impinj J42 size: 15x8mm, IC: Monza 4D, 4E, 4QT
	Impinj E44 size: 105x6mm, IC: Monza 4D,4E,4QT		

1.The listed sizes are antenna size.

2.The length and width of dry inlay,wet inlay,lable must be 4mm longer than antenna size.

3. we supply OEM service for custom antenna size.

FPC Inlay

FPC (Flexible Printed Circuit) Inlay

*The FPC can resist 280°C high temperature.

*Application: All kinds of HF and UHF RFID tags which be required to have good flexibility and resist high temperature.

Key Features:

Protocol: ISO14443A, ISO15693, ISO18000-6C

Frequency: 13.56Mhz, 860MHz-960Mhz

ICs: Mifare Ultralight EV1, NTAG213, ICODE SLIX, Mifare 1k EV1, Alien Higgs3 or other

Material: FPC (Flexible Printed Circuit), PI (Polyimide)

Antenna: Etching copper

Size: 15*25mm, 9*19mm, 12*12mm, 70*9.5mm or customized

Thickness:

>>Inlay: 0.15+/-0.01mm or customized

>>Chip: 0.60+/-0.05mm

Temperature: -30°C to + 280°C

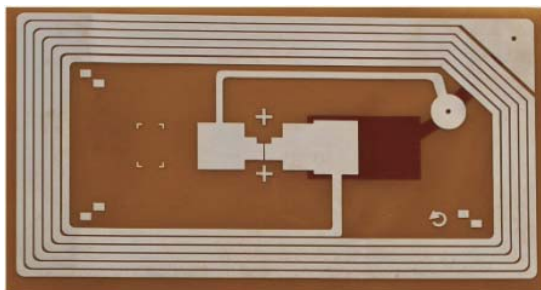
Read/write: 100,000 cycles

Option:

>>with glue for label

>>with ferrite for metal tag

>>other customized



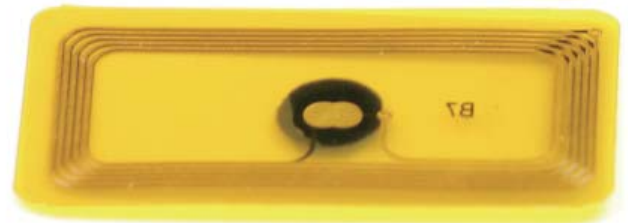
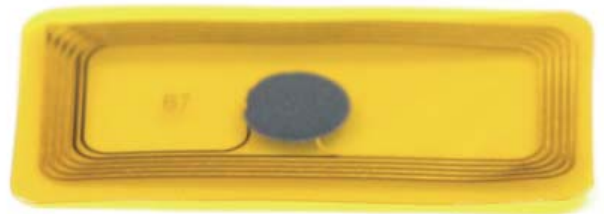
HF Inlay



UHF Inlay



UHF Inlay



HF Inlay

RFID PCB Tag

*The PCB can resist 250°C high temperature.

*Application: All kinds of NFC antennas, Subway stickets, wristband or long distance UHF tags

Key Features:

Protocol: ISO14443A, ISO15693, ISO18000-6C

Frequency: 13.56Mhz, 860Mhz-960Mhz

ICs: Mifare Ultralight EV1, NTAG213, ICODE SLIX, Alien Higgs-3, Impinj Monza-4, NXP UCODE 7

Material: PCB

Antenna: Etching

Size: 15*25mm, 10*10mm, 38*21mm or customized

Thickness: 0.08mm-3.0mm

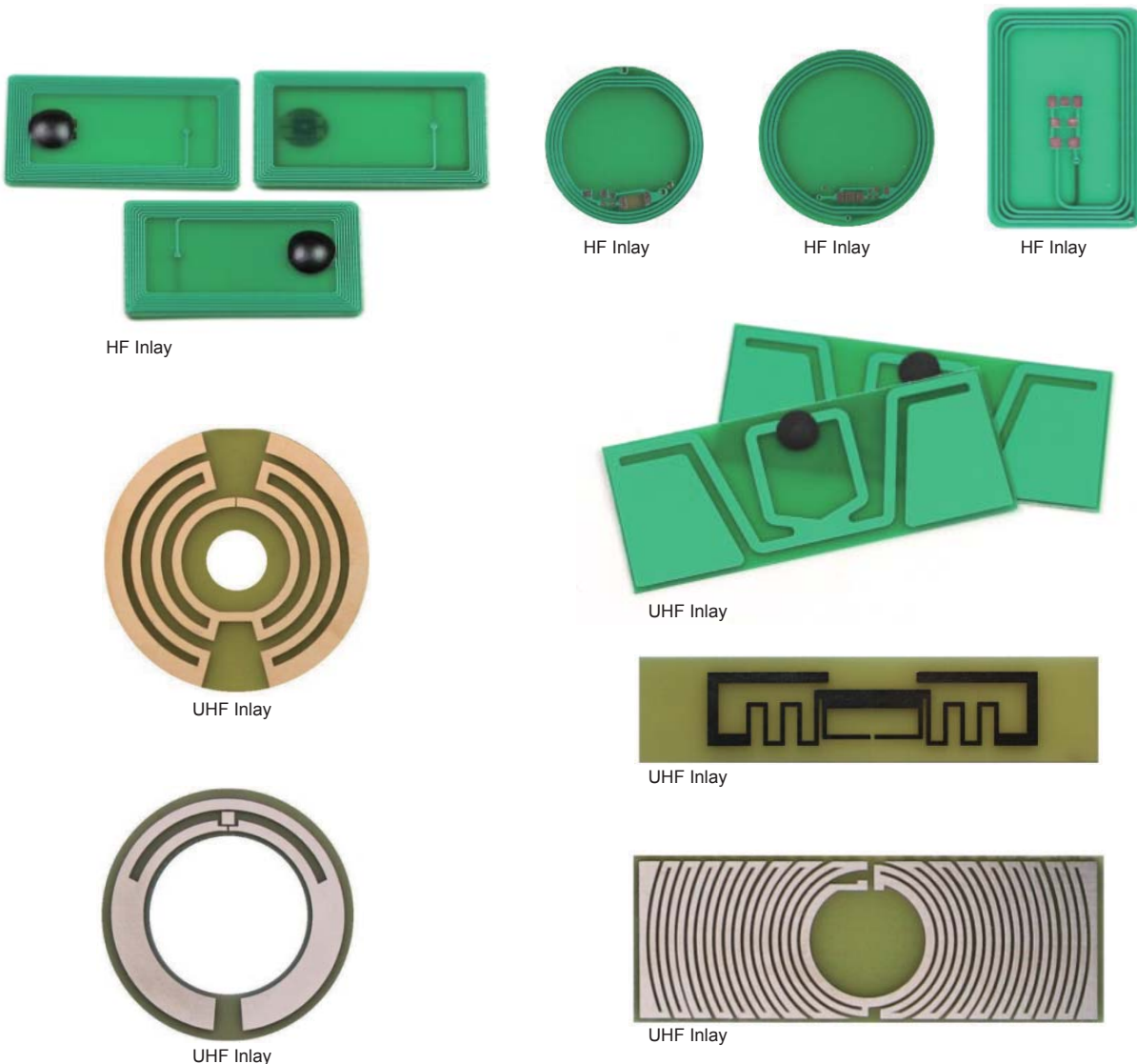
Temperature: -30°C to + 250°C

Read/write: 100,000 cycles

Option:

Printed LOGO

Serial number



FR4 (PCB) UHF Metal Tags

Key Features

Tag Material:	PCB (FR4/Glass epoxy Layer)
Antenna Material:	Glod + copper
Frequency:	860Mhz-960Mhz
Protocol:	EPC Class1 Gen2, ISO18000-6C
RFID Chip:	IMPINJ M4, or other
Memory:	96 Bit EPC /512 Bit User
Work Temperature:	-20℃ to +140℃
Storage Temperature:	-30℃ to +160℃
Personalization:	Print LOGO, serial number etc
Protection:	IP68
Other:	RoHS
Mounting:	with 3M Glue or hole Metal surface
Application :	Warehouse,Logistics management
	IT asset management ,
	Inventory management,
	Assets management,
	Automotive component tracking, Industrial manufacturing



6x6x2.5mm



3x7x2mm



10x3.4x1.3mm



10x5x2.5mm



D10mmx2mm



12.5x7.5x2.5mm



D16mmx2.5mm



15x4x2.5mm



18x8x2.5mm



18x13x2.5mm



22x8x2.5mm



25x9x2.5mm



30x9x3mm



80x6x2.5mm



70x20x3mm



36x13x2.5mm



52x13x2.5mm



50x2.5x1mm



3x7x2mm

The FR4 UHF metal tags are designed and developed by TANSOC. We are special developed smallest UHF metal tag as Diameter D10mm, The smallest UHF metal tag have very good communication distance. These tags are designed for warehousing, asset tracking etc applications.

Specification

Number	size (mm)	Chip position (thickness)	Read distance(1W, 30db, Handheld,air)	Weight(g)	Note
OP0606	6*6*2.5mm	3.5mm	15cm	0.2	without hole and glue
OP0307	3*7*2mm	3mm	15cm	0.2	without hole and glue
OP105	10*5*2.5mm	3.5mm	25cm	0.3	without hole and glue
OP103	10*3.5*1.3mm	2mm	15cm	0.3	without hole and glue
OPD10	D10mm*2mm	2.9mm	30cm	0.4	with glue
OPD14	D14mm*3mm	3.5mm	40cm	0.8	with glue
OPD16	D16mm*2.5mm	3.5mm	60cm	1.1	with glue
OP1207	12.5*7.5*2.5mm	3.5mm	35cm	0.6	with glue
OP1504	15*4*2.5mm	3.5mm	50cm	0.8	with glue
OP1808	18*8*2.5mm	3.5mm	50cm	1.0	with glue
OP1813	18*13*2.5mm	3.5mm	70cm	1.3	with glue
OP2208	22*8*2.5mm	3.5mm	80cm	1.1	with glue
OP2509	25*9*2.5mm	3.5mm	100cm	1.4	with glue
OP2510	25*10*1.5mm	2.5mm	120cm	1.4	with glue
OP2525	25*25*3mm	3.5mm	130cm	3.0	with glue
OP3005	30*5*1mm	2.5mm	30cm	1.0	with glue
OP3009	30*9*3mm	3.5mm	120cm	2.1	with glue
OP3232	32*32*3mm	3.5mm	150cm	3.5	with glue
OP3310	33*10*3mm	3.5mm	125cm	2.3	with glue
OP3613	36*13*2.5mm	3.5mm	130cm	3.0	with glue
OP4010	40*10*2.5mm	3.5mm	150cm	4.0	with hole and glue
OP5025	50*25*1mm	2.5mm	100cm	3.5	with hole and glue
OP5213	52*13*2.5mm	3.5mm	250cm	5.0	with hole and glue
OP5233	52*33*2.5mm	3.3mm	280cm	8.0	with hole and glue
OP6030	60*30*2.5mm	3.3mm	300cm	9.0	with hole and glue
OP7020	70*20*3mm	3.5mm	350cm	10.0	with hole and glue
OP8006	80*6*2.5mm	3.3mm	160cm	3.0	with hole and glue
OP8010	80*10*1.6mm	2.5mm	130cm	3.0	with hole and glue
OP8020	80*20*2.5mm	3.5mm	400cm	12.0	with hole and glue
OP9011	90*11*3mm	3.5mm	350cm	15.0	with hole and glue
OP9525	95*25*2.5mm	3.5mm	500cm	16.5	with hole and glue

we supply OEM service for custom the metal tag size.

UHF Metal Ceramic Tags

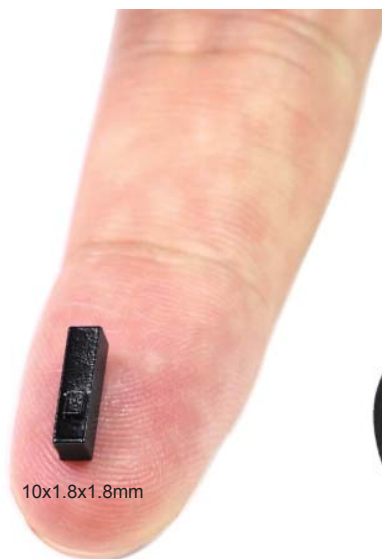
Metal Ceramic Tag are optimized for placement on metal assets, such as tools, weaponry and surgical instrumentation. The hard shells encasing these tiny UHF transponders shield them from exposure to autoclave sterilization and demanding industrial environments.

1. Embeddable in space-restricted applications.
2. Withstand physical stress, are dust tight, and resistant to water, chemicals, acids and temperature extremes.
3. Autoclave sterilization; bleach, cleaning solutions, oil.

Frequency: 860Mhz-960Mhz
Standard: EPC C1G2, ISO 18000-6C
Chip: Higgs 3
Memory: 512 bit read/write
Housing Material: Ceramic, surface Painted
Colour: Black
Water: IP68
Fix to: Metal surfaces

APPLICATION:

- Surgical instrumentation tracking
- Medical equipment status and utilization
- Cable identification
- Tool or weapon inventory and management
- Key fobs for automobile immobilization systems



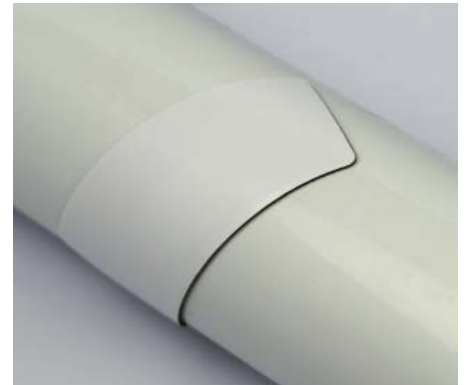
Specification

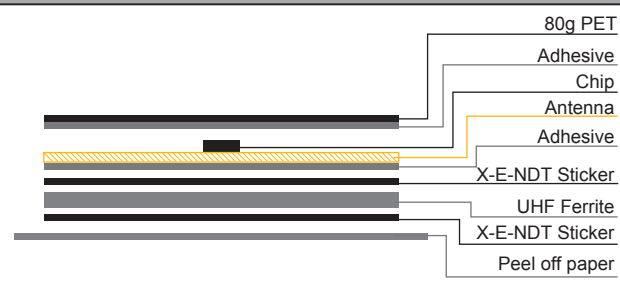
	SIZE	Read Distance (4W EIRP)	Operating Temperature	Weight	IC Type
OP443S	4x4x3mm	1.0m	-40°C to +125°C	0.26g	Alien H3/Impinj M5
	5x5x3mm	1.5m	-40°C to +125°C	0.40g	Alien H3/Impinj M5
OP1018s	10x1.8x1.8mm	1.0m	-40°C to +125°C	0.22g	Alien H3/Impinj M5
	10x2.5x2.5mm	1.5m	-40°C to +125°C	0.38g	Alien H3/Impinj M5
OP1005s	10x5x3mm	3.0m	-40°C to +125°C	1.4g	Alien H3/Impinj M5
OP1309s	13x9x3mm	4.5m	-40°C to +125°C	1.8g	Alien H3/Impinj M5
OP2309s	23x9x3mm	6.0m	-40°C to +125°C	3.3g	Alien H3/Impinj M5
OP3030s	30x30x3mm	10.0m	-40°C to +125°C	14.0g	Alien H3/Impinj M5
	25x25x3mm	9.0m	-40°C to +125°C	10.0g	Alien H3/Impinj M5
OP1615s	16x15x1.5mm	1.8m	-40°C to +125°C	1.6g	Alien H3/Impinj M5
OP2117s	21x17x2mm	2.5m	-40°C to +125°C	3.5g	Alien H3/Impinj M5
OP1818s	18x18x2mm	3.5m	-40°C to +125°C	3.2g	Alien H3/Impinj M5

Flexible UHF Metal Tags

This flexible UHF Gen 2 mount-on-metal RFID tag is ideal for indoor conditions. It is a perfect choice for supply chain applications and small asset tracking applications such as laptop computers, tools and electronic components. The slim RFID tag operates over the frequency range of 860 to 960 MHz . It is compliant with EPC Class 1 Gen 2 standard and has an outstanding read range of 1 to 5M when used directly on metal. This small form factor tag is available with EPC encoding, barcode and human readable content. It is also available with pressure sensitive adhesive.

