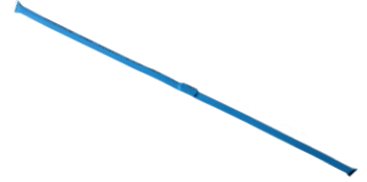




# FT-1002

## Embeddable Tag



### CONTENTS

1	PRODUCT DESCRIPTION .....	2
1.1	Specifications.....	2
1.2	Dimensions .....	3
1.3	Read Range.....	4
1.4	Environmental Specifications .....	4
1.5	Supported Services.....	5
1.6	Possible Applications .....	5
2	INSTALLATION .....	5
3	CONTACTING TROI LLC .....	5



# FT-1002

## Embeddable Tag

### 1 PRODUCT DESCRIPTION

The patent-pending **TROI FT-1002 Embeddable** RFID tag provides automatic identification and tracking capabilities never-before available in such a unique package designed for rugged or hazardous use-areas.

The plastic-covered flexible tag is designed to be mounted to any surface by wrapping the tag around any object, or embedding it into concrete, wood, fiberglass, composites, compression or injection molds, etc.

The **FT-1002** can withstand unprecedented high temperature (consistent temperatures of 100 degrees Centigrade), high pressure and severe environmental conditions.

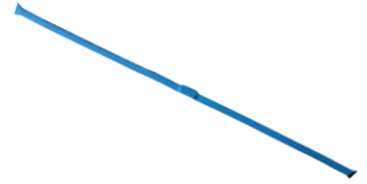
#### 1.1 SPECIFICATIONS

<b>Device type</b>	Passive RFID tag
<b>Air interface protocol</b>	<b>UHF:</b> EPCGlobal Class1Gen2 / ISO/IEC 18000-6C
<b>Operational frequency</b>	<b>Standard:</b> UHF (865-869 MHz (EU), 902-928 MHz (US))
<b>IC options - UHF</b>	<b>Standard:</b> Alien Higgs 3 (others on request) Optional: EM, Fujitsu, Impinj, NXP (others on request)
<b>EPC memory - UHF</b>	<b>Standard:</b> 128 bit Optional: Up to 240 bit
<b>EPC memory content</b>	Unique 96-bit number encoded
<b>Extended memory - UHF</b>	<b>Standard:</b> 512 bit
<b>TID - UHF</b>	Factory-programmed, non-changeable, unique 64-bit ID.
<b>Read range - UHF</b>	Real-world:3-6 meters
<b>Size</b>	<b>L:</b> 17.9 mm <b>Wire Diameter:</b> 3.12 mm <b>Chip Diameter:</b> 4.2 mm
<b>Tag material</b>	Self extinguishing polyolefin
<b>Tensile strength</b>	2500 psi minimum
<b>Applicable surfaces</b>	Any material NOTE: metal reduces read distance significantly unless modified
<b>Product RoHS compliant?</b>	Yes
<b>Standards compliancy</b>	ATEX-compliant



# FT-1002

## Embeddable Tag

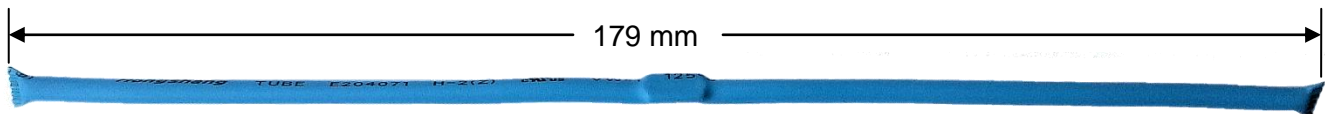


### 1.2 DIMENSIONS

**Length:** 179 mm

**Wire Diameter:** 3.12 mm

**Chip Diameter:** 4.2 mm

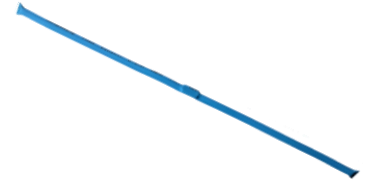


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# FT-1002

## Embeddable Tag



### 1.3 READ RANGE

	UHF max read-range on metal with 4W ERP
<b>FT-1002</b> (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

<b>Operating temperature</b>	-50°C to +100°C*
<b>Temperature Cycling Test</b>	100 deg C, continuous for 30-days 200c continuous - with degradation of the plastic, but not the tag
<b>IP classification</b>	IP69K
<b>Weather resistance</b>	Excellent, including UV-resistance and sea water immersion
<b>Chemical resistance</b>	No physical or performance changes in: <ul style="list-style-type: none"> <li>- Salt water</li> <li>- NaOH (depending on concentration)</li> <li>- Sulfuric acid (depending on concentration)</li> <li>- Motor oil (tested in 168 hour exposure)</li> </ul> Generally good against: <ul style="list-style-type: none"> <li>- Most solvents</li> <li>- Most acids and bases</li> </ul>

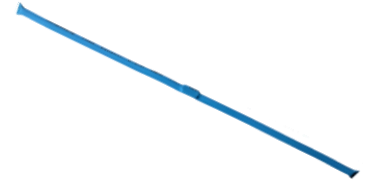
\* **NOTE:** The RFID tag will not be functional if the FT-1002 tag is left at the maximum indicated temperatures such that the internal soak temperature exceeds +80 deg C. The RFID tag itself will (resume) function between -50 deg C and +80 deg C.

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# FT-1002

## Embeddable Tag



### 1.5 SUPPORTED SERVICES

- Tag pre-encoding

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

### 1.6 POSSIBLE APPLICATIONS

<b>Metal surfaces</b>	Metal returnable containers, metal canisters, metal pallets, metal pipes, high value metal items, aerospace applications, military applications, etc.
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## 2 INSTALLATION

- Wrap the tag around or along an object.
- Embed the tag into; fiberglass, composites, wood, concrete, compression or injection molds, etc.
- Epoxy the tag onto the surface using **TROI's** AP-1 Adhesive\_Paint.
- Clips or eyelets

## 3 CONTACTING TROI LLC

For additional information and technical support contact:

### **TROI LLC**

311 Drury Lane  
Mauldin SC 29662  
PH: 864-228-9096

pat@troirfid.com

www.troirfid.com

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