



## **USTEK TAG PORTFOLIO**

UHF RFID TAGS FOR TEXTILE, RUBBER & ASSET TRACKING DESIGNED, DEVELOPED AND MANUFACTURED BY USTEK RFID.

## **USTEK RFID: CAPABILITIES**

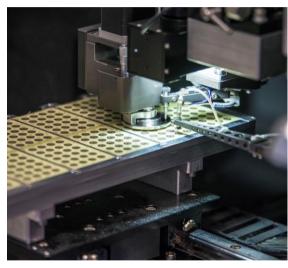




IN-HOUSE DESIGN & DEVELOPMENT
All products are designed and developed by
expert USTEK engineers and manufactured
in-house in Istanbul, Turkey.



SEMICONDUCTOR ASSEMBLY
We operate high precision, highperformance chip-on-board assembly
line for semiconductor assembly.



ANSYS LICENSE

USTEK is a licensed user of ANSYS
with full capability of High
Frequency Electromagnetic Field
Simulation.



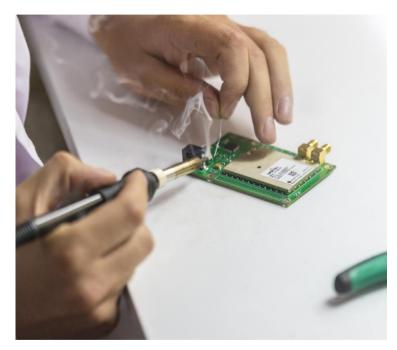
## **USTEK RFID: EXPERTISE**





TAGS, READERS, SOFTWARE

Ustek is one of the few companies that produces all of the tags, readers, and software components required to establish an efficient RFID system.



#### **INNOVATION ORIENTED**

We constantly track and experiment with new technologies to come up with even better solutions. We design various specialty UHF RFID tags including foodgrade, clean room, or tire tracks.



2010

First Generation USTAG 70
27 Bar Resistance

2013
4th Generation USTAG
P70

60 Bar Resistance

2016
USMAT 95 for rubber applications

2018

USTAG Semiconductors inhouse Chip on board capability 2021

M6 DURA UHF RFID IC package with an integrated loop antenna

2023

M8 Transition

ER72 Embedded Rubber Tags for tires and mats

2012

3rd Generation USTAG Performer Series 55 Bar Resistance Antenna Design registered in EU 2014 USTAG Performer 55 Smaller Footprint Outstanding

Performance

2017

USTAG Performer line updates Food/Cleanroom tags P55 & P70 are certified by EECC 2020

USTAG R6 enhanced series: P50 HS/SI/LL P52 AC/CR P60 SI P30 HS/SI/LL 2022

Fine Tuned antenna design Separate product lines for • 865-868 MHz –

- 865-868 MHz –
  Lower Band (ETSI)
  902-928 MHz (US)
  and 915-921 MHz
  (ETSI Upper)
  USTAG P136 released for
- (ETSI Upper)
  USTAG P136 released for textile finishing industry and wet reading
  USTAG P67 narrow form tag released

2024

In-house

Anechoic chamber service for antenna design and fine tuning

(RFTT)







TESTED IN HARSHEST INDUSTRIAL LAUNDRY CONDITIONS



MIN. 200 WASHER EXTRACTOR CYCLES



AVAILABLE IN HEAT-SEAL, SEW-IN AND CUSTOM DESIGN WOVEN LOGO LABEL



EXCELLENT BULK READ PERFORMANCE



SOFT, FLEXIBLE FABRIC BASE ENGINEERED FOR MAXIMUM USER COMFORT



RESISTANT TO ALL
CHEMICALS COMMON
TO INDUSTRIAL
LAUNDRIES



OPTIMIZED DESIGN FOR MANAGING STRAY READ



70 BAR PRESSURE RESISTANCE

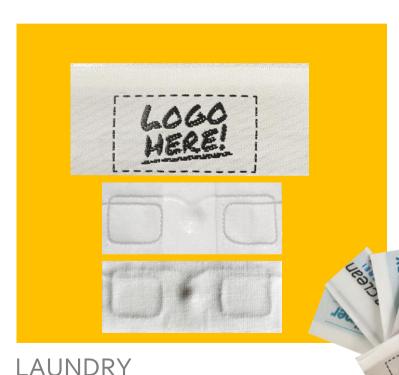


IRONING FRIENDLY
INCLUDING CHEST-HEATED
ROLLERS, SUITABLE FOR
DRY CLEANING

## P50: UHF RFID LAUNDRY TAG



USTAG P50 is a high performance, wash-proof, heavy industry RFID tag designed for textile tracking operations.



