

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 edge¹

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

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	<table border="0"> <tr> <td>Enclosure Protection</td> <td>IP67</td> </tr> <tr> <td>Temperature (Operating and Storage)</td> <td>-40° to +257°F (-40° to +125°C)</td> </tr> <tr> <td>Shock</td> <td>IEC 60068-2-32, test Ed</td> </tr> <tr> <td>Vibration</td> <td>IEC 60068-2-6, test Fc</td> </tr> </table>	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
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Shock	IEC 60068-2-32, test Ed								
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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 SXT-7110 is a directional tag and cannot be read through the back.

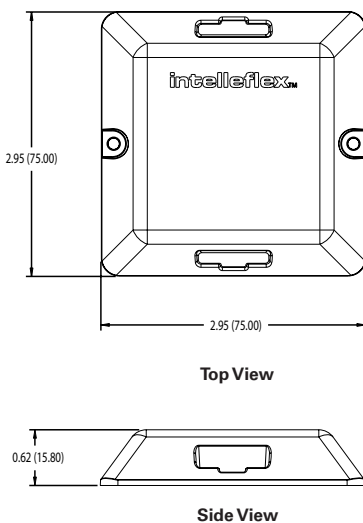
2. Intellex reserves the right to change product information and specifications without notice.

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



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)