Key Features	
-On metal RFID tag	
-Compliant with EPC Class 1 Gen 2 standard	
-Available with pressure sensitive adhesive	
-Available with EPC encoding, barcode and human readable content	
-Available with paper or polyester labels	
-Available with custom 4-color label printing	
-Small form factor, thin and flexible	

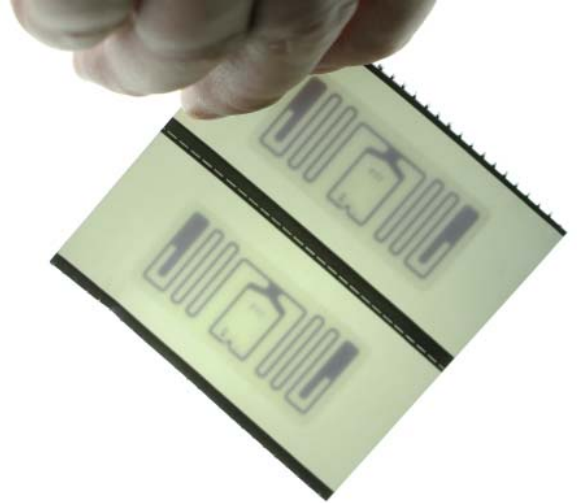


Number	TH11U
Structure	
size	70x30mm, 52x13mm, 92x15mm, or customs
Thickness	1.0+-0.1mm
Frequency	860Mhz-960Mhz
Protocol	EPC Class1 Gen2, ISO18000-6C
Chip	Alien Higgs3 or other
Memory	96 Bit EPC /512 Bit User
Read distance	up to 5M
Temperature	-25℃ ~ + 75℃
Mounting	Adhesive
Other	IP54
	Apply metal surface
	Package in roll
	Flexible
	Can be printed with RFID printer

UHF Washable Label

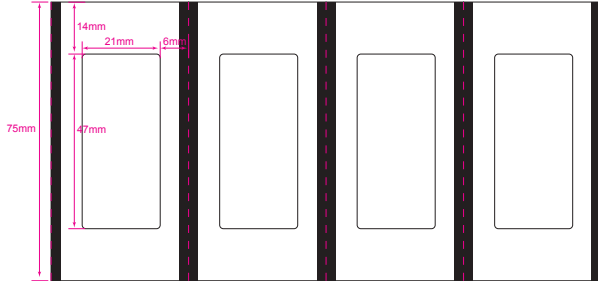
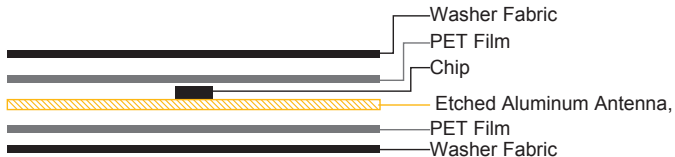
RFID Washable Label/ Cloth Laundry Tag is a flexible, washable label for laundry applications with best cost efficiency. And it use for Apparel Tag, Laundry Management, Uniform identity, Logistic system for Retail of Garment etc application.

It encapsulate UHF 860-960MHz, Passive RFID inlay and read range up to 3-10Meter, the exactly read range was depend on your UHF reader and antenna.



Key Features

>>Flexible
>>Compliant with EPC Class 1 Gen 2 standard
>>Waterproof, Dust proof
>>Available with EPC encoding, barcode and human readable content
>>Available with custom 4-color label printing
>>Small form factor, thin and flexible

Number	
Size	
Structure	
size	75x37mm or customs
Thickness	0.35mm
Frequency	860Mhz-960Mhz (or 13.56Mhz)
Protocol	EPC Class1 Gen2, ISO18000-6C
Chip	Alien Higgs3 or other
Memory	96 Bit EPC /512 Bit User
Read distance	up to 10M
Temperature	-25℃ ~ + 70℃, +120℃ for 20 minutes
	Package in roll
	Flexible
	Can be printed with RFID printer

High Temperature UHF Metal Tag, Long Distance UHF Metal Tag

High Temperature UHF Metal tag**Key Features**

Protocol: EPC global Gen2 (V 1.2.0) as well as ISO/IEC 18000-6C

Frequency: 902-928MHz (860Mhz to 960Mhz)

ICs: Alien Higgs-3 or other

- › 800-Bits of Nonvolatile Memory
- › 96-EPC Bits, extensible to 480 Bits
- › 512 User Bits
- › 64 Bit Unique TID
- › 32 Bit Access and 32 bit Kill Passwords

Material: PPA + Ceramic

Package: Ultrasonic

Size: 45 x 35 x 8mm /1.77 x 1.38 x 0.31inch

Mounting: Screw or Glue

Read distance: 1-6M

Temperature: -40℃ to + 200℃

Read/write: 100,000 cycles

ESD Performance: Passed IEC 61000-4-2

Seismic performance: Passed IEC 60068-2-6

Waterproof, dustproof : IP68

Weight: 16.5g

Application: metal surface

Personalization: printed LOGO or serial number

**Long Distance UHF Metal Tag****Key Features**

Waterproof, Dustproof: IP67

Material: ABS

Operating frequency: 860-960MHz

User Memory: 512 bits

Size: 135mm×22mm×12mm (thickness), Hole diameter:4mm, Distance between two holes:120mm

Chip: Alien Higgs-3 (Option: Alien Higgs-4/Monza 4D/Monza 4E/Monza 4QT)

Available reading distance: up to 15 meters, depend on your reader

Available operation life: 10years

Working temperature range: -25℃ to 85℃

Standard: ISO18000-6C

Weight: 19g

Mounting: Fixed with screw or label adhesive

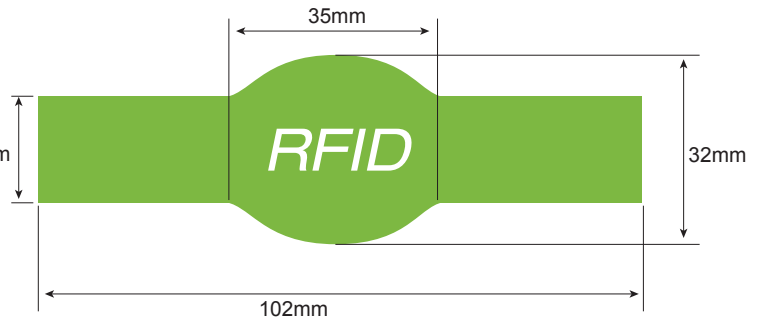
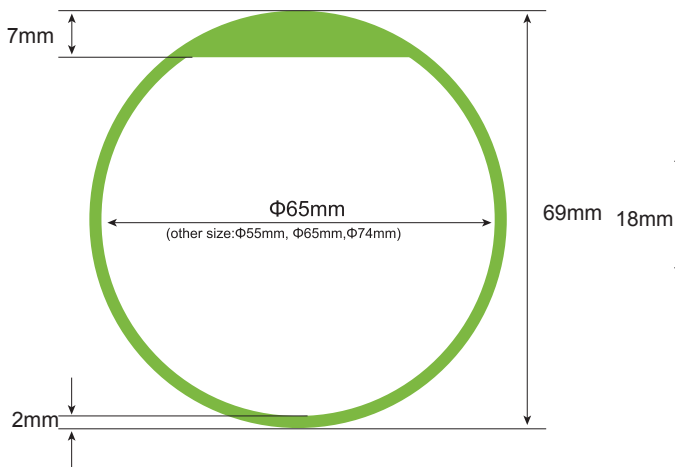
Personalization: printed LOGO or serial number



RFID Silicone Wristband

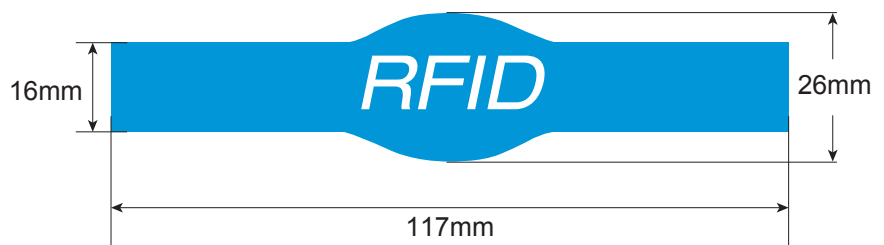
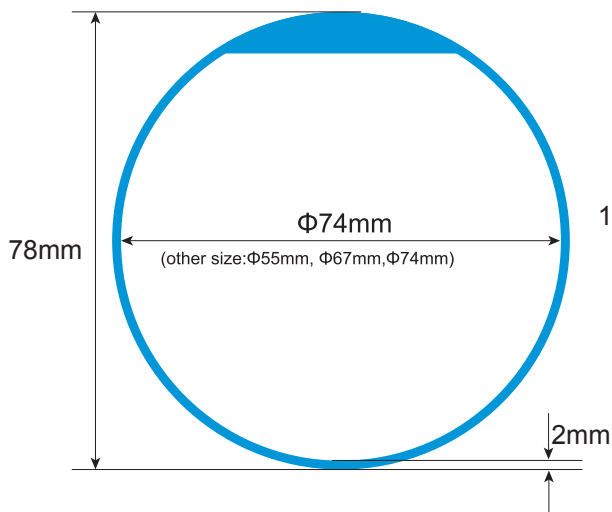
OP005

Material: Silicone
Operating Temperature: -30°C to +70°C
Waterproof, Dustproof: IP68
Size: Diameter 55mm, 65mm, 74mm
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White
Protocol: ISO14443A, ISO15693, ISO18000-6C
Personalization: Silkscreen printing 1-2 Colour, laser print serial number
Frequency: 125KHz, 13.56MHz, 860-960MHz



OP002

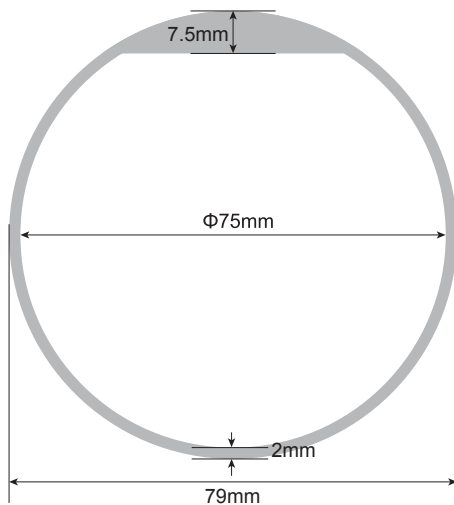
Material: Silicone
Operating Temperature: -30°C to +70°C
Waterproof, Dustproof: IP68
Size: Diameter 55mm, 65mm, 74mm
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White
Protocol: ISO14443A, ISO15693, ISO18000-6C
Personalization: Silkscreen printing 1-2 Colour, laser print serial number
Frequency: 125KHz, 13.56MHz, 860-960MHz



RFID Silicone Wristband

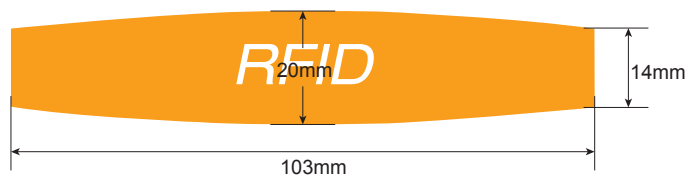
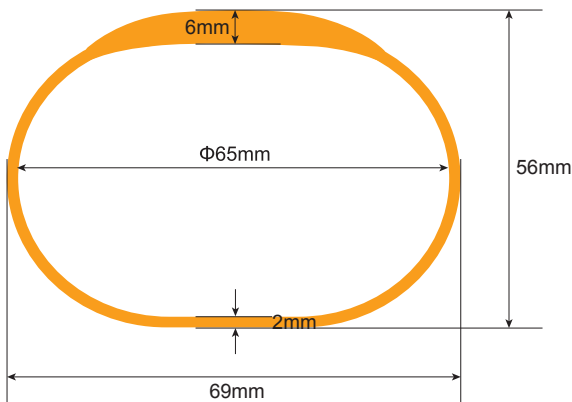
OP004

Material: Silicone
Operating Temperature: -30°C to +70°C
Waterproof, Dustproof: IP68
Size: Diameter 75mm
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White
Protocol: ISO14443A, ISO15693, ISO18000-6C
Personalization: Silkscreen printing 1-2 Colour, laser print serial number
Frequency: 125KHz, 13.56MHz, 860-960MHz
Weight: 14.5g



OP010

Material: Silicone
Operating Temperature: -30°C to +70°C
Waterproof, Dustproof: IP68
Size: Diameter 55mm, 65mm, 74mm
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White
Protocol: ISO14443A, ISO15693, ISO18000-6C
Personalization: Silkscreen printing 1-2 Colour, laser print serial number
Frequency: 125KHz, 13.56MHz, 860-960MHz



