

# Intellex SXT-7110 Extended Temperature RFID Tag

*Extended temperature, range, and reliability for asset tracking in harsh environments.*



The Intellex SXT-7110 tag provides high read/write accuracy and long range on outdoor assets in intense hot and cold environments.

The Intellex SXT-7110 extended temperature tags are rugged, compact tags designed to withstand severe temperatures and other demanding environments. The tags also 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 tag's proprietary wake-up circuit ensures long battery life with persistent data storage. The SXT-7110 tag's high temperature materials make it ideal for harsh industrial applications and ensure survival in temperature ranges from -40°F to +257°F (-40°C to +125°C).

The SXT-7110 tag consists of a custom chip packaged with a high-temperature battery enclosed in a high temperature resin casing.

Based on patent pending tag antenna design, the SXT-7110 also 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. The SXT-7110 tag maximizes use of multi-path in metal rich environments to ensure readability. The tags can be mounted on reusable totes, heavy machinery, trucks, rail cars, cargo containers and more with adhesives, screws or plastic cable ties.

## FEATURES

### Extended Temperature Materials

### Robust RF Communications

- Low turn-on threshold
- High receive signal sensitivity/backscatter efficiency
- Read/write on edge<sup>1</sup>

### Efficient Power Management

- Multi-stage wake up

### 60 Kb User-rewritable Memory

### Activation of Selected Group of Tags

### Built-in Application-specific Security

### Single Chip RFID Tag

## BENEFITS

- Operates in severe hot and cold temperatures

- Up to 50 meter (150+ ft) read/write range
- Exceptional read/write reliability in real world environments

- High read/write reliability
  - Take advantage of multipath 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.

- Enables faster identification and sorting of tagged items

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

- Rugged, compact form factor tags

## SPECIFICATIONS<sup>2</sup>

<b>Device Type</b>	Class 3 RFID (battery-assisted passive) single chip transponder
<b>Protocol</b>	Class 3
<b>Operating Frequency</b>	902-928 MHz (North America); 865-868 MHz (Europe/India)
<b>Modulation</b>	Amplitude modulated forward link (reader to tag) Frequency modulated reverse link (tag to reader)
<b>Range<sup>3</sup></b>	Up to 50 meters (150+ ft)
<b>Battery Life</b>	Up to 5 years depending on use; data is persistent and also readable at close range upon battery expiration
<b>Data Rates</b>	8 Kb/sec forward link 8 or 32 Kb/sec reverse link
<b>Data Retention</b>	10 years at 85°C
<b>Memory</b>	64 Kb total, 60 Kb rewritable non-volatile user memory
<b>Environmental</b>	
Enclosure Protection	IP67
Temperature (Operating and Storage)	-40° to +257°F (-40° to +125°C)
Shock	IEC 60068-2-32, test Ed
Vibration	IEC 60068-2-6, test Fc
<b>General Dimensions</b>	2.95" x 2.95" x 0.62" (75 mm x 75 mm x 15,8 mm) (L x W x D)
<b>Mounting Options</b>	Screws, straps, adhesive; not included
<b>Other Features</b>	Password-controlled read, write, 1 Kb block level locking, and permalock

1. The SXT-7110 is a directional tag and cannot be read through the back.

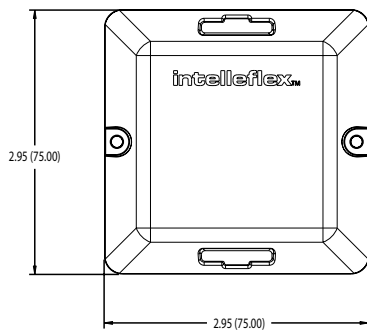
2. Intellex reserves the right to change product information and specifications without notice.

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

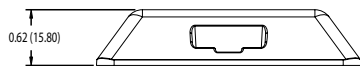
## ORDERING INFORMATION

Part Number	Description
SXT-7110	Asset tag for metal or other conductive surface mounting, and multi-path environments with extreme temperatures; North America 902-928 MHz frequency range
SXT-7110-EU	Asset tag for metal or other conductive surface mounting, and multi-path environments with extreme temperatures; Europe and India 865-868 MHz frequency range

## DIMENSIONS



Top View



Side View

### 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)



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