



# TireTag Gen4 enables complete tire lifetime traceability from manufacturing to recycling

Unique performance combined with reliability to withstand the harsh vulcanization process of tires. Embedding RFID tag inside the tire enables applications from production control to more transparent supply chain, distribution, tire usage and recycling process.



**SECURITY AND AUTHENTICITY**



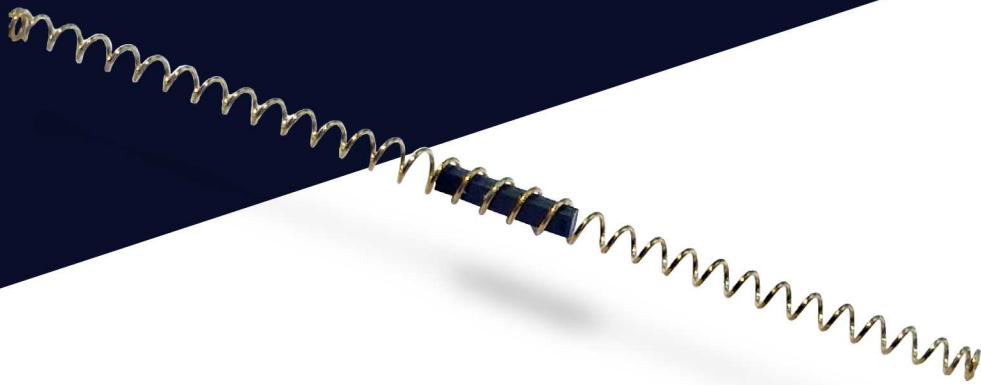
**SUSTAINABILITY AND CIRCULAR ECONOMY**



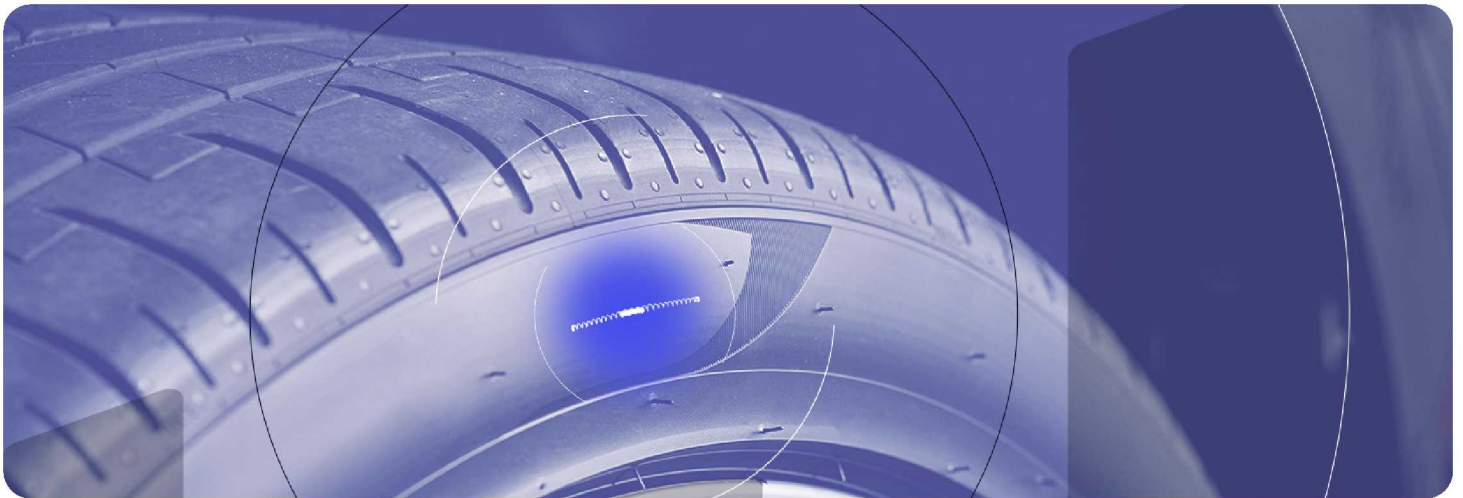
**INVENTORY MANAGEMENT AND DISTRIBUTION**



**END-TO-END TRACEABILITY THROUGHOUT LIFECYCLE**



# TireTag Gen4



### Electrical specifications

**Device type**

UHF RFID / EPCglobal Gen2v2  
ISO 20909 and 20910 compliant

**Operational frequency**

Global 865-928MHz

**IC type and Memory configuration**

Impinj® M750  
- EPC 96 bits; User 32 bits; TID 96 bits

**EPC memory content**

Unique number encoded as a default

**Read range (2W ERP)\***

- ISO 20912 compliant
- 4-6 meters globally, depending on tire structure and tag position inside tire

**Applicable surface materials\***

Optimized to be embedded inside rubber.