RFID Silicone Wristband

OP014

Material: Silicone

Operating Temperature: -30°C to +70°C

Waterproof, Dustproof: IP68

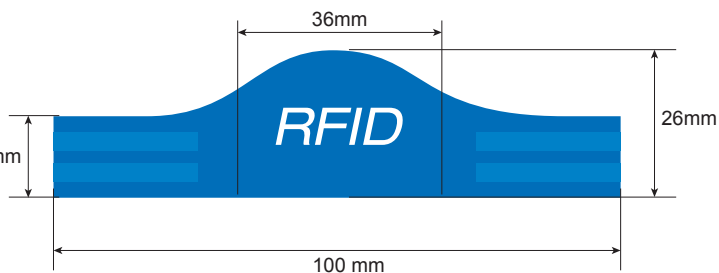
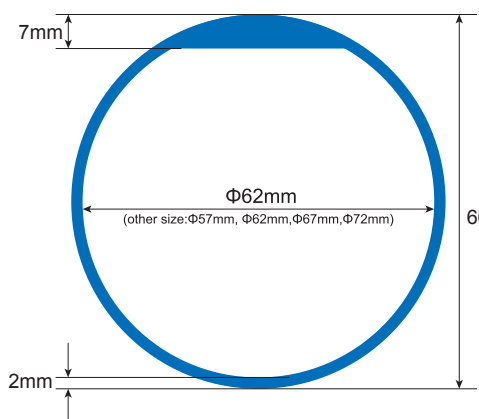
Size: Diameter 57mm, 62mm, 67mm, 72mm

Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White

Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: Silkscreen printing 1-2 Colour, laser print serial number

Frequency: 125KHz, 13.56MHz, 860-960MHz



OP015 DUAL Frequency Wristband

Material: Silicone

Operating Temperature: -30°C to +70°C

Waterproof, Dustproof: IP68

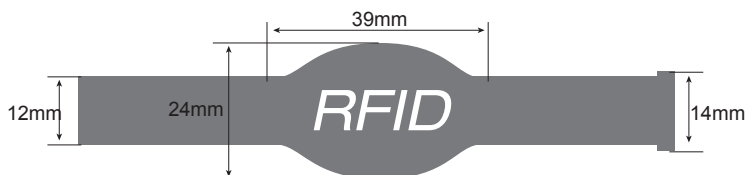
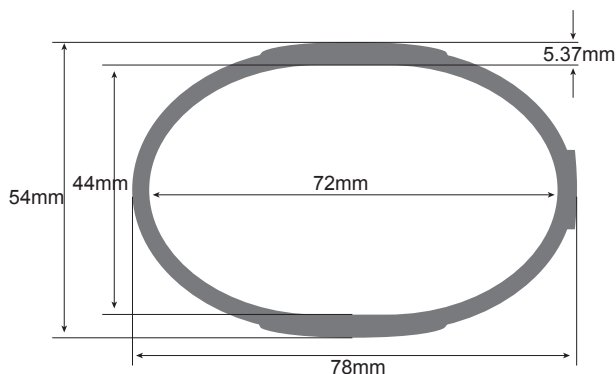
Size: Diameter 65mm

Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White

Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: Silkscreen printing 1-2 Colour, laser print serial number

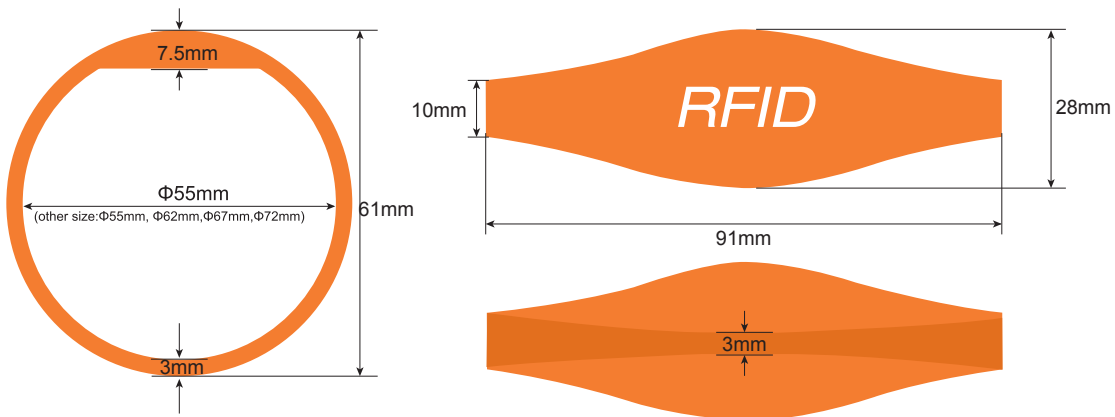
Frequency: 125KHz, 13.56MHz, 860-960MHz



RFID Silicone Wristband

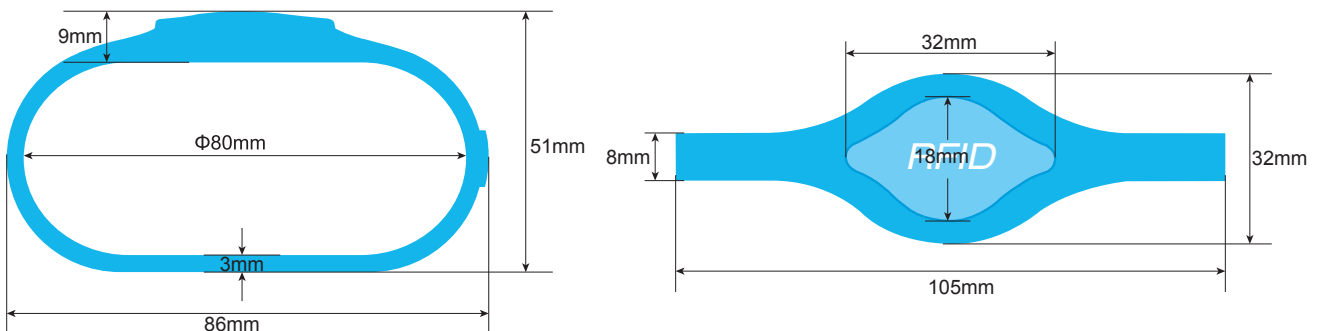
OP013

Material: Silicone
Operating Temperature: -30°C to +70°C
Waterproof, Dustproof: IP68
Size: Diameter 55mm, 62mm, 67mm, 72mm
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White
Protocol: ISO14443A, ISO15693, ISO18000-6C
Personalization: Silkscreen printing 1-2 Colour, laser print serial number
Frequency: 125KHz, 13.56MHz, 860-960MHz



OP012

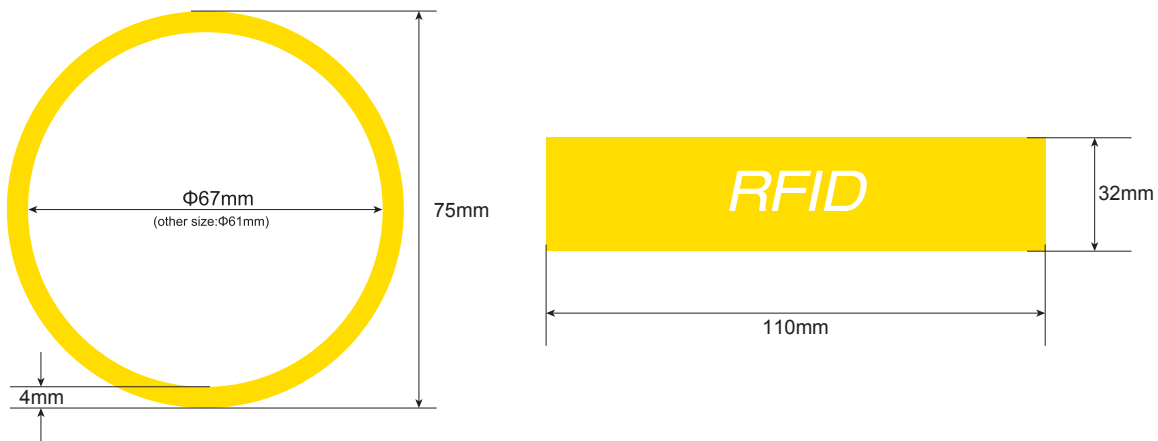
Material: Silicone
Operating Temperature: -30°C to +70°C
Waterproof, Dustproof: IP68
Size: Diameter 65mm
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White
Protocol: ISO14443A, ISO15693, ISO18000-6C
Personalization: Silkscreen printing 1-2 Colour, laser print serial number
Frequency: 125KHz, 13.56MHz, 860-960MHz



RFID Silicone Wristband

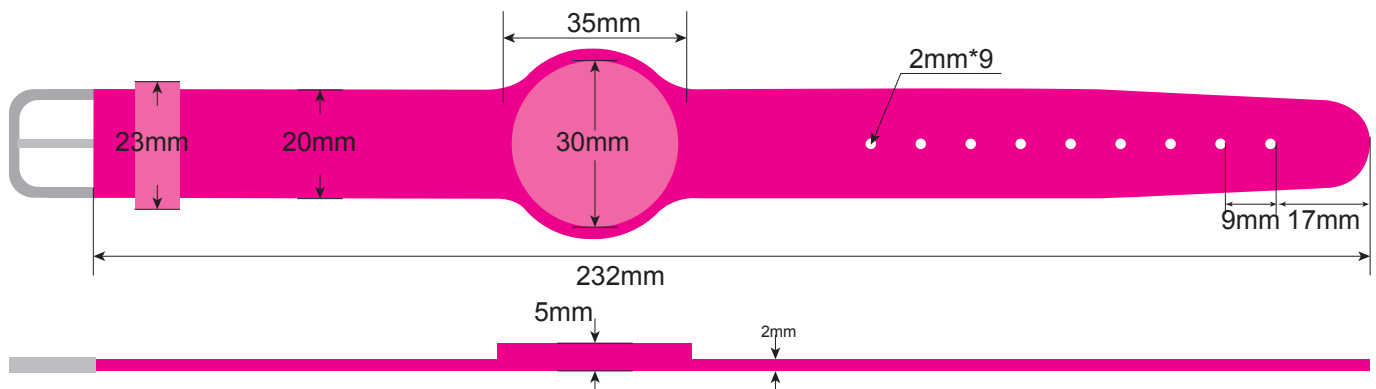
OP022

Material: Silicone
Operating Temperature: -30°C to +70°C
Waterproof, Dustproof: IP68
Size: Diameter 61mm, 67mm
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White
Protocol: ISO14443A, ISO15693, ISO18000-6C
Personalization: Silkscreen printing 1-2 Colour, laser print serial number
Frequency: 125KHz, 13.56MHz, 860-960MHz



OP009

Material: Silicone
Operating Temperature: -30°C to +70°C
Waterproof, Dustproof: IP68
Size: Diameter 65mm
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White
Protocol: ISO14443A, ISO15693, ISO18000-6C
Personalization: Silkscreen printing 1-2 Colour, laser print serial number
Frequency: 125KHz, 13.56MHz, 860-960MHz
Weight: 17.5g



RFID Silicone Wristband

OP037

Material: Silicone

Operating Temperature: -30°C to +70°C

Waterproof, Dustproof: IP68

Size: 260x26mm

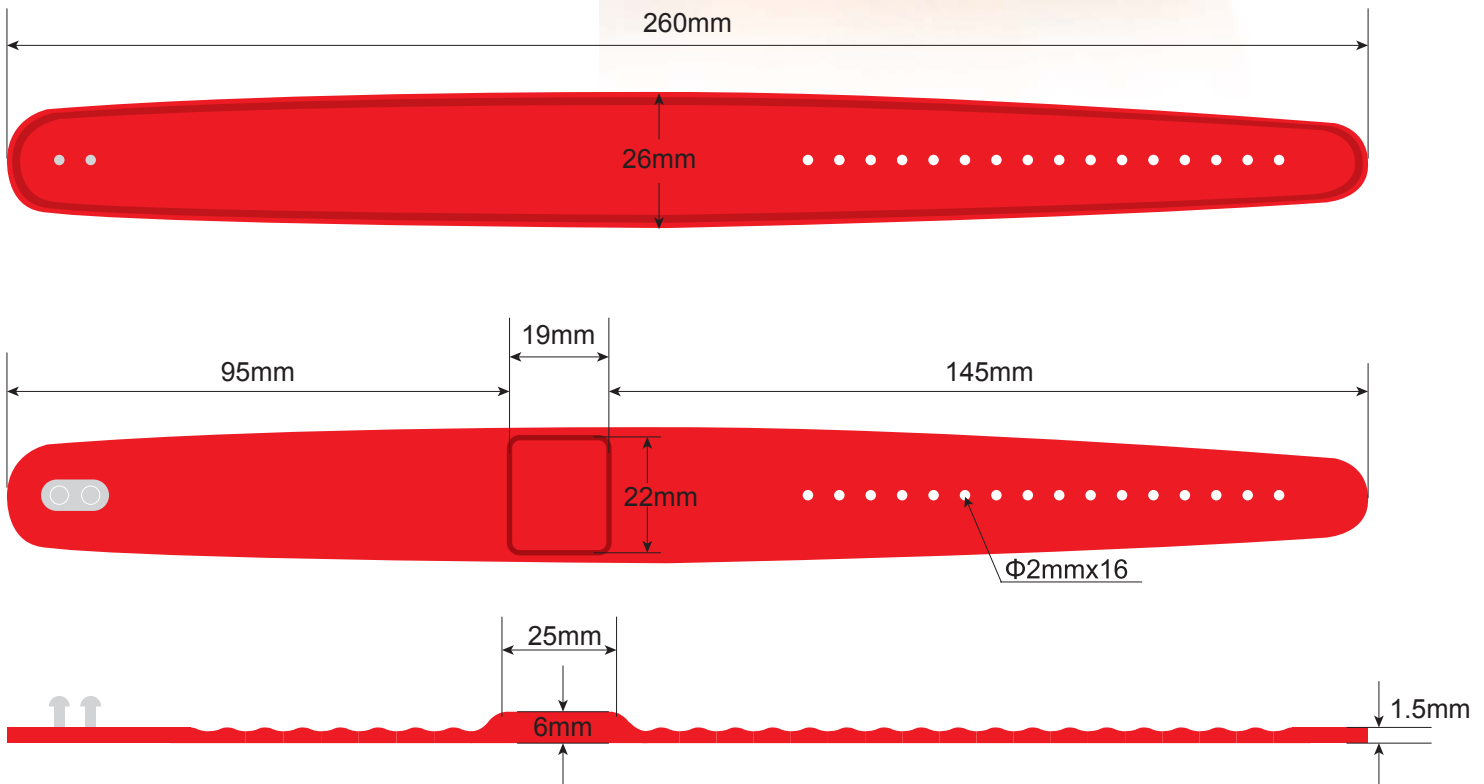
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White

Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: Silkscreen printing 1-2 Colour, laser print serial number