#### **USTAG P50**

RFTT

- Best in class performance with optimized dimensions.
- Excellent bulk read performance.
- Streamlined tag design for minimized stray reads.
- Developed for and tested in industrial laundries.
- Source tagging (SI), patchable (heat-sealable) (HS) and in woven logo label (LL).
- Source tagging model includes an extra layer for antenna tuning and enhanced durability.
- Markable with EPC code.

DETAILS	
Dimensions	19 x 50 x 7 mm (1.8 mm at center module)
Operating Frequency	865-868 MHz ETSI (Lower) 902-928 MHz FHSS (Upper) 916-918 MHz EU 2018/1538 (Upper)
Material	Polycotton engineered fabric base (SI/ HS/ LL) Hot - melt adhesive backside (HS)

## P67: UHF RFID LAUNDRY TAG

aurola innovative textiles & rfid technologies

USTAG P67 is a discreet, wash-proof, heavy industry laundry RFID tag with a narrow form factor.



**LAUNDRY** 

#### **USTAG P67**

- Specially designed for insertion into narrow hems of flat linen items and personal garments.
- Unnoticeable look and feel enhances ease of wear.
- Source tagging (SI), patchable (heat-sealable) (HS) and in woven logo label (LL).
- Source tagging model includes an extra layer for antenna tuning and enhanced durability.
- Markable with EPC code.

DETAILS	
Dimensions	67 x 11 x 0.7 mm (1.8 mm at center module)
Operating Frequency	865-928 MHz ETSI, FHSS, EU 2018/1538 (Wide)
Material	Polycotton engineered fabric base (SI/ HS/ LL) Hot - melt adhesive backside (HS)



## P<sub>3</sub>0: UHF RFID GARMENT TAG



USTAG P30 is a discreet, wash-proof, heavy industry RFID tag designed for the personal garment tracking.



LAUNDRY

#### **USTAG P30**

- Developed with the smallest footprint, ideal for tagging personal/senior living garments and other small size articles.
- Optimized antenna design for swift read & sort.
- Minimum stray reads.
- Source tagging (SI), patchable (heat-sealable) (HS) and in woven logo label (LL).
- Source tagging model includes an extra layer for antenna tuning and enhanced durability.

DETAILS	
Dimensions	30 X 20 X 1.8 mm
Operating Frequency	865-928 MHz ETSI, FHSS, EU 2018/1538 (Wide)
Material	Polycotton engineered fabric base(SI/HS/LL/RL) Hot-melt adhesive backside(HS) 100% polyester fabric base(CR)

## ER72: UHF RFID TAG FOR RUBBER APPLICATIONS



USTAG ER72 is a heavy industry UHF RFID tag designed for rubber embedded applications such as tires, floor mats, shoe soles.



#### **DUST CONTROL & TIRES**

#### **USTAG ER72**

- 15X72 mm
- Best in the market read performance
- Ideal for high-temperature rubber vulcanization processes such as embedding in tires or floor mats during production and any other rubber molding applications.
- Its lightweight, coated fiber web perfectly blends into rubber.
- Antenna design has been optimized to the dielectric properties of standard rubber materials.
- Custom designs for various other materials are possible.





## P<sub>13</sub>6: UHF RFID TEXTILE TRACKING TAG



USTAG P136 is a long distance and high performance textile tag developed for tracking rolls for textiles.



#### USTAG P<sub>13</sub>6

- Ideal for weaving mills, textile treatment plants and storage space monitoring
- Specially designed to allow wet reading; especially for tracking textiles during finishing processes.
- Long distance reading performance ideal for online textile storage space monitoring.
- Source tagging (SI), patchable (heat-sealable) (HS) directly on textile.
- Markable with EPC code.

DETAILS	
Dimensions	136 x 18 x 0.7 mm (1.7 mm at center module)
Operating Frequency	865-928 MHz ETSI, FHSS, EU 2018/1538 (Wide)
Material	Polycotton engineered fabric base Hot - melt adhesive backside (HS)

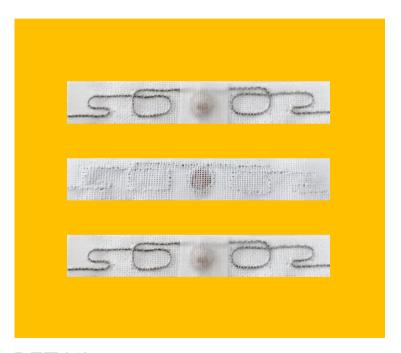




## T70: UHF RFID TEXTILE TAG

UHF RFID Source Tagging Textile Tag for Retail.





#### **USTAG T70**

- UHF RFID Tag for textile based applications.
- Designed to be sewn in articles during production (Source Tagging).
- Durable to production processes.
- Excellent bulk and singulated read performance.
- Optimized read range to minimize stray readings.
- Wide band antenna design for global operation.

