AT5415 Hardened Transportation Tag

Features

- Supports American Trucking Associations (ATA) and Super eGo® (SeGo) protocols
- Non-battery for extended service life
- 2048-bit read/write memory
- Read/write capability in SeGo mode
- Compatible with multiple Amtech®-brand readers and TransCore® Encompass® multiprotocol readers
- Data encryption and authentication
- Harsh environment durability
- Factory-sealed case

The AT5415 Hardened 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 AT5415 Hardened 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, or the tag can be user-programmed in the field using the new AP4600 Multifunction Tag Programmer. The tag 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.
**AT5415 Hardened 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**
ATA Mode: 60 bits
SeGo Mode: 2,048 bits
User memory programmable using RF link

**POWER REQUIREMENTS**

**Power Source**
Beam powered

**LIFE EXPECTANCY**

**Service Life**
Unlimited

**PHYSICAL**

**Dimensions**
Size: 9.3 x 2.38 x 0.69 in. (23.6 x 6.05 x 1.75 cm)
Weight: 5.3 oz (150.3 g)

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

**Mounting Surface**
Any smooth metal surface
Where mounting surface is non-metallic or irregular, the AT5415 Hardened 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 AT5415 Hardened 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**
20 G, 20 to 2000 Hz

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

**AREMA Requirements**
Meets AREMA 11.5.1, Class A (Trackbed) requirements

**Ultraviolet (UV) Exposure**
MIL-STD 810-D, Method 505.2: 10 years of Florida-level UV radiation

**Dust Ingress/Water Immersion**
Meets IP67 requirements for dust ingress and water immersion (≤1 meter of immersion)

**COMPATIBILITY**

**ATA Mode:** American Trucking Associations standard
**Super eGo Mode:** SeGo

**ACCESSORIES**

**AP4600 Multifunction Tag Programmer**
The AT5415 Hardened Transportation Tag can be programmed in the field using the AP4600 Multifunction Tag Programmer. The AP4600 programmer is designed for use in an office environment and connects to a host PC’s USB port.

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

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