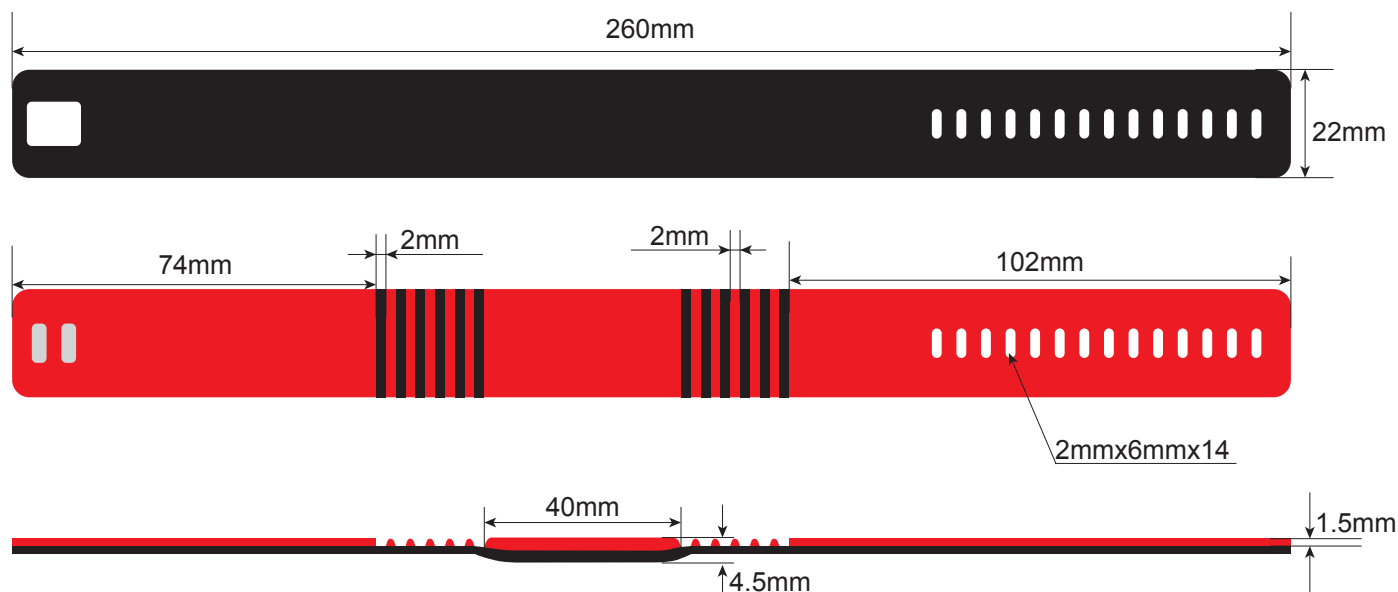
Frequency: 125KHz, 13.56MHz, 860-960MHz

Weight: 24.5g



OP074 *Dual Colour Wristband*

Weight: 24.5g



RFID Silicone Wristband

OP025 *Clap on wristbands*

Material: Silicone

Operating Temperature: -30°C to +70°C

Waterproof, Dustproof: IP68

Size: 280x28mm

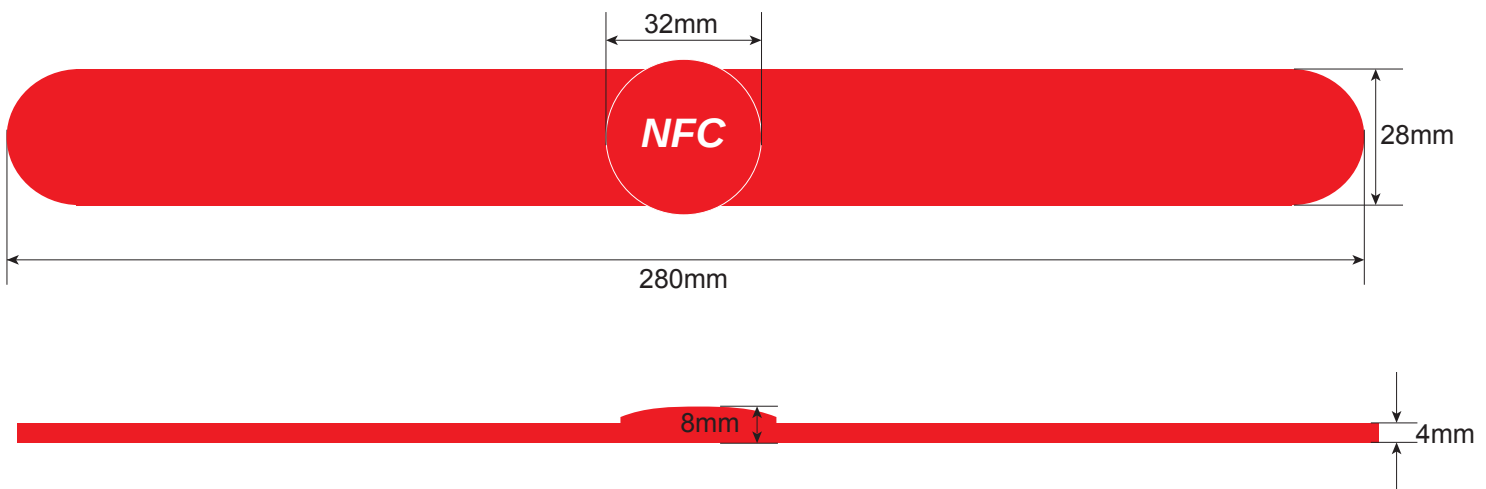
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White

Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: Silkscreen printing 1-2 Colour, laser print serial number

Frequency: 125KHz, 13.56MHz, 860-960MHz

Weight: 37g



RFID Silicone Wristband

OP046 *Camouflage Wristband*

Material: Silicone

Operating Temperature: -30°C to +70°C

Waterproof, Dustproof: IP68

Size: 250x25mm

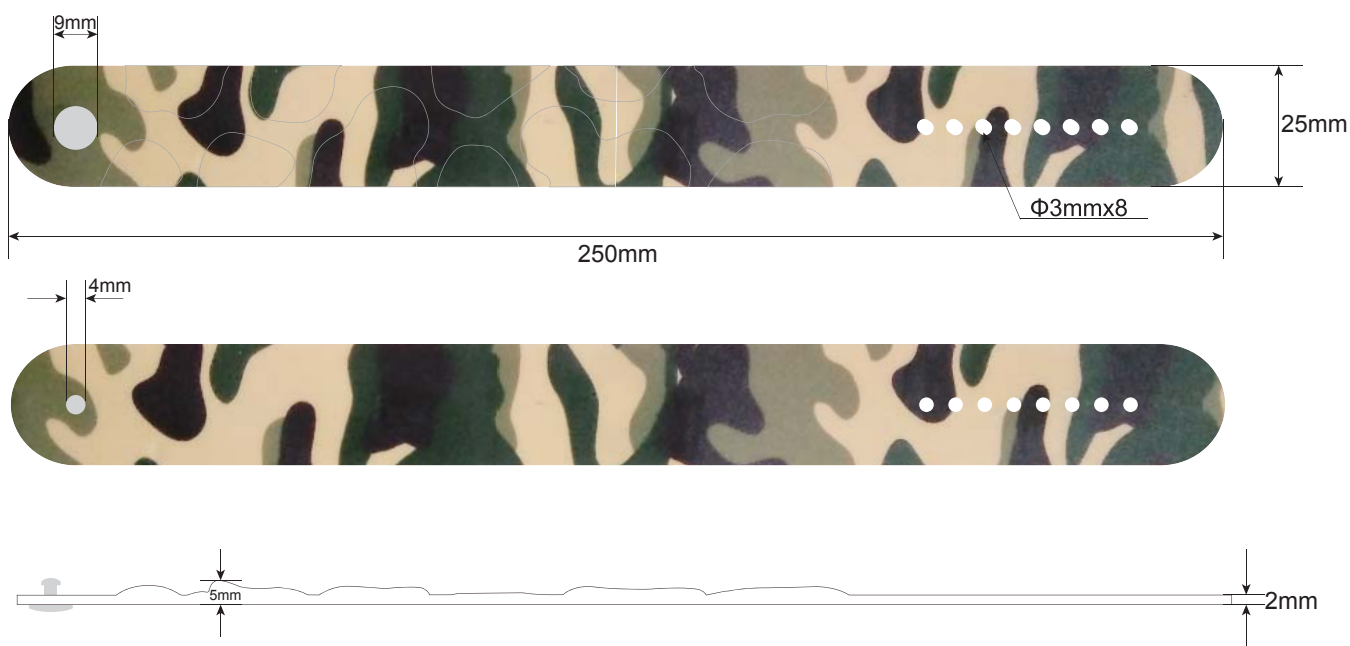
Available Colour: camouflage

Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: Silkscreen printing 1-2 Colour, laser print serial number

Frequency: 13.56MHz, 860-960MHz

Weight: 22.5g



RFID Plastic Wristband

OP008

Material: PVC+ABS

Operating Temperature: -30°C to +70°C

Waterproof, Dustproof: IP68

Size: 276x20mm

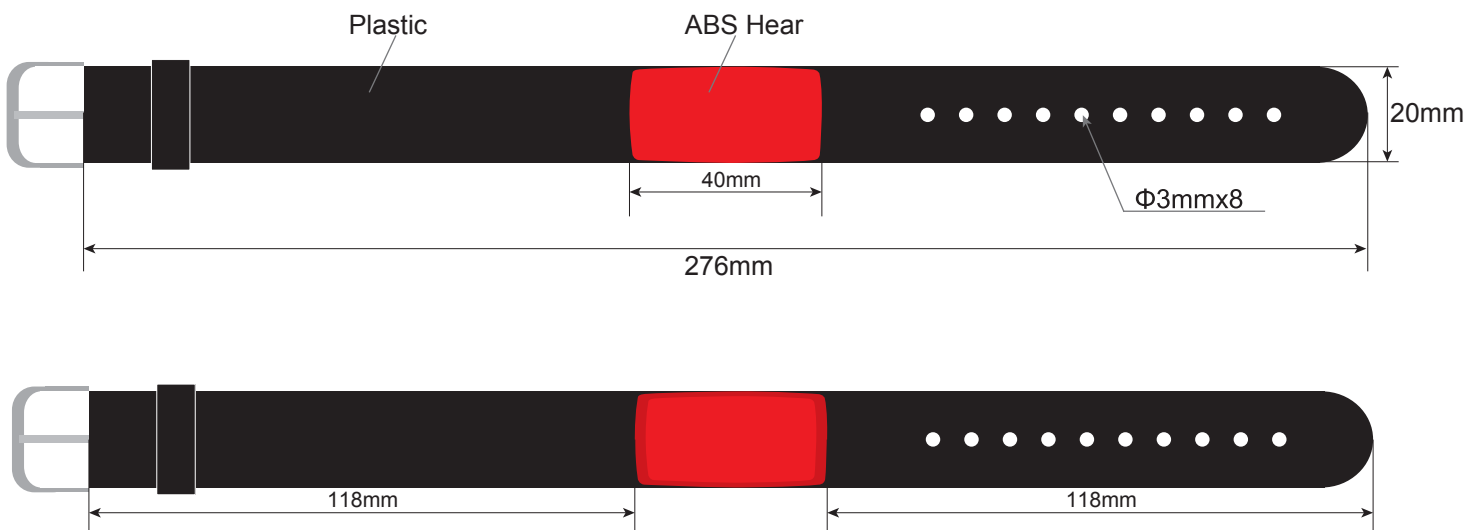
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White

Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: Silkscreen printing Colour, laser print serial number

Frequency: 125KHz, 13.56MHz, 860-960MHz

Weight: 22.5g



RFID Velcro Wristband

OP003

Material: ABS + Nylon Straps

(Versions include ABS housings with Nylon straps, plastic closures, durable Polyester VELCRO type closures)

Adjustable strap length.

Operating Temperature: -30°C to +70°C

Waterproof, Dustproof: IP65

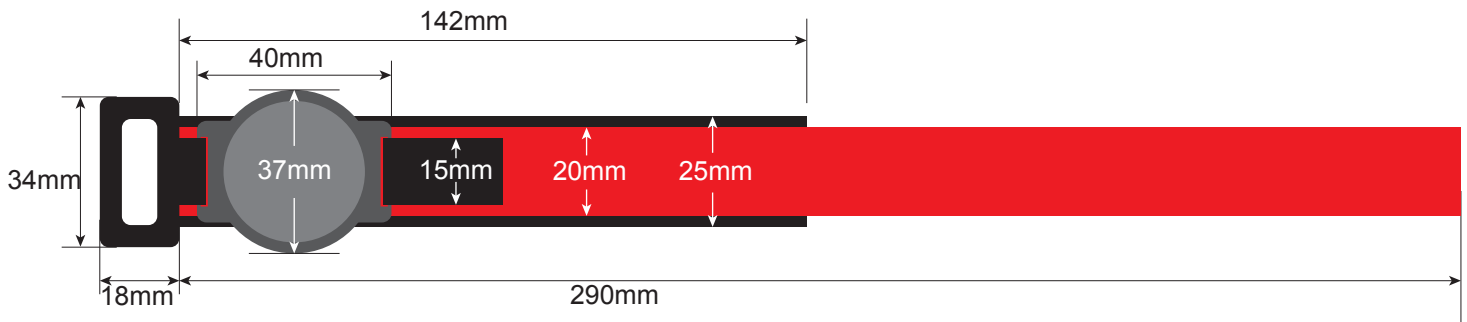
Size: 290x40mm

Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: Silkscreen printing 1-2 Colour, laser print serial number

Frequency: 125KHz, 13.56MHz, 860-960MHz

Weight: 11.5g



OP003A

Material: ABS + Nylon Straps (Versions include ABS housings with Nylon straps, metal button.)

