

# **Industry and logistics flexible UHF tag series**

- Extreme durability resistant to outdoor elements as well as blunt and sharp impact
- Multiple mounting options glue, screw or weld
- Enhanced reliability read-write on any material, up to 26 ft (8 m\*)
- Broadband frequency for worldwide use, including Europe, the United States and Japan

STid InLine  $Tag^{TM}$  Ultra passive contactless transponders are the most advanced general-purpose UHF tags available in the market. Choose from options that mount on any material while enabling read ranges of up to a 26 ft (8 m\*), with no line-of-sight.

InLine  $\mathsf{Tag}^{\mathsf{TM}}$  devices improve data collection speed and accuracy for logistics applications, while making tracking more cost-effective. These tags enable complete accuracy of asset identification. For example, it is possible to track hundreds of metal kegs containing liquid loaded on a truck as it moves slowly through RFID reader enabled gates placed at points of distribution and delivery.

UHF technology enables anti-collision functionality, fast datarate communication and password data protection for precise, reliable reading and updating of each tag's 512-bit read-write memory. All

InLine  $Tag^{TM}$  RFID tags are compliant with EPC global-certified UHF Class 1 Gen 2 readers and modules, with broadband capability for international operations.

The tough and versatile InLine  $Tag^{\text{TM}}$  transponders are available for mounting on metal, plastic or wood using standard M5 screws, industrial adhesives or welding.

The tags are lightweight, waterproof and provide high resistance to aggressive liquids or physical impact, and deliver excellent performance and reading stability across fluctuating temperatures.

InLine  $Tag^{\text{TM}}$  Ultra RFID tags include STid patented 3D antenna, enabling omnidirectional read range performance independent of mounting material. The tags also enable maintenance of separate public and private profiles for added data security.

The InLine  $\mathsf{Tag}^{\mathsf{TM}}$  Ultra **Curve** version is arched to hug metallic kegs or gas cylinders, and durably withstands typical washing and disinfection cycles. **Slim** versions of the tags enable UHF, performance for space-restricted applications, and are configured for attachment via screw or weld.

#### Applications areas







Returnable transport items

Waste management

#### Technology highlights

- Worldwide operating frequencies from 860 to 960 MHz
- $\bullet \ \ \text{Fully interoperable; standards compliant}\\$
- Reliable performance on both metal and non-metal surfaces
- Waterproof; chemical and impact resistant
- Mounting options include nails, screws, welding and glues
- Memory of up to 512-bit user memory and 128-bit EPC number

<sup>\*</sup>Caution: information about Reading distance: Distance measured from the centre of the antenna, depending on the reader, the power supply and the operating environment

# **InLine Tag™ Ultra**

All-purpose UHF RFID tags



|   | InLine tag™ Ultra series   |  |   |   |  |
|---|--|--|---|---|--|
|   | Screw  | Weld   | Slim                                    | Slim Weld   | Curve  |
| ELECTRONIC                                |  |  |   |   |  |
| Physical properties                       | RFID passive tag   |  |   |   |  |
| Operating frequency /<br>Standards        | 865-956 MHz (EU, US, JP)   |  |   |   |  |
| Chip type                                 | Monza 4QT  |  |   |   |  |
| EPC/User Memory                           | 128 bit EPC + 96 bit TID + 512 bit user memory   |  |   |   |  |
| Anti-collision                            | Yes  |  |   |   |  |
| Reading distances*                        | Up to 8 m (26.2 ft)  |  | Up to 5 m (16.4 ft)                     |   | Up to 8 m (26.3 ft)  |
| PHYSICAL                                  |  |  |   |   |  |
| Dimensions<br>(L x W x T)                 | $97 \times 27 \times 15 \text{ mm}$ (3.8 × 1.1 × 0.6 in)                               | $105 \times 35 \times 15 \text{ mm}$<br>(4.1 × 1.4 × 0.6 in) | 97 × 27 × 10 mm<br>(3.8 × 1.1 × 0.4 in) | $105 \times 35 \times 10 \text{ mm}$ (4.1 × 1.4 × 0.4 in) | 88 × 37 × 14.5 mm<br>(3.5 × 1.5 × 0.6 in);<br>450 mm (17.7 in)<br>curve radius |
| Mounting Method                           | Screw  | Weld   | Screw                                   | Weld  |  |
| Screw Mounting hole                       | Ø 5.2 mm (0.2 in)  |  | Ø 5.2 mm (0.2 in)                       | PC/ABS high impact,<br>stainless steel ring               |  |
| Affixes To                                |  |  | g metal, plastic, wood<br>dry wood      | Curved metal  |  |
| Housing Material                          | PC/ABS high<br>impact  | PC/ABS high<br>impact, stainless<br>steel ring               | PC/ABS high<br>impact                   | ØТРE  |  |
| Color                                     | Pantone blue 287C (custom colors available)  |  |   |   |  |
| Weight                                    | 16 g (0.5 oz)  | 18 g (0.6 oz)  | 12 g (0.4 oz)                           | 14 g (0.5 oz)   | 15 g (0.5 oz)  |
| CHEMICAL AND MECHANI                      | CAL RESISTANCE   |  |   |   |  |
| <b>N</b> ater                             | IP68, 20° C (68° F), 1 m (3.3 ft) x 24 h   |  |   |   |  |
| Withstands Exposure<br>To                 | Mineral oil, petroleum, salt mist, vegetable oil; up to 80% humidity at 70° C (158° F) |  |   |   |  |
| Environmental Test<br>Conditions          | 20° C (68° F), 100 h   |  |   |   |  |
| /ibration                                 | IEC 68.2.6 [10 g, 10 to 2000 Hz, 3 axis, 2.5 h]  |  |   |   |  |
| Shock                                     | IEC 68.2.29 [40 g, 18 ms, 6 axis, 2000 times]  |  |   |   |  |
| mpact                                     | IEC 62262-IK09 IEC 62262-IK08  |  |   |   |  |
| Axial / Radial Force                      | 1000 N, 10 sec   |  |   |   |  |
| Thermal                                   |  |  |   |   |  |
| Storage                                   | -40° to +80° C (-40° to +176° F), 1x1000 h   |  |   |   |  |
| Operating                                 | -40° to +80° C (-40° to +185° F )  |  |   |   |  |
| Temperature                               | -40° to +85° C (-40° to +194° F), $100 \times 5$ min with 20 sec transition            |  |   |   |  |
| •   |  | -40° to +85° C (-  | 40 to +134 1), 100 x 3 min with         |   |  |
| Shock/Fatigue                             |  | -40° to +85° C (-  | 40 to +134 1), 100 x 3 min with         |   |  |
| Temperature Shock/Fatigue OTHER Standards |  |  | Class 1 Gen 2, ISO 18000-6C, ISC        | ) 17364   |  |
| Shock/Fatigue                             |  | UHF EPC  |   |   |  |
| Shock/Fatigue<br>OTHER<br>Standards       |  | UHF EPC  | Class 1 Gen 2, ISO 18000-6C, ISC        |   |  |

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