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Dimensions 70 x 11 x 0.7 mm (1.7 mm at center module)

Operating Frequency 865-928 MHz ETSI, FHSS, EU 2018/1538 (Wide)

Material Exposed cotton web base

RETAIL





# TECHNICAL FACTS

	New Generation USTAG Series
Operating Frequency	<ul> <li>865-868 MHz-ETSI (Lower)</li> <li>902-928 MHz-FHSS (Upper)</li> <li>916-918 MHz-EU 2018/1538 (Upper)</li> </ul>
Compliance	ISO/IEC 18000-6C EPC Class 1 Gen 2
Tag Memory	96 - 128 bit EPC
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Patching	204°C (399°F), 15 seconds, 0,5kg/cm²
Washing	90°C (194°F), 15 minutes
Drying	180°C (356°F), 20 minutes
Ironing	200°C (392°F), 30 seconds
Mechanical Resistance	Tested at 70 Bars

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Each transponder produced by USTEK is encoded with a unique g6 bit EPC code and an access password. Transponders are thus protected and can be re-programmed with this access password only. For customers willing to encode their own EPC, USTEK provides custom coding services or a re-programmable transponder version. Please be sure to specify when ordering.

## **ORDERING INFORMATION**



ORDER CODE	DEFINITION
P <sub>5</sub> o L-HS	HS: Patchable / to be heat-sealed on textile - ETSI (Lower)
P <sub>5</sub> o U-HS	HS: Patchable / to be heat-sealed on textile - FHSS (Upper), EU 2018/1538 (Upper)
P50 L-SI	SI: Source tagging / to be sewn into textile hem - ETSI (Lower)
P <sub>5</sub> o U-SI	SI: Source tagging / to be sewn into textile hem - FHSS (Upper), EU 2018/1538 (Upper)
P50 L-LL	LL: Woven label with multi-color customer logo or generic RFID logo or plain white – ETSI (Lower)
P50 U-LL	LL: Woven label with multi-color customer logo or generic RFID logo or plain white FHSS (Upper), EU 2018/1538 (Upper)
P67 W-HS	HS: Patchable / to be heat-sealed on textile. ETSI, FHSS, EU 2018/1538 (Wide)
P67 W-SI	SI: Source tagging / to be sewn into textile hem. ETSI, FHSS, EU 2018/1538 (Wide)
P67 W-LL	LL: Woven label with multi-color customer logo or generic RFID logo or plain white. ETSI, FHSS, EU 2018/1538 (Wide)
P <sub>3</sub> o W-HS	HS: Patchable / to be heat-sealed on textile. ETSI, FHSS, EU 2018/1538 (Wide)
P <sub>3</sub> o W-SI	SI: Source tagging / to be sewn into textile hem. ETSI, FHSS, EU 2018/1538 (Wide)
P <sub>3</sub> o W-LL	LL: Woven label with multi-color customer logo, generic RFID logo or plain white. ETSI, FHSS, EU 2018/1538 (Wide)
ER <sub>72</sub> W	ETSI, FHSS, EU 2018/1538 (Wide)
P136 W-HS	HS: Patchable / to be heat-sealed on textile - ETSI, FHSS, EU 2018/1538 (Wide)
P136 W-SI	SI: Source tagging / to be sewn into textile hem -ETSI, FHSS, EU 2018/1538 (Wide)
T70 W	ETSI, FHSS, EU 2018/1538 (Wide)
CD	EPC code print option available for certain models. Please specify at the time of order. ETSI, FHSS, EU 2018/1538 (Wide)

## M6 DURA: SURFACE MOUNT RFID TAG





#### MANUFACTURING

#### M6 DURA

- UHF RFID IC package with an integrated loop antenna.
- Encapsulated in a 5mm diameter custom SMD package.
- Exposed pads for easy soldering.
- Ideal for hard tag manufacturing.

DETAILS	
Dimensions	Dia: 5mm, Thickness in center: 1.4mm
Operating Frequency	865-928 MHz ETSI, FHSS, EU 2018/1538 (Wide)
Material	FR4, Epoxy



## **KONTAG 120: UHF RFID HARD TAG**



Durable to high temperatures, impact and water-resistant all purpose UHF RIFD hard tags optimized for mid-to-long-range reading.



**ASSET MANAGEMENT** 

#### **KONTAG 120**

- Kontag is an industrial-grade on metal UHF RFID hard tag.
- Suitable for bolting and/or screwing on hard surfaces.
- Engineered casing of Kontag provides durability for applications where collisions are frequent.
- High temperature durability.