Operating Temperature: -30°C to +70°C

Waterproof, Dustproof: IP65

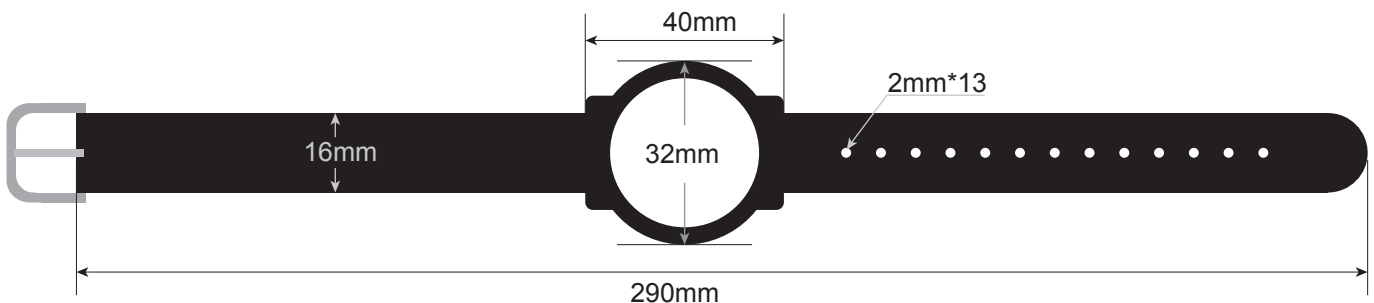
Size: 290x40mm

Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: Silkscreen printing 1-2 Colour, laser print serial number

Frequency: 125KHz, 13.56MHz, 860-960MHz

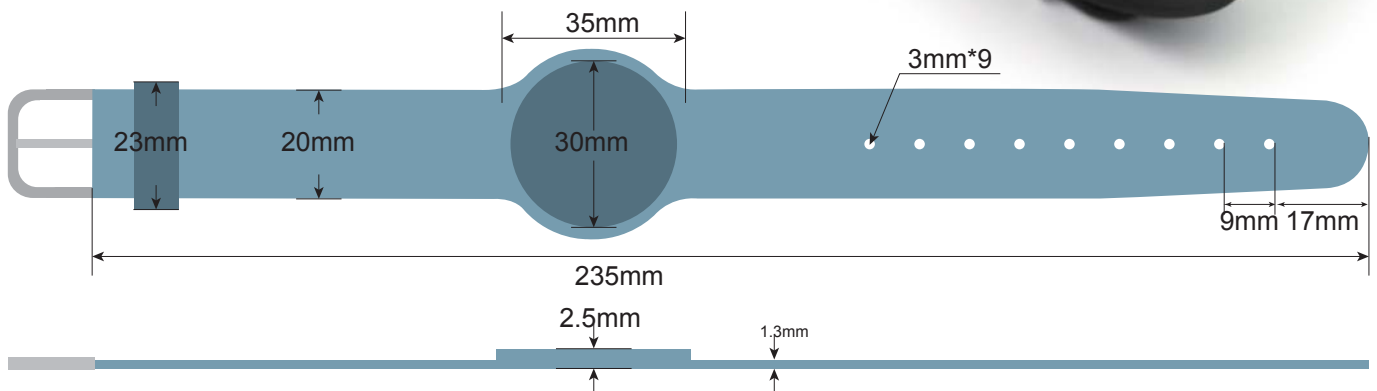
Weight: 11.5g



RFID Plastic Wristband

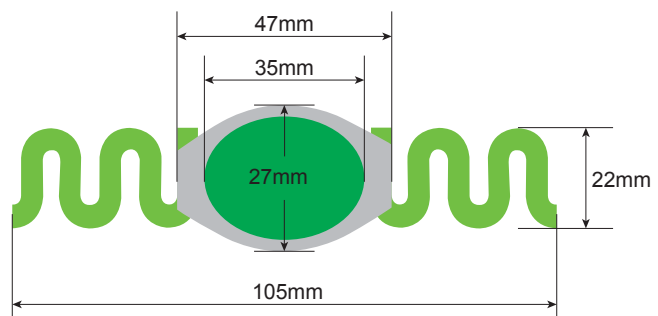
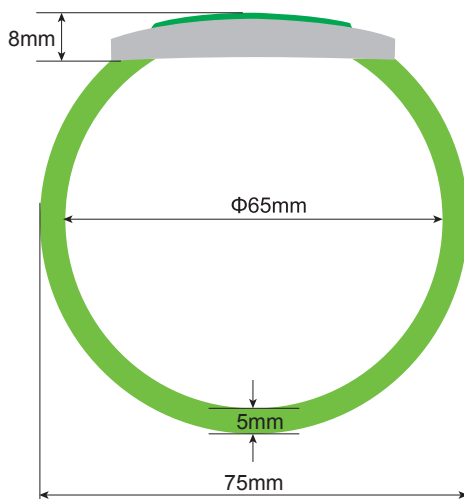
OP001

Material: PVC
Operating Temperature: -30°C to +70°C
Waterproof, Dustproof: IP68
Size: 235x20mm
Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White
Protocol: ISO14443A, ISO15693, ISO18000-6C
Personalization: Silkscreen printing Colour, laser print serial number
Frequency: 125KHz, 13.56MHz, 860-960MHz
Weight: 11.5g



OP006

Material: ABS + Plastic
Operating Temperature: -30°C to +70°C
Waterproof, Dustproof: IP65
Size: Diameter 65mm
Protocol: ISO14443A, ISO15693, ISO18000-6C
Personalization: Silkscreen printing 1-2 Colour, laser print serial number
Frequency: 125KHz, 13.56MHz, 860-960MHz
Weight: 16.5g



RFID Woven Wristband, RFID Tyvek Wristband

OP011

Material: Woven + PVC

Adjustable strap length.

Operating Temperature: -30°C to +70°C

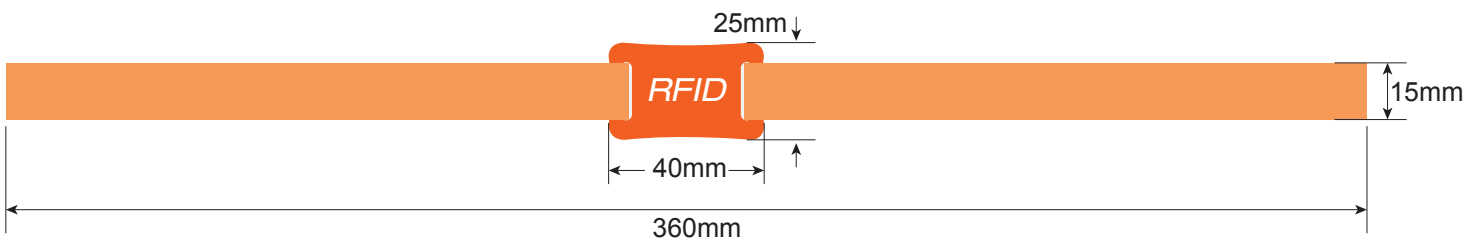
Waterproof, Dustproof: IP68

Size: PVC material, 40*25mm; Woven Wristbands, 360*15mm

Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: printing full Colour, laser print serial number

Frequency: 125KHz, 13.56MHz, 860-960MHz



OP016

Material: Tyvek or PP Synthetic Paper

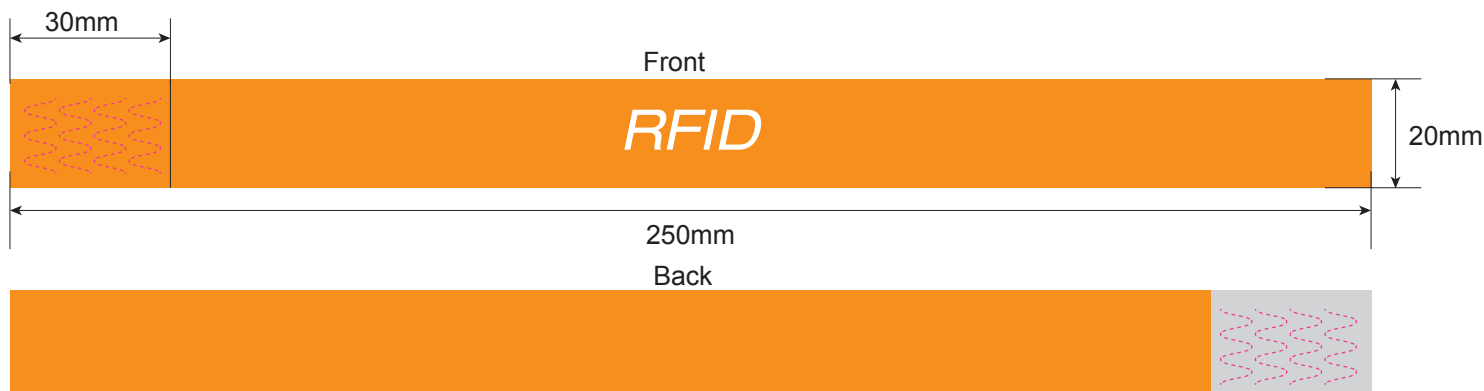
Operating Temperature: -20°C to +70°C

Size: 250x20mm

Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: printing full Colour, print serial number

Frequency: 13.56MHz, 860-960MHz



RFID Elastic Wristband, RFID Plastic Wristband

OP012

Material: Woven + Elastic

Size: Diameter: 60mm or 67mm, Width: 25mm or 15mm

Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: Heat transfer

Frequency: 125KHz, 13.56MHz, 860-960MHz



OP007

Material: Soft PVC

Operating Temperature: -20°C to +70°C

Available Colour: Blue, Yellow, Green, Pink, Orange, Black, White

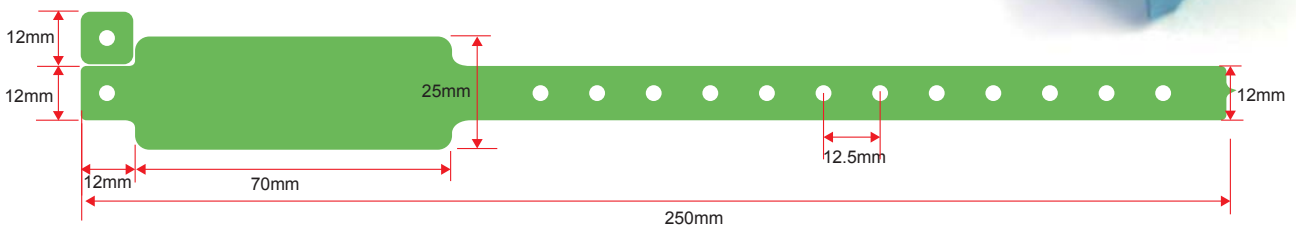
Protocol: ISO14443A, ISO15693, ISO18000-6C

Personalization: Silkscreen printing Colour, laser print serial number

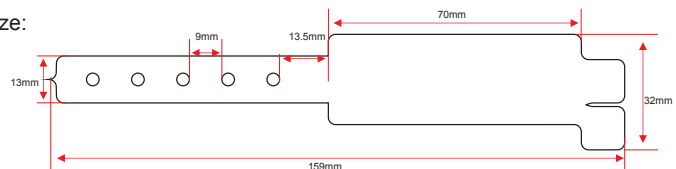
Frequency: 13.56MHz, 860-960MHz



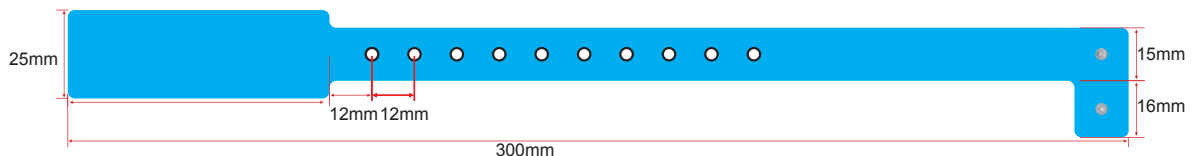
Standard Size:



Child Size:



UHF Size:



RFID Security Seals, RFID Tie Tag

RFID Security Seals

Key Features:

Protocol: ISO14443A, ISO15693, ISO18000-6C

Frequency: 125Khz, 13.56Mhz, 860Mhz-960Mhz

ICs: Mifare Ultralight EV1, NTAG213, ICODE SLIX,
Alien Higgs-3, Impinj Monza-4 etc

Material: ABS + Steel wire

Size: 35*25*11mm + L280mm*D1.5mm

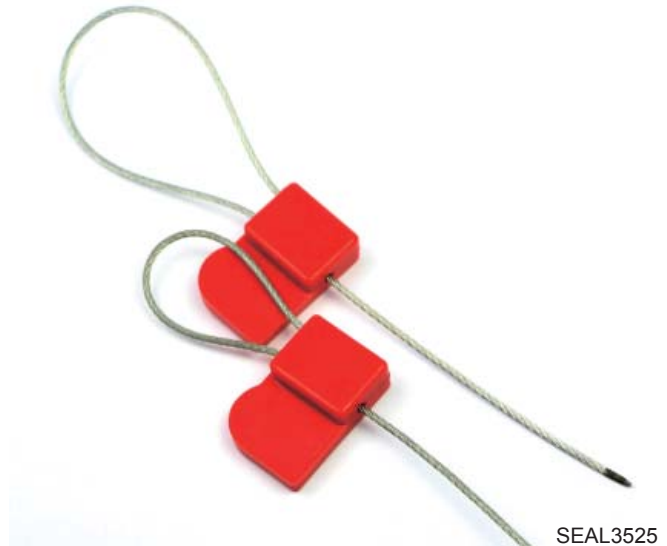
Weight: 22g

Colour: Red, white, Green, blue, yellow;

Temperature: -20°C to + 80°C

Read/write: 100,000 cycles

Option: Laser Printed Serial number, Silkscreen printed LOGO.



SEAL3525

RFID Tie Tag

Key Features:

Protocol: ISO14443A, ISO15693, ISO18000-6C

Frequency: 13.56Mhz, 860Mhz-960Mhz

ICs: Mifare Ultralight EV1, NTAG213, ICODE SLIX,
Alien Higgs-3, Impinj Monza-4 etc

Material: ABS + PA

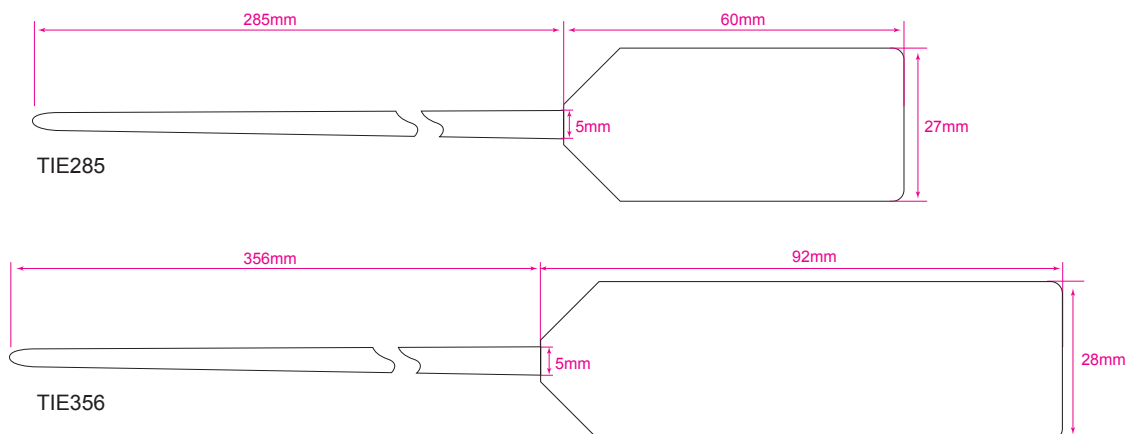
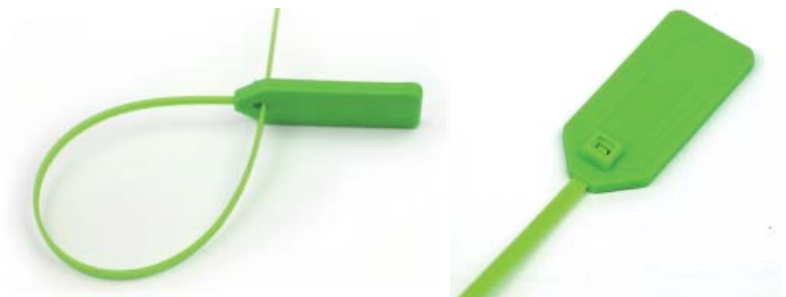
Packaging: Ultrasonic

Colour: Red, white, Green, blue, yellow;

Temperature: -20°C to + 80°C

Read/write: 100,000 cycles

Option: Laser Printed Serial number, Silkscreen printed LOGO.



