The AT5412 Harsh Environment Transportation Tag is a half frame, beam-powered tag used in 915 MHz radio frequency (RF) band applications with TransCore Amtech-brand and TransCore Encompass multiprotocol reader systems. It is packaged in a factory-sealed case, which makes this tag ideal for mounting on vehicle chassis, intermodal containers, or in any environment requiring a durable, weatherproof tag.

The AT5412 Transportation Tag is beam-powered (a small portion of the RF signal continually energizes the tag’s circuitry) so no internal battery is required. In addition to giving the tag an unlimited service life, this feature limits the tag’s range and reduces the possibility of cross-reads from nearby tags. System discretion is enhanced to within a 5- to 10- foot (1.5- to 3-meter) diameter reading area.

The tag can be factory-programmed, as specified by the customer, and can store up to 10 six-bit alphanumeric characters of data (60 bits) compatible with previous ATA/AAR read-only readers.

The tag’s mutual authentication feature, in conjunction with TransCore Encompass readers, uses hardware-based protection that is more difficult to compromise than software-only protection. Mutual authentication prevents unwanted data from being written to the tag’s protected memory space.
**AT5412 Transportation Tag**

**COMMUNICATIONS**

**Frequency Range**
902 to 928 MHz

**Typical Working Range**
5 to 10 ft (1.5 to 3 m)

Range depends on system parameters.

**Polarization**
Parallel with longer side

**SOFTWARE FEATURES**

**Data Memory**
SeGo and eGo Mode: 2,048 bits
ATA Mode: 60 bits
User memory programmable using RF link

**POWER REQUIREMENTS**

**Power Source**
Beam powered

**LIFE EXPECTANCY**

**Service Life**
>10 years

**PHYSICAL**

**Dimensions**
Size: 9.3 x 2.38 x 0.69 in. (23.6 x 6.0 x 1.75 cm)
Weight: 5.3 oz (150.2 g)

**Case Material**
Weatherproof, sealed, UV-stabilized, gray case

**Mounting Surface**
Any smooth metal surface

Where mounting surface is non-metallic or irregular, the AT5412 Transportation Tag may be mounted to a metal backplate attached to the surface of the vehicle or object to be tagged.

**Mounting Method**
**Rivet Mounting:** The AT5412 Transportation Tag can be mounted directly to any smooth metal surface using blind rivets or TIR-approved fasteners.

**ENVIRONMENTAL**

**Operating Temperature**
-40°F to +185°F (-40°C to +85°C)

**Storage Temperature**
-67°F to +212°F (-55°C to +100°C)

**Humidity**
100% relative humidity, condensing

**Vibration**
2 G<sub>rms</sub>, 10-200 Hz

**Shock, Normal Environment**
30 G, half-sine pulse, 6 ms duration, 3 axes

**COMPATIBILITY**

**Super eGo Mode:** SeGo
eGo Mode: ANSI NCITS 256-2001 Part 4.2 and ISO 18000-6B standards
ATA Mode: American Trucking Associations standard

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For more information:
Call **214.461.6443** (Sales Support) • **505.856.8007** (Technical Support)

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