DETAILS	
Dimensions	21 X 120 X 16 mm
Weight	21 g
Operating Frequency	865-928 MHz ETSI, FHSS, EU 2018/1538 (Wide)
Heat Resistance	200 °C 60 minutes - 250 °C 10 minutes
Read Range	5 m on metal 19 m on- non metal



#### TROLABEL: UHF RFID SNAP ON TAG

aurora innovative textiles & rfid technologies

TROLABEL is a snap on RFID tag ideal for trolley and metal cage identification.



**ASSET MANAGEMENT** 

#### **TROLABEL**

- Trolabel is an UHF RFID hard tag streamlined for trolley and metal cage tracking. Unit constitutes of a collision resistant plastic base and a custom logo and barcode printed UHF RFID polyester label.
- Snap on Structure with plastic rivets, easy to install.
- UHF RFID Label, detectible from long distance.
- Custom logo, company name and address printed on label along with QR code.
- EPC code and article # visible on label.

DETAILS	
Dimensions	210 × 55 × 4 (mm) customizable
Operating Frequency	865-928 MHz ETSI, FHSS, EU 2018/1538 (Wide)
Material	PVC (Gray)



## **UHF RFID CARDS**

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Extremely durable, water-resistant all purpose UHF RIFD hard tags.



#### **KEYTAG**

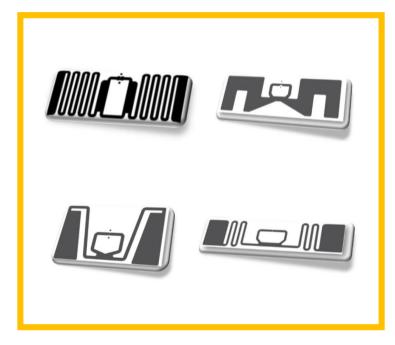
- Keytag can be screwed on non-metal surfaces, attached to a keychain or easily fixed on surfaces with adhesives.
- It can be utilized for vehicle tracking, asset monitoring, and server room applications.



DETAILS	
Dimensions	14 × 45 × 2.9 mm
Weight	3·5g
Material	FR <sub>4</sub> PCB Blue Solder Mask
Operating Frequency	865-868 MHz ETSI (Lower) 902-928 MHz FHSS (Upper)

## **ASSET TRACKING UHF RFID LABELS**





#### **INLAYS**

- Available in dryinlay and white polyester/paper label rolls.
- EPC Class 1 Gen 2 standard.
- Various designs and sizes for different applications.
- Selected based on the type and size of the item to be tracked and project specifics.

**ASSET MANAGEMENT** 



## **UHF RFID CARDS**





#### **UHF CARDS / BADGES**

- Credit card size RFID cards suitable for access control applications.
- Available Frequencies:
  - LF
  - HF
  - UHF
- Design services and color printing for small quantities.



#### **FUSE PRESS DUO**

INDIVATIVE TEXTILES & RFID TECHNOLOGIES

FUSE PRESS DUO is a semi-auto switch plate press for heat sealing RFID tags on textiles.



#### **FUSE PRESS DUO**

- The Fuse Press Duo is a bench top pneumatic press for heat sealing UHF RFID tags on textiles.
- It comes with dual pads to facilitate high speed tagging of textiles. While heat sealing on one pad (15 seconds), the operator can prepare the next article on the other pad. The operation is semi-automatic such that the heated press automatically comes down by manually switching position from pad to pad.
- Homogenous heat distributing aluminum block and sensitive heat control with digital thermostat.
- Pneumatic pressure adjustable according to all type of fabrics.
- Adjustable press duration.
- Pad size suitable for any tag size and model.
- Counter to track output.
- Safety frame for operator protection.

DETAILS	
Dimensions	53x51x62 mm?
Weight (kg)	57
Resistance Power (W)	800
Pad Size	15X15 cm
Air Pressure	5-6 bar
Air Consumption	4 L/min ( ±%10 ) or 0.14 cfm
Operating Voltage	110V / 230V





We offer textile tags fine-tuned to Upper and Lower Bands separately:

865-868 MHz ETSI (Lower)

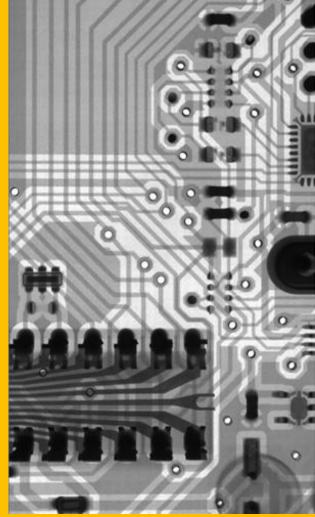
902-928 MHz FHSS (Upper)

916-919 MHz EU 2018/1538 (Upper)

Please specify your zone when ordering and experience the perfection of UHF first hand.









## **CONTACT US**

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