Animal Ear Tag

Key Features:**Protocol:** ISO14443A, ISO15693, ISO18000-6C**Frequency:** 13.56Mhz, 860MHz-960Mhz**ICs:** Alien Higgs3, Impinj M4, NTAG213, ICODE SLIX, Mifare Ultralight EV1 or other**Material:** TPU(Polyurethane)**Antenna:** Aluminum + PET**Size:** 80x70mm**Temperature:** -40℃ to + 85℃**Read/write:** 100,000 cycles**Option:** Laser Printed Serial number, Silkscreen printed LOGO.**Weight:** 16.5g

EAR7080

Animal Ear Tag

Key Features:**Protocol:** ISO11784/11785**Frequency:** 125KHz, 135KHz**ICs:** EM4305, Hitag1, Hitag2, TK4100, EM4200**Material:** TPU(Polyurethane)**Antenna:** Copper Wire**Size:** D30mmxH23.5mm**Temperature:** -40℃ to + 85℃**Read/write:** 100,000 cycles**Option:** Laser Printed Serial number, Silkscreen printed LOGO.**Weight:** 10.5g

EAR3023

RFID Nail Tag

Key Features:**Protocol:** ISO11784/11785, ISO14443A, ISO15693**Frequency:** 125KHz, 13.56MHz**ICs:** EM4305, Hitag1, Hitag2, TK4100, Mifare 1k, ICODE SLI**Material:** ABS**Antenna:** Copper Wire**Size:** D8mmxL37mm**Temperature:** -40℃ to + 85℃**Read/write:** 100,000 cycles**Weight:** 2g

NA0837

NFC Anti-Metal Tag, Fragil Anti-Tamper Label

NFC Anti-Metal Tag

Key Features:

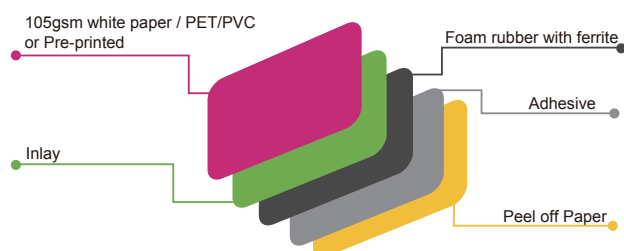
Surface: Glossy or matte
Color: White or custom artwork
Size: 46x31mm, 29x29mm, 15x35mm or Custom
Thickness: 0.3mm to 0.6mm
Frequency: 13.56MHz
Protocol: ISO14443A, ISO15693
Operating temperature: -20°C to +50°C
Option: epoxy surface

Printing options:

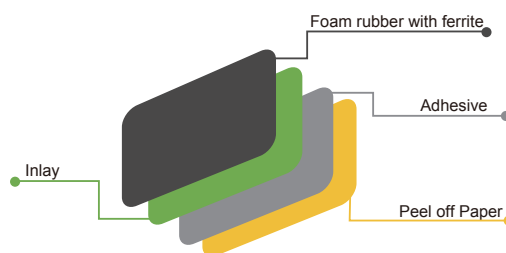
Offset Print full colour,
Silkscreen print gold/silver colour

Application: Metal Surface

Structure A:



Structure B:



Fragil Anti-Tamper Label

TANSOC offer customized tamper proof labels, which are known for their security they provide. Once these labels are applied on a glossy surface, other people can't tear them down in complete and reuse them. their self-destructive function can be widely used in many occasion like parking system, asset tracking and other protection system.

Key Features:

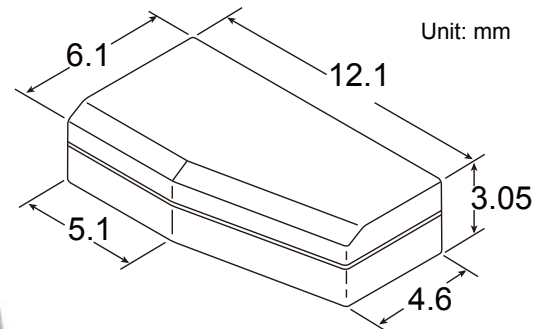
- Standards: ISO 14443A, ISO15693, ISO18000-6C
- Operating frequency: 13.56MHz, 860-960MHz
- Size: 13*20mm, D26mm, D32mm, 40*19mm, 30*20mm, 75*19mm, 43*30mm or customized.
- Thickness: 0.12+/-0.02mm.
- Storage Temp: -15°C to 25°C
- Working Temp: -20°C to 50°C



Brick Tag (Wedge Tag)

Key Features:

- *Small footprints - Embeddable in space-restricted applications.
- *Exceptionally durability - Withstand physical stress, are dust tight, and resistant to water, chemicals, acids and temperature extremes.
- *Versatility - Available in LF and HF; may be customized to fit application requirements.



Dimensions:	12x6x3mm
Material:	ABS/Plastic
Storage Temperature:	-40°C + 85°C
Operating Temperature:	-20°C + 85°C
Ingress Protection:	IP68
Chipset:	ATA5577, Hitag 1, Hitag 2, Hitag S2048, Mifare 1k etc.
Protocol:	ISO18000-2, ISO11784/11785, ISO15693, ISO14443A, NFC etc
Frequency:	125KHz, 13.56MHz

Screw RFID Tag

Key Features:

Protocol: ISO14443A, ISO15693, ISO11784/11785, ISO18000-6C

Frequency: 125KHz, 13.56MHz, 860-960MHz

ICs: EM4305, Hitag1, Mifare 1k, ICODE SLI etc.

Material: polyamide + epoxy

Size: D30mmxH14.8mm

Temperature: -40°C to + 85°C

Read/write: 100,000 cycles

Weight: 9g

Option: Laser Printed Serial number, Silkscreen printed LOGO.

Weight: 9.5g



SCRE3014

RFID KeyFob

ABS Keyfob

Key Features:

Material: ABS

Operating temperature: -25°C to +60°C

Waterproof, Dustproof.

Available IC's 125KHz, 13,56MHz, 860-960MHz

Available colours

Grey, blue, yellow, red, green, pink, orange, black

Printing options

Printing the logo (silk-screen printing)

Laser Numbering, Inkjet print Numbering.



AB001
(43.7x30.5x5.3mm)



AB002
(35.3x28x6.4mm)



AB003
(40.5x32x4.2mm)



AB004
(46x28x5mm)



AB005
(53x37.5x9.8mm)



AB006
(52.5x35.2x9mm)



AB007
(55.8x37.3x8.8mm)



AB008
(51.4x32.3x5.6mm)



AB016
(53.9x33.8x5mm)



AB-P06
(36x30x7.4mm)



AB027
(34.4x43x5.1mm)



AB028
(55.2x31x7mm)

Leather Keyfob

Key Features:

Material: Leather

Operating temperature: -25°C to +60°C

Waterproof, Dustproof.

Available IC's 125KHz, 13,56MHz, 860-960MHz

Available colours

black

Printing options

embossing logo



PJ017
(33x48x4.5mm)



PJ018
(33x48x4.5mm)



PJ019
(39x39x5.5mm)



Key Features:

Material: PVC

Thickness: 4-5mm

Operating temperature: -20°C to +50°C

Available IC's 125KHz, 13,56MHz, 860-960Mhz

Printing options:

Offset Print full colour,

Silkscreen print gold/silver colour

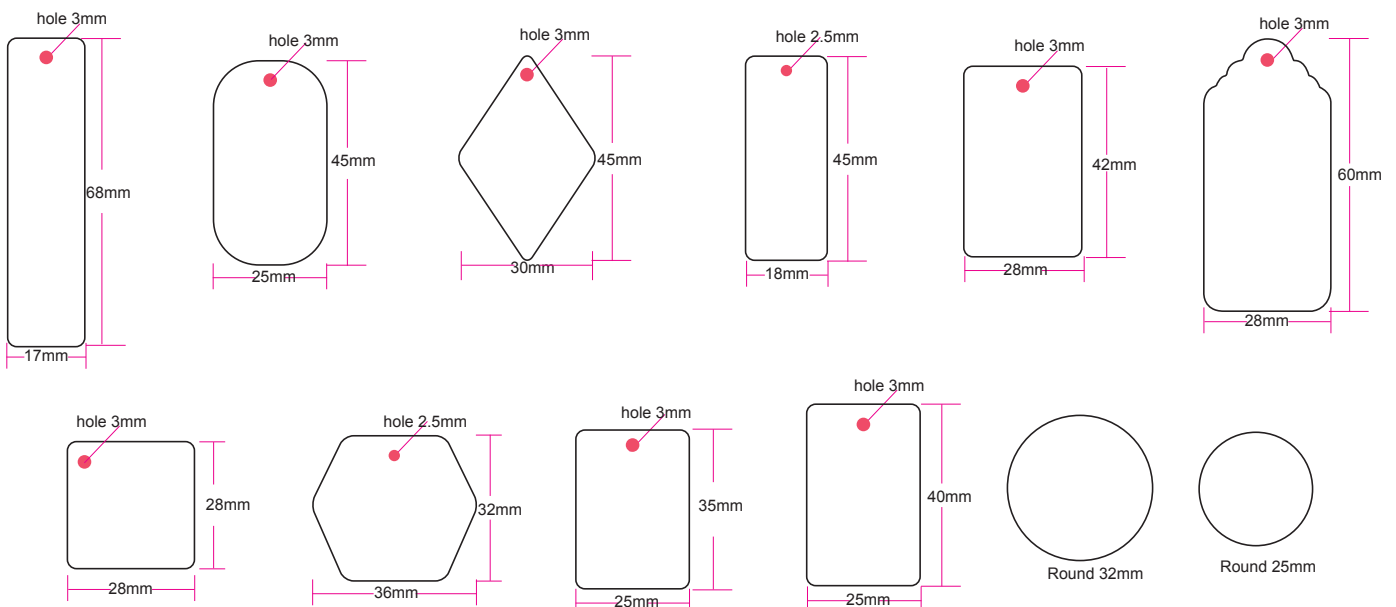
Personalization:

Hole punching,

Hot-Stamping silver/gold,

Inkjet print number

Laser print number



RFID Cartoon

Devote into enterprise mascot, we specially develop cartoon RFID tag using material PVC soft bubble. It is popular in use for payment system, Security System, access control system, Time attendance system etc.

The size and design of cartoon tag would be customized with a very low mould cost ,that is USD250. Besides, chip options are various too,we can use mifare 1k, ICODE SLI, Alien Higgs-4 ect,frequency and protocol just depend on your RFID software hardware .

Key Features:

Protocol: ISO14443A, ISO15693, ISO18000-6C

Frequency: 125Khz, 13.56Mhz, 860Mhz-960Mhz

ICs: Mifare Ultralight EV1, NTAG213, ICODE SLIX, Alien Higgs-3, Impinj Monza-4 etc

Material: PVC SOFT RUBBER

Size: customized

Colour: customized

Thickness: 6.0mm-10.0mm

Temperature: -20°C to + 80°C

Read/write: 100,000 cycles

Option:

Laser Printed Serial number



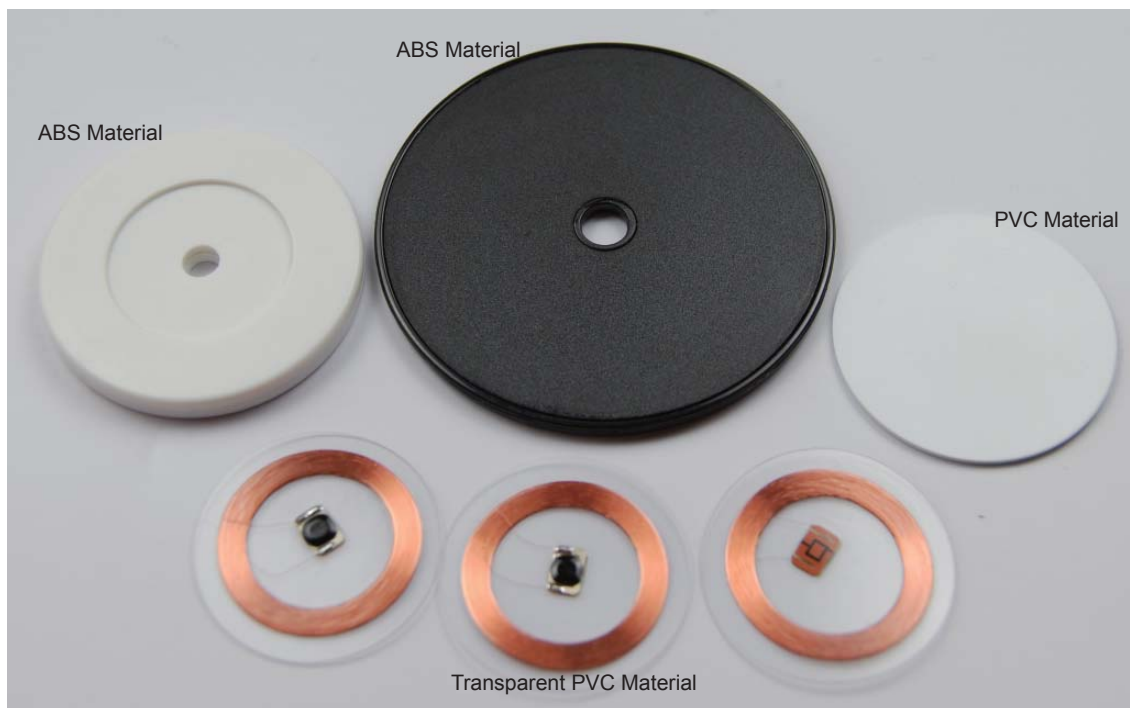
Example A



Example B



Example C



ABS Disc Tag

Key Features:

Waterproof, Dustproof.

Operating temperature: -20°C to +50°C

Available IC's 125KHz, 13,56MHz, 860-960Mhz

Printing options:

Silkscreen print

Personalization:

Inkjet print number

Laser print number

PVC Disc Tag

Key Features:

Waterproof, Dustproof.

