

Intellex SMT-7100 RFID Tag

Extended range, reliability, memory, and security for asset tracking on metals, liquids and other challenging environments.



The Intellex SMT-7100 tag provides industry-leading range and read/write reliability on metals, liquids and other challenging environments

The Intellex SMT-7100 tags are rugged, compact tags designed for a wide variety of applications, indoors and outdoors. The tags provide exceptionally high read/write accuracy and long range operation. They perform reliably in real world environments around liquids, metals, and other RF-unfriendly conditions, ensuring accurate reads and writes on vehicles, containers, and bins at up to 50 meters. In addition, the SMT-7100 tag's proprietary wake-up circuit ensures long battery life with persistent data storage. The tag's innovative security features provide secure on-tag data access. Intellex tags are the first to integrate all of these features onto a single chip.

Based on patent pending tag antenna design, the SMT-7100 is the first tag that offers long range, on-edge performance on metal regardless of tag orientation. It offers exceptional read/write range of up to 50 meters when read edge on. This tag maximizes use of multi-path in metal rich environments to ensure readability. The SMT-7100 tags can be mounted on reusable totes, heavy machinery, trucks, rail cars, cargo containers and more with adhesives, screws or plastic cable ties.

FEATURES

Robust RF Communications

- Low turn-on threshold
- High receive signal sensitivity/backscatter efficiency
- Read/write on edge¹

Efficient Power Management

- Multi-stage wake up

60 Kb User-rewritable Memory

BENEFITS

- Up to 50 meter (150+ ft) read/write range
- Exceptional read/write reliability in real world environments
- High read/write reliability
 - Take advantage of multi-path in metal rich environments
 - Read metal containers from forklifts

- Long battery life (up to 5 years), based on duty cycle

- Stores user information locally on tags:
 - E-manifest, maintenance records, custody chain, history, etc.

Activation of Selected Group of Tags

- Enables faster identification and sorting of tagged items

Built-in Application-specific Security

- Lockable read/write user memory protects data integrity
- 1 Kb block level locking with separate read/write permalock password protection

Single Chip RFID Tag

- Rugged, compact form factor tags



SPECIFICATIONS²

Device Type	Class 3 RFID (battery-assisted passive) single chip transponder
Protocol	Class 3
Operating Frequency	902-928 MHz (North America); 865-868 MHz (Europe/India)
Modulation	Amplitude modulated forward link (reader to tag) Frequency modulated reverse link (tag to reader)
Range³	Up to 50 meters (150+ ft)
Battery Life	Up to 5 years depending on use; data is persistent and also readable at close range upon battery expiration
Data Rates	8 Kb/sec forward link 8 or 32 Kb/sec reverse link
Data Retention	10 years at 85°C
Memory	64 Kb total, 60 Kb rewritable non-volatile user memory
Environmental	
Enclosure Protection	IP67
Temperature (Operating and Storage)	-4° to +140°F (-20° to +60°C)
Shock	IEC 60068-2-32, test Ed
Vibration	IEC 60068-2-6, test Fc
General Dimensions	2.95" x 2.95" x 0.62" (75 mm x 75 mm x 15,8 mm) (L x W x D)
Mounting Options	Screws, straps, adhesive; not included
Other Features	Password-controlled read, write, 1 Kb block level locking, and permalock

1. The SMT-7100 is a directional tag and cannot be read through the back.

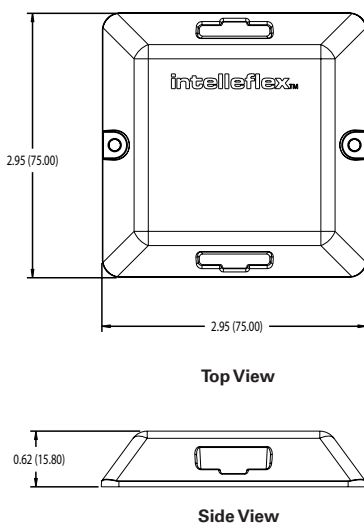
2. Intellex reserves the right to change product information and specifications without notice.

2. For best tag performance, Intellex recommends using circular polarized antennas with the reader (part number IA410.1).

ORDERING INFORMATION

Part Number	Description
SMT-7100	Standard asset tag for metal or other conductive surface mounting, and multi-path environments; North America 902-928 MHz frequency range
SMT-7100-EU	Standard asset tag for metal or other conductive surface mounting, and multi-path environments; Europe and India 865-868 MHz frequency range

DIMENSIONS



Screw Type Options

Machine Screw

Socket Head, Button Head or Pan Head Screws Recommended
Holes Designed for 4-40 or M3 Screw Threads
Recommended Minimum Screw Length:
5/16" (8,00 mm)

Wood Screw

Standard #4 Wood Screw Recommended
Round Head Recommended
Recommended Minimum Screw Length:
5/16" (8,00 mm)

Note: All dimensions are in inches (mm)