\* Read ranges are theoretical values that are calculated for non-reflective environment. Different surface materials may influence performance.



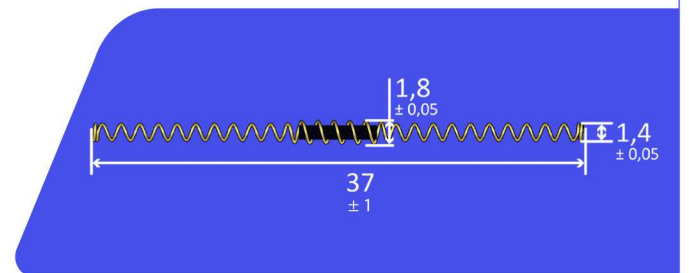
### Personalization options

**Pre-encoding**

Customer-specific encoding of EPC with or without locking



### Mechanical specifications

**Tag materials**

Industrial grade materials suitable for high temperature applications

**Dimensions**

37 x 1,4 mm  
1.46 x 0.055 in

**Delivery format**

According to tape and reel specification of EIA-481-D with 18" reel size to enable automated application.

**Mechanical durability**

Developed and tested for the whole tire lifetime in collaboration with Michelin, using Michelin's and Beontag's patented technologies.

**Weight**

0,05g

**Amount on reel**

6,000 pcs



## Environmental resistance

### Operating temperature

-40°C to +85°C / -40°F to +185°F

### Peak temperature

+230°C / +446°F for 1h

### IP classification

IP68

### Vibration

JEDEC JESD22-B103B, service condition 1, 20G

### Chemical resistance

No performance changes in:

- 168h Motor oil exposure
- 48h Salt water (salinity 10%) exposure
- 48h NaOH (10%, pH 13) exposure

### Storage conditions

2 year in +20°C / 50% RH

### Expected lifetime

Years in normal operating conditions



## Installation instructions

**Below is the recommended procedure of embedding Beontag TireTag™ Gen4 inside the tire. Process should be tested and modified according to the requirements of unique manufacturing processes.**

### 1. Rubber component

For the optimal outcome, Beontag TireTag™ Gen4 may also be laminated between two rubber layers before attaching to the tire. Air is to be avoided during the manufacturing of the component. TireTag Gen4 is delivered on tape and reel package optimized for the automated lamination process.

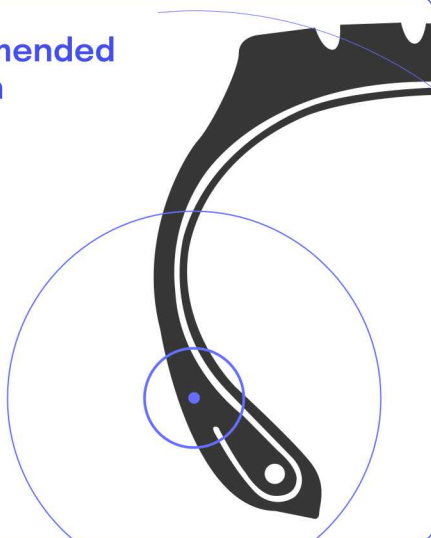
### 2. Final assembly

Attachment location is recommended to be tested at every tire manufacturer. One recommended process is to attach the rubber component with embedded tag on the apex after which it is covered by the sidewall rubber, but other locations may also be considered. Position inside tire may vary between the tire designs and should be tested for each design for optimal performance. Optimum position for the embedded tag is as far as possible from the bead wire to ensure minimum interference and provide more consistent read range when tire is mounted on the rim.

**For more instructions and detailed recommendations on the installation process, please contact Beontag**



## Recommended position



## Order information

Product number: **3005117**

Product Name: **TireTag Gen4 M750**



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From the science of graphic and label materials, RFID and wireless IoT enablers, we create solutions across the value chain to deliver digital transformation for businesses around the world.

Sustainability is at the core of what we do and we strongly believe that by substituting non-renewable materials and innovating through more sustainable and renewable products, we act as an ESG enabler for our customers' value chain.

Beontag is one of the world's leading providers of RFID and wireless IoT solutions, being present in more than 40 countries with 7 R&D centers and 2,000 employees, in constant development of technological and sustainable solutions designed to connect items, and gain efficiency and end-to-end traceability

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