Operating temperature: -20°C to +50°C

Available IC's 125KHz, 13,56MHz, 860-960Mhz

Material: PVC, Transparent PVC,
size: D15mm, D20mm, D25mm, D30mm, D50mm

Printing options:

Silkscreen print, offset printing.

Personalization:

Inkjet print number, Laser print number

Adhesive is available.

ABS Disc Tag size list

Partnumber	Diameter	Thickness	Hole	Colour	Packaging
ABD17-G	17mm	3.5mm	/	Black,Blue	Glued
ABD22-W	22mm	2mm	/	black	Ultrasonic
ABD25-W	25mm	4mm	/	white	Ultrasonic
ABD30-1-G	30mm	3mm	/	black	Ultrasonic
ABD30-3-W	30mm	2mm	3mm	black	Ultrasonic
ABD30-4-W	30mm	4mm	/	black	Ultrasonic
ABD30-5-W	30mm	2mm	5mm	black	Ultrasonic
ABD35-W	35mm	4mm	3.8mm	white	Ultrasonic
ABD50-1-W	50mm	2mm	5mm	black	Ultrasonic
ABD50-2-W	50mm	5mm	5mm	black	Ultrasonic

EPOXY Disc Tag

Key Features:

Protocol: ISO14443A, ISO15693, ISO11784/11785 (FDX)

Frequency: 125Khz, 13.56Mhz

ICs: Mifare Ultralight EV1, NTAG213, ICODE SLIX, TK4100, T5577, EM4305 etc

Material: PA66+ EPOXY or ABS+EPOXY

Size: D12mm+H4mm, D26mm+H3mm, customized

Colour: Yellow, black, or customized

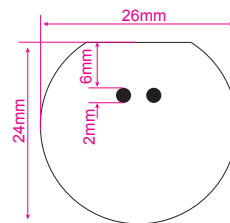
Waterproof, Dustproof: IP68

Temperature: -20°C to + 120°C for PA66 material, -20°C to + 80°C for ABS material

Read/write: 100,000 cycles

Option:

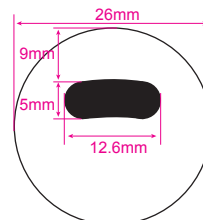
Laser Printed, Inkjet printed, silkscreen print.



size: 26x24mm, H3mm



size: D12mm, H4mm



size: D26mm, H3mm

The Laundry tag has been specially designed for applications requiring a rugged transponder that can withstand harsh environment, this RFID tag basically meets all requirements in terms of heat, pressure and chemical resistance as needed in applications of RFID tracking of garments in the textile rental and laundry industries



Key application
Laundry
High Temperature Resistance, Corrosion Resistance

Available IC's 125KHz, 13,56MHz, 860-960Mhz

Printing options:
Laser print

Diameter ±0.5mm	9	10	11	12	13	14	15	16	17	18	20	22	24	26	28	30
Thickness±0.3mm	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Weight g ±5%	.25	.35	.40	.45	.55	.60	.70	.85	.90	.95	1.20	1.50	1.70	2.00	2.40	2.50
Material	PPS + epoxy															
Reading Distance	Depending on the reader design and local installation conditions															
Operating Temp.	-25℃ ~ + 90℃															
Storage Temp.	-25℃ ~ + 90℃ for 1000 hours +160℃ for 35 hours, +220℃ for 30 seconds															
Standard Color	Black															
Weight	Details as above															
Applications	Any application requiring high temperature resistant															
Packaging	100pcs/ cellophane bag, or customized															

PPS hole Tag

Key Features:
Protocol: ISO18000-6C
Frequency: 860-960MHz
ICs: Alien Higgs3, Inpinj Monza 4 etc
Material: PPS
Size: D25.5xH2.75mm
Colour: Yellow, black
Waterproof, Dustproof: IP68
Temperature: -20℃ to + 120℃
Read/write: 100,000 cycles
Option:
 Laser Printed.



RFID Reader/Writer

Desktop ISO14443A Protocol HF Tag Reader

Key Features:

1. Model: OP1036USB
2. Size: 115mmx82mmx25mm
3. Weight: 88g
4. Self-intellectual property;
5. Support mainstream ISO14443A protocol tag;
6. Advanced tag processing algorithm, high identification rate;
7. Built-in TX/RX antenna with effective distance up to 150mm ;
8. Low power dissipation design;
9. USB 1.1 interface. No external power source needed;
10. Provide DLL and demonstration software to facilitate development.



ISO/IEC 15693 Protocol HF Tag Reader

Key Features:

1. Model: OP9036USB
2. Size: 115mmx82mmx25mm
3. Weight: 88g
4. Self-intellectual property;
5. Support mainstream ISO/IEC15693 protocol tag;
6. Advanced tag processing algorithm,high identification rate;
7. Built-in TX/RX antenna with effective distance up to 150mm ;
8. Low power dissipation design;
9. USB 1.1 interface. No external power source needed;
10. Provide DLL and demonstration software to facilitate development.



UHF Desktop Reader

Key Features:

1. Model: OPU9809USB-L
2. Size: 105mmx70mmx11mm
3. Weight: 80g
4. Self-intellectual property;
5. Support ISO18000-6C(EPC C1G2) , ISO18000-6B protocol tag;
6. 860~868MHz, 902~928MHz frequency band(frequency customization optional);
7. FHSS or Fix Frequency transmission;
8. RF output power up to 13dbm(adjustable);
9. No external power source needed;
10. Built-in antenna with effect distance up to 200mm*;
11. Support USB1.1 interface with VSP(Virtual Serial Port) or HID mode;
12. Slim outline;
13. Provide SDK and demo software to facilitate further development.



Desktop TCP/IP ISO14443A Protocol HF Tag Reader

Key Features:

1. Model: OP1036SRIP
2. Size: 123mmx94mmx29mm
3. Weight: 144g
4. Self-intellectual property;
5. Support ISO14443A tag;
6. Advanced tag processing algorithm, high identification rate;
7. Built-in TX/RX antenna with effective distance up to 100mm ;
8. Low power dissipation design with single DC+12V power source needed;
9. Support TCP/IP and RS232 interface and provide DLL and demonstration software to facilitate development;
10. Provide DLL and demonstration software to facilitate development.



NFC USB Reader

Key Features:

1. Size: 98x65x12.8mm
2. Weight: 70g
- USB 2.0 Full Speed Interface
- CCID Compliance
- Smart Card Reader:
 - a. Read/write speed up to 424 kbps
 - b. Built-in antenna for contactless tag access, with card reading distance of up to 50 mm (depending on tag type)
 - c. Supports ISO 14443 Type A and B cards, Mifare, FeliCa, and all 4 types of NFC (ISO/IEC 18092) tags
 - d. Built-in anti-collision feature (only 1 tag is accessed at any time)
- Application Programming Interface:
 - Supports PC/SC
 - Supports CT-API (through wrapper on top of PC/SC)
- Peripherals:
 - User-controllable bi-color LED
 - User-controllable buzzer



UHF RFID Integrated Reader

Key Features:

1. Model: OP1861-12dbi, OP1861-8dbi
2. Size: 235mmx235mmx57mm, 445mmx445mmx55mm
3. Weight: 900g, 2600g
4. Self-intellectual property;
5. Support ISO18000-6B, ISO18000-6C(EPC C1G2) protocol tag;
6. 902~928MHz frequency band(frequency customization optional);
7. FHSS or Fix Frequency transmission;
8. RF output power up to 30dbm(adjustable);
9. 12dbi antenna optional with effect distance more than 10m;
10. Support auto-running, interactive and trigger-activating work mode;
11. Low power dissipation with single +9 DC power supply;
12. Support RS232, RS485, Wiegand interface;
13. Provide DLL and Demonstration Software Source code to facilitate further development.



OP5000U RFID Handheld Computer

Key Features:

1. WindowsCE Operating System
2. Superior UHF/HF/LF RFID Reading Capability
3. Dimensions:188mm x 78mm x52mm/ 7.40 x 3.07 x 2.05in
4. Weight:450g/ 15.87oz
5. Display:3.2" QVGA (240*320), 6.5M colors
6. Touch Panel:Rugged resistive touch panel
7. Power:Main battery: Li-ion, 4000mAh
8. Expansion Slot:1 PSAM, 1 SIM / PSAM, 1 MicroSD(TF) slot
9. Interfaces:USB Micro-B, RS-232
10. Audio:0.5W speaker
11. Keypad:Numeric / Qwerty



OP4000 Series RFID Android PAD

Key Features:

1. Android Operating System
2. Superior UHF/HF/LF RFID Reading Capability
3. Dimensions:153mm x 75mm x 29mm/ 6.02 x 2.95 x 1.14in
4. Weight:286g/ 10.09oz
5. Display:4" WVGA (480*800), 16.7M colors
6. Touch Panel:Rugged capacitive touch panel
7. Power:Main battery: Li-ion, 3200mAh /Pistol battery: Li-ion, 5200mAh
8. Expansion Slot:1 PSAM, 1 SIM, 1 MicroSD(TF) slot
9. Interfaces:USB Micro-B
10. Audio:0.5W speaker, build-in microphone
11. Keypad:4 TP touch key-press buttons
12. Sensors:Light Sensor, Proximity Sensor



RFID Chipset

MIFARE Platform

Product Features	MIFARE Ultralight		MIFARE Classic	MIFARE Plus								MIFARE DESFire							
	EV1	C	EV1	S		SE	X		EV1		EV1		EV2						
RF Interface Protocol	ISO/IEC 14443-3																		
UID – unique identifier	7-byte UID		7-byte UID, 4-byte NUID, Random ID										7-byte UID						
Communication speed	106 Kbps		106-848 Kbps																
Memory size [Byte]	48	128	144	1K	4K	2K	4K	1K	2K	4K	2K	4K	256B	2K	4K	8K	2K	4K	8K
Memory Model	Compact, 4-byte page		Compact, Sectors & 16-byte block										Flexible file system						
Crypto	TDES		Crypto-1, AES										DES / 2K3DES / 3K3DES / AES						
Key Length	112-bit		48-bit crypto-1, 128-bit AES										128-bit AES, up to 168-bit DES						
Authentication	Password		3-pass mutual																
Communication-Security	-		CMACed										Plain, Encrypted and/or CMACed						
MifareApp	-		-										-						
Transaction MAC	N/A		-										✓						
Multi Key Sets	-		-										✓						
Proximity Check	-		-										✓						
Virtual Card Select	-		-										✓						
Originality check features	ECC signature		ECC signature										ECC signature						
ECC Certification	-		-										-						
ISO 7816-4 APOU	-		-										-						
NFC compliance	NFC Forum Tag Type 2 compliant		NFC capabilities in SL3										NFC Forum Tag Type 4 V2.0 compliant						
Target applications	Public Transport & event Ticketing Loyalty Programs, limited use tickets		Public transport / Campus cards / Access management										Smart City Platform / Advanced Mobility Multi-applications / Micropayment / Loyalty Programs / Access Management						
Input capacitance	17pF or 50pF		17pF or 70pF										17pF or 70pF						
Secure NFC channel	-		-										-						
Multi applications	-		-										-						

NTAG family overview

Product Features	NTAG210	NTAG212	NTAG213 / 213F	NTAG215	NTAG216 / 216F	NTAG I²C 1K	NTAG I²C 2K
Memory							
NFC Forum Type	Tag Type 2	Tag Type 2	Tag Type 2	Tag Type 2	Tag Type 2	Tag Type 2	Tag Type 2
EEPROM size [byte]	80 (20 pages à 4 byte)	164 (41 pages à 4 byte)	180 (45 pages à 4 byte)	540 (135 pages à 4 byte)	924 (231 pages à 4 byte)	2048 (32 sectors à 64 byte)	2048 (32 sectors à 64 byte)
User memory [byte]	48	128	144	504	888	888	1904
Write Endurance [cycles]	100,000	100,000	100,000	100,000	100,000	200,000	200,000
Data Retention [yrs]	10	10	10	10	10	20	20
RF-Interface							
According to	ISO14443A (up to layer 3) NFC Forum Type 2 Tag	ISO14443A (up to layer 3) NFC Forum Type 2 Tag	ISO14443A (up to layer 3) NFC Forum Type 2 Tag	ISO14443A (up to layer 3) NFC Forum Type 2 Tag	ISO14443A (up to layer 3) NFC Forum Type 2 Tag	ISO14443A (up to layer 3) NFC Forum Type 2 Tag	ISO14443A (up to layer 3) NFC Forum Type 2 Tag
Frequency [MHz]	13.56	13.56	13.56	13.56	13.56	13.56	13.56
Baud-rate [Kbit/s]	106	106	106	106	106	106	106
Anticollision	bit-wise	bit-wise	bit-wise	bit-wise	bit-wise	bit-wise	bit-wise
Security							
Unique Serial Number [byte]	7, cascaded 32 bit	7, cascaded 32 bit	7, cascaded 32 bit	7, cascaded 32 bit	7, cascaded 32 bit	7, cascaded 32 bit	7, cascaded 32 bit
Access Keys							
Access Conditions	write, read and write	write, read and write	read, read and write	read, read and write	read, read and write	read, read and write	read, read and write
Write Protection	blockwise	blockwise	blockwise	blockwise	blockwise	blockwise	blockwise
Security	Password	Password	Password	Password	Password	-	-
Special Features							
Field detection pin	-	-	✓ (configurable)	-	✓ (configurable)	✓ (configurable)	✓ (configurable)
PC Interface	-	-	-	-	-	✓	✓
Others	- UID ASCII mirror - Originality check - Fast Read	- UID ASCII mirror - Originality check - Fast Read	- UID ASCII mirror - NFC counter - NFC counter ASCII mirror - Originality check - Fast Read - Sleep mode via FD pin¹	- UID ASCII mirror - NFC counter - NFC counter ASCII mirror - Originality check - Fast Read	- UID ASCII mirror - NFC counter - NFC counter ASCII mirror - Originality check - Fast Read - Sleep mode via FD pin¹	- Passthrough mode 64 bytes SRAM buffer - Energy harvesting	- Passthrough mode 64 bytes SRAM buffer - Energy harvesting

