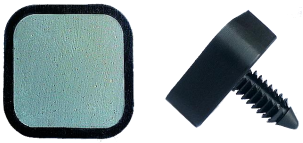
EaT-101
Push Tag

Technologies ROI, LLC



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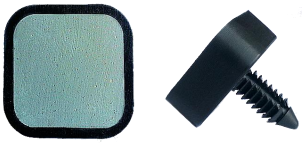

1 PRODUCT DESCRIPTION

The patent-pending **TROI EaT-101** provides identification and tracking capabilities never-before available in such a tiny plastic package designed for rugged or hazardous use-areas. The EaT-101 was designed to be mounted to the surface of the part by pushing the mounting prong on the back of the tag into a 6 mm (0.236 inch) hole.

The tag is able to withstand extreme pressures and temperatures up to 200 degrees C.

1.1 SPECIFICATIONS

Device type Passive RFID tag	**Standard**: UHF (Ultra High Frequency band; 860MHz – 950MHz))
Air interface protocol	UHF: EPCGlobal Class1Gen2 / ISO/IEC 18000-6C
Operational frequency	**Standard:** UHF 865-869 MHz (EU), 902-928 MHz (US)
IC options - UHF	**Standard**: Impinj Monza 4
EPC memory - UHF	**Standard**: 128 bit
EPC memory content	Unique 96-bit number encoded
Extended memory - UHF	**Standard**: 512 bit
TID - UHF	Factory-programmed, non-changeable, unique 64-bit ID.
Read range - UHF	Real-world: 1 – 2 meters, depending on attachment Lab environment: 7 meters
Applicable surfaces	Any material Surface mounting on metal surfaces, both ferrous and non-ferrous
Material	High temperature plastic: Proprietary impact resistant filled nylon
Weight	20 grams
Standards compliancy	ISO 17665 – Sterilization of Health Care Products – Moist Steam ISO 11135 - Sterilization of Health Care Products – Ethylene Oxide ATEX-compliant
Product RoHS compliant?	Yes

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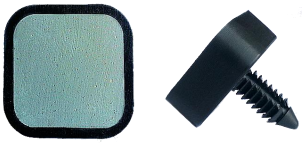


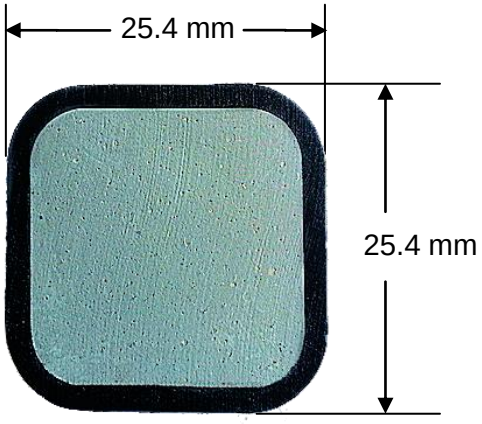
1.2 DIMENSIONS

TAG ONLY: 25.4 mm Long x 25.4 mm Wide x 10 mm High

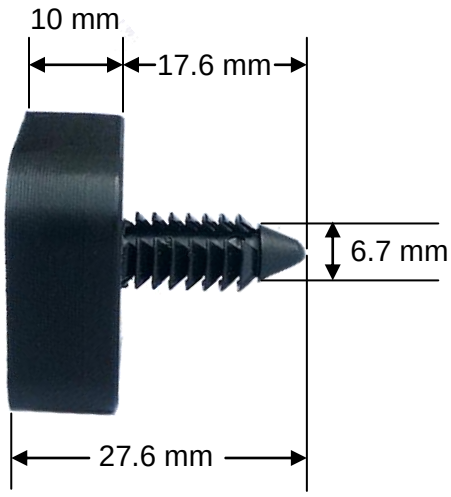
TAG & MOUNTING PRONG: 25.4 mm Long x 25.4 mm Wide x 27.6 mm High

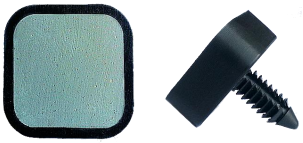
NOTE**:** Pictures are not to scale

PLAN VIEW



PROFILE VIEW





1.3 READ RANGE

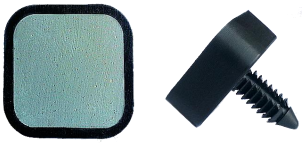
	UHF Max read range on metal with 4W ERP
EaT-101 (915 MHz)	660.4 cm / 260 inches (6.63 m / 21.75 feet)

The read range listed above was obtained from a lab test environment. Actual test results may be different. Testing in actual use environments is strongly recommended.

1.4 ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-50º C to +200º C* -50º F to + 392º F*
Temperature Cycling Test	200 deg C continuous, for 30 days
IP classification	IP68: - Complete protection against dust - Protection against continuous immersion in water (Tested for 5 hours in 1 m [3.3 ft] depth)
Weather-ability	Excellent, including UV-resistance and sea water immersion
Chemical resistance	No physical or performance changes in: - Salt water - NaOH (depending on concentration) - Sulfuric acid (depending on concentration) - Motor oil (tested in 168 hour exposure) Generally good against: - Most solvents - Most acids and bases

* **NOTE**:
The RFID tag will not be functional if it is left at the maximum indicated temperatures such that the internal soak temperature exceeds +80 deg C (+176 deg F). The RFID tag itself will function between -50 deg C and +80 deg C.



1.5 SUPPORTED SERVICES

Several options are available:

- Tag pre-encoding
- Laser engraving on tags surface

For further details, please contact **TROI LLC**.

1.6 POSSIBLE APPLICATIONS

Metal surfaces	Metal pipes, metal returnable containers, metal canisters, metal pallets, high value metal items, aerospace applications, military applications, etc.

2 INSTALLATION INSTRUCTIONS

2.1 TAG PLACEMENT

The EaT-101 tag must be mounted with the prong pushed through a suitably-sized hole, and flush with the mounting surface.

If the tag is not flush with the mounting surface, it might affect the tag's performance.

- Drill a hole approximately 7 mm in diameter in the surface that the tag is to be mounted on to.
  - NOTE: The mounting prong needs at least 18 mm of clearance (depth – not counting the width of the mounting surface [if mounting to thin sheet stock]) to mount the tag properly.
- Push the mounting prong into the hole until the tag is flush with the surface.
- Done!

The EaT-101's performance depends on the shape of the metal object and the tags placement on that surface. Testing is recommended to verify performance in each use-case.

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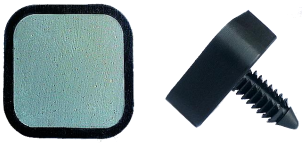

3 CONTACTING TROI LLC

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ADVISORY

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