ICODE family overview

Product Features	SLI-L	SLIX-L	SLI	SLIX	SLI-S	SLIX-S	SLIX 2	ILT	ILT-M
Standard	ISO 18000-3M1 ISO 15693	ISO 18000-3M1 ISO 15693	ISO 18000-3M1 ISO 15693	ISO 18000-3M1 ISO 15693	ISO 18000-3M1 ISO 15693 EPC Class 1¹	ISO 18000-3M1 ISO 15693	ISO 18000-3M1 ISO 15693	EPC Class-1 HF¹ ISO 18000-3M3	EPC Class-1 HF¹ ISO 18000-3M3
User Memory [bit]	256	256	896	896	1280	1280	2528	-	512
EPC Code Size [bit]	-	-	-	-	96	96	-	up to 240	up to 240
UID (TID)¹ size [bit]	64	64	64	64	64	64	64	96 (TID)	96 (TID)
Data Retention [Years]	10	50	10	50	10	50	50	50	50
Write Endurance [cycles]	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Anticollision Speed	up to 60 units/s	up to 60 units/s	up to 60 units/s	up to 60 units/s	up to 60 units/s up to 200 units/s²	up to 60 units/s	90 units/s³	up to 700 units/s	up to 700 units/s
Fast Inventory	✓	✓	✓	✓	✓	✓	✓	✓	✓
Security Functions									
EAS	✓	✓	✓	✓	✓	✓	✓	✓	✓
EAS Password Protection	✓	✓	-	✓	✓	✓	✓	✓	✓
EAS Selective	✓	✓	-	-	✓	✓	✓	-	-
AFI	✓	✓	✓	✓	✓	✓	✓	-	-
AFI Password Protection	-	✓	-	✓	-	✓	✓	-	-
Persistent Qlet	-	-	-	-	-	-	✓	-	-
Memory write Lock	✓	✓	✓	✓	✓	✓	✓	✓	✓
Memory access Password Protection	-	-	-	-	✓	✓	✓	-	-
Privacy Password Protection	✓	✓	-	-	✓	✓	✓	✓	✓
Destroy Password Protection	✓	✓	-	-	✓	✓	✓	-	-
Counter	-	-	-	-	-	-	✓	-	-
Originality Signature	-	-	-	-	-	-	✓	-	-
Cres Capacitance [pF]	23 / 97	23 / 97	23	no / 23 / 97	23 / 97	23 / 97	23	0 / 23 / 97	0 / 23 / 97

HITAG family overview

Product Features	Hitag 1	Hitag 2	Hitag S 256	Hitag S 2048	Hitag μ	Hitag μ Advanced	Hitag μ Advanced +	HitagRO
Memory								
Size [bit]	2048	256	256	2048	128*	512*	1760*	64
Write Endurance [cycles]	100.000	100.000	100.000	100.000	100.000	100.000	100.000	-
Data Retention [yrs]	10	10	10	10	10	10	10	10
Organisation	64 blocks à 4 bytes	8 blocks à 4 bytes	8 blocks à 4 bytes	64 blocks à 4 bytes	4 blocks à 4 bytes	16 blocks à 4 bytes	55 blocks à 4 bytes	2 blocks à 4 bytes
RF Interface								
According to	HITAG 1	HITAG 2 ISO 11784/85	HITAG 1+ ISO 11784/85	HITAG 1+ ISO 11784/85	ISO 11784/84	ISO 11784/85 ISO 14223	ISO 11784/85 ISO 14223	-
Frequency	100-150 kHz	100-150 kHz	100-150 kHz	100-150 kHz	100-150 kHz	100-150 kHz	100-150 kHz	100-150 kHz
Baud-rate[KBit/s]	up to 4	up to 4	up to 8	up to 8	up to 8	up to 8	up to 8	-
Anti-collision	collision detection	-	collision detection	collision detection	-	collision detection	collision detection	-
Security								
Unique ID [byte]	4	4	4	4	6	6	6	5
Access Keys	32 bit	48 bit	48 bit	48 bit	32 bit	32 bit	32 bit	-
Access Conditions	Encrypted Mutual Authentication or plain	Encrypted Mutual Authentication or plain	Authentication or plain	Authentication or plain	Plain, Password	Plain, Password	Plain, Password	-
Encryption Algorithm	✓	✓	for authentication only	for authentication only	-	-	-	-
Special Features								
TTF Modes	-	✓	✓	✓	✓	✓	✓	✓
RTF Modes	✓	✓	✓	✓	-	✓	✓	-
Write ISO 11785	-	-	-	-	✓	✓	✓	-

UCODE family overview

Product Features	UCODE G2XL	UCODE G2XM	UCODE G2iL	UCODE G2iL+	UCODE G2iM	UCODE G2iM+	UCODE 7	UCODE 7m	UCODE 7xm	UCODE 7xm+	UCODE I ² C	UCODE DNA
EPC Global Standard	1.0.9 / 1.1.0	1.0.9 / 1.1.1	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	GS1 Gen2 v2.0 ISO29167-10 ISO18000-63
User Memory [bit]	-	512	-	-	512	up to 640 dep. on EPC size	-	32	1024	2048	3328	3072
EPC Code Size [bit]	240	240	128	128	256	256-448	128	128	448	448	160	224
TID size[bit]	64	64	64	64	96	96	96	96	96	96	96	96
Access password [bit]	32	32	32	32	32	32	32	32	32	32	32	32
Kill password [bit]	32	32	32	32	32	32	32	32	32	32	32	32
User Password	-	-	-	-	-	32	-	-	-	-	-	-
Data Retention [Years]	50	50	20	20	20	20	20	20	20	20	20	20
Write Endurance [cycles]	100.000	100.000	10 000	10 000	10 000	10 000	100.000	100.000	100.000	100.000	50 000	100.000
Feature set												
Read Protection (bankwise)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Block perma lock	-	✓	-	-	✓	✓	-	-	✓	✓	-	✓
Tag authentication	-	-	-	-	-	-	-	-	-	-	-	AES – 128 Bit
Privacy protection	-	-	-	-	-	-	-	-	-	-	-	✓
Block Write	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Segmented User memory	-	-	-	-	-	✓	-	-	-	-	-	✓
PSF (Product Status Flag- EAS)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Automatic self pre-serialization	-	-	✓	-	-	-	✓	✓	✓	✓	✓	✓
Parallel encoding	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
Tag Power Indicator	-	-	-	-	-	-	✓	✓	✓	✓	-	✓
Tag Tamper Alarm	-	-	-	✓	-	✓	-	-	-	-	-	-
Digital Switch	-	-	-	✓	-	✓	-	-	-	-	✓	-
External supply mode	-	-	-	✓	-	✓	-	-	-	-	✓	-
Backscatter strength reduction	-	-	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
Real Read Range Reduction (4R)	-	-	✓	✓	-	✓	-	-	-	-	✓	✓
Digital Signature [bit]	-	-	-	-	-	-	-	-	-	✓	-	-
Untraceable	-	-	-	-	-	-	-	-	✓	✓	-	✓
Data transfer	-	-	-	✓	-	✓	-	-	-	-	✓ (I ² C)	-
Bridge mode for fast data transfer	-	-	-	-	-	-	-	-	-	-	-	-
2 UHF Front Ends	-	-	-	-	-	-	-	-	-	-	✓	-
I ² C Interface	-	-	-	-	-	-	-	-	-	-	✓	-
Trust Provisioning Service	-	-	-	-	-	-	-	-	-	-	-	✓

RFID Chipset

Contactless reader IC solutions

	NFC frontend solutions							NFC controller solutions					HITAG
Product	MFRC522	MFRC523	MFRC630	MFRC631	CLRC663	PNS12	PNS180	PNS32	PNS33	PN7120	PR601	HTRC110	
	Standard 3 V ISO/IEC14443A MIFARE front-end	Standard 3 V ISO/IEC14443 front-end	High-performance ISO/IEC 14443A MIFARE	High-performance ISO/IEC 14443	High-performance multi-protocol NFC front-end	Full NFC Forum compliant front-end	High-performance multi-protocol, fully NFC Forum-compliant	NFC controller with integrated FW	USB NFC controller with integrated FW	Full NFC Forum-compliant controller with NCI interface	High-performance multi-protocol NFC controller	Highly integrated optimized HITAG short range reader/writer	
Integrated microcontroller													
Carrier frequency [MHz]	13.56	13.56	13.56	13.56	13.56	13.56	13.56	Integrated FW 13.56	Integrated FW 13.56	Integrated FW 13.56	LP1227 for customer FW 13.56 ¹⁰	0.125	
Standards & protocols													
Reader/writer	ISO/IEC 14443 A	ISO/IEC 14443	ISO/IEC 14443 A	ISO/IEC 14443	ISO/IEC 18092 ISO/IEC 14443 ISO/IEC 15693 Felica	ISO/IEC 18092 ISO/IEC 14443 ISO/IEC 15693 Felica	ISO/IEC 18092 ISO/IEC 14443 ISO/IEC 15693 Felica	ISO/IEC 18092 ISO/IEC 14443 ISO/IEC 15693 Felica	ISO/IEC 18092 ISO/IEC 14443 ISO/IEC 15693 Felica	ISO/IEC 18092 ISO/IEC 14443 ISO/IEC 15693 Felica	ISO/IEC 18092 ISO/IEC 14443 ISO/IEC 15693 Felica	HITAG	
NFC tag type support	1, 2, 4	1, 2, 4	1, 2, 4	1, 2, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	-	
ISO/IEC 14443 Baud-rate [Kbit/s]	106/212/424/848	106/212/424/848	106/212/424/848	106/212/424/848	106/212/424/848	106/212/424	106/212/424/848	106/212/424	106/212/424/848	106/212/424/848	106/212/424/848	Up to 4K	
Felica Baud-rate [Kbit/s]					212/424	212/424	212/424	212/424	212/424	212/424	212/424		
MIFARE Classic support (license included)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
ISO/IEC 15693 Baud-rate [Kbit/s]	-	-	-	-	26.5/53	-	26.5/53	-	-	1.66/26.5	26.5/53		
EPC class-1 HF / ISO/IEC 18000-3M3	-	-	-	-	✓	-	✓	-	-	✓	✓		
EMVCo compliance	-	✓	-	✓	✓	✓	✓	✓	✓	✓	✓		
Card emulation	-	-	-	-	-	✓	✓	✓	✓	✓	✓		
NFC tag type emulation	-	-	-	-	-	2, 3, 4	1, 2, 3, 4, 5	2, 3, 4	2, 3, 4	1, 2, 3, 4	-		
NFC tag type Baud-rate [Kbit/s]	-	-	-	-	-	106/212/424	106/212/424/848	106/212/424	106/212/424	106/212/424	-		
Peer-to-peer (ISO/IEC 18092)	-	-	-	-	-	✓	✓	✓	✓	✓	✓		
Passive communication	-	-	-	-	Initiator	Initiator/Target	Initiator/Target	Initiator/Target	Initiator/Target	Initiator/Target	Initiator		
Active communication	-	-	-	-	-	Initiator/Target	Initiator/Target	Initiator/Target	Initiator/Target	Initiator/Target	-		
Product features													
Operating distance up to [mm]	70	70	120	120	120/160	70	120/160	70	70	70	120/160	up to 200 w.o. booster	
RF transmitter supply voltage [V]	3.6	3.6	3.3 to 5	3.3 to 5	3.3 to 5	3.6	5.5	3.6	2.5 to 3.6	3.1	3.3 to 5	5	
Transmitter supply current, typ [mA]	100	100	250	250	250	100	250	60	60	60	200	200	
Host interface	SPI, I ² C, UART	SPI, I ² C, UART	SPI, I ² C, UART	SPI, I ² C, UART	SPI, I ² C, UART	SPI, I ² C, UART	SPI	SPI, I ² C, UART	USB, UART	I ² C	SPI, I ² C, UART	Serial 2/3 wire	
Supply voltage host interface [V]	2.5 to 3.6	2.5 to 3.6	3.3 to 5.0	3.3 to 5.0	3.3 to 5.0	2.5 to 3.6	1.8 or 3.3	2.5 to 3.6	UART: 1.8 or 3.3 USB: 5	1.8 or 3.3	3.3 to 5.0	5	
Idle mode current, typ [µA]	-	-	6	6	6	-	2.5	-	-	-	6	200	
Power-down mode current, typ [µA]	5	5	0.008	0.008	0.008	5	10	2	10	10.5	0.008	7	
Power-down mode with RF level detector on [µA]	-	-	-	-	-	10	-	25	30	20	-	-	
Low-power card detection mode [µA]	-	-	0.5	0.5	0.5	-	0.5	-	-	150	0.5	-	
Temperature range [°C]	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-30 to +85	-30 to +85	-25 to +85	-25 to +85	-30 to +85	-25 to +70	-40 to +85	
Security features													
MIFARE SAM support in X-mode	SAM AV1 & AV2	SAM AV1 & AV2	SAM AV 2.6	SAM AV 2.6	SAM AV 2.6	SAM AV1 & AV2	✓	✓	✓	✓	SAM AV 2.6		
MIFARE Classic security (CRYPTO1 HW)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

Other RFID Chipset

Chip Type	Chip Supplier	Frequency	Protocol	Memory
EM4200	EM Martin	125KHz	ISO18000-2	64bits
ATA5577	Atmel	125KHz	ISO18000-2	363bits
EM4450	EM Martin	125KHz	ISO18000-2	1k bits
EM4205	EM Martin	125KHz	ISO11784/11785	512bits
EM4305	EM Martin	125KHz	ISO11784/11785	512bits
TK4100		125KHz	ISO18000-2	64bits
SLE66R10P	Infineon	13.56MHz	ISO14443A	1216bits
TI256	Texas Instrument	13.56MHz	ISO15693	256bits
TI2048	Texas Instrument	13.56MHz	ISO15693	2048bits
PICOPASS 2KS	INSIDE	13.56MHz	ISO14443B/15693	2K bits
PICOPASS 32KS	INSIDE	13.56MHz	ISO14443B/15693	32K bits
LEGIC MIM256	LEGIC	13.56MHz	Legic RF	256 Bytes
LEGIC MIM1024	LEGIC	13.56MHz	Legic RF	1024 Bytes
LEGIC ATC256	LEGIC	13.56MHz	ISO15693	256 Bytes
LEGIC ATC1024	LEGIC	13.56MHz	ISO15693	1024Bytes
LEGIC ATC2048	LEGIC	13.56MHz	ISO15693	2048Bytes
SRI512	STM	13.56MHz	ISO14443B	512bits
SRIX4K	STM	13.56MHz	ISO14443B	4096bits
LRI2K	STM	13.56MHz	ISO15693	2048bits
JWL782	BROADCOM	13.56MHz	ISO14443A	120Bytes
Topaz512	BROADCOM	13.56MHz	ISO14443A	512Bytes
Higgs-3	Alien	860-960MHz	ISO18000-6C	EPC 96bits, User 512bits, TID64bits
Higgs-4	Alien	860-960MHz	ISO18000-6C	EPC128bits, User 128bit, TID64bits
Monza 4QT	Impinj	860-960MHz	ISO18000-6C	EPC128bits, User 512bit, TID64bits
Monza 4E	Impinj	860-960MHz	ISO18000-6C	EPC496bits, User 128bit, TID64bits
Monza 4D	Impinj	860-960MHz	ISO18000-6C	EPC128bits, User 32bit, TID64bits
Monza 5	Impinj	860-960MHz	ISO18000-6C	EPC128bits, TID48bits