



## POWERFUL PARKING PERFORMANCE DATA

### SPS-X - Wireless Smart Parking Sensor

#### Real-Time Guidance, Stall Usage Data Collection, Actionable Analytics

True smart parking starts at the stall and eleven-x's innovative wireless SPS-X sensor detects and monitors stall occupancy in real-time and provides data and actionable insights that enables evidence-driven planning and programs.

The SPS-X smart parking sensor is an innovative patent-pending LoRaWAN®-based device that utilizes multiple technologies including magnetic sensing, radar, Bluetooth and AI that provides:

- Real-time stall occupancy status and monitoring
- Industry leading accuracy based on multiple sensing technologies backed by advanced AI
- Designed and engineered for maximum reliability and robustness
- Leverages standards-based low power wireless technology
- Ultra-long battery life
- Enables a variety of key analytics and insights
- Easy deployment and integration with other technologies
- Integrated device management
- Lowest cost per stall

Thinking of deploying in harsh outdoor environments? No problem, the SPS-X utilizes multiple technologies to maintain its industry leading accuracy and reliability in winter conditions, and filters out negative influencers such as buried metal, electromagnetic interference and other factors for the most reliable and accurate stall monitoring.

The SPS-X comes with an easy-to-use web app that enables easy deployment, sensor calibration and insights, making installation and daily management stress-free. Add additional sensors at any time in minutes. The eleven-x phone app is available for download on Google Play.

#### SPS-X BENEFITS:

- Real-time stall monitoring
- Ultra-long life (think up to 10 years, not 3)
- Industry-leading accuracy
- Unsurpassed reliability
- Based on low power LoRaWAN technology for always on detection and power saving communications
- Lowest cost per stall price point:
  - Cost-effective sensor
  - Near-zero maintenance
  - Low connectivity fees
- Actionable analytics
- Easy sensor management
- Simple installation process
- Easy integration with other technologies



**TECHNICAL SPECIFICATIONS**

**Communications**

|                        |  |
|------------------------|--|
| Communication Protocol | LoRaWAN® 1.02   BLE (Bluetooth Low Energy) |
| Device Class           | Class A                                    |
| Frequency              | US902-928, EU863-870                       |
| Transmit Power         | Up to 20dBm (US), 14dBm (EU)               |

**Mechanical**

|                |                               |
|----------------|-------------------------------|
| Enclosure      | Ruggedized enclosure          |
| Antenna        | Internal                      |
| Ingress Rating | IP67 - waterproof   dustproof |
| Mounting       | Indoor or outdoor             |
| Weight         | 576g (1.27lbs)                |

**Security**

AES-128 encryption (end-to-end)

**Provisioning**

Secured key injection and key exchange  
 Key management with join server  
 Infield or back office secure provisioning  
 Smart phone app for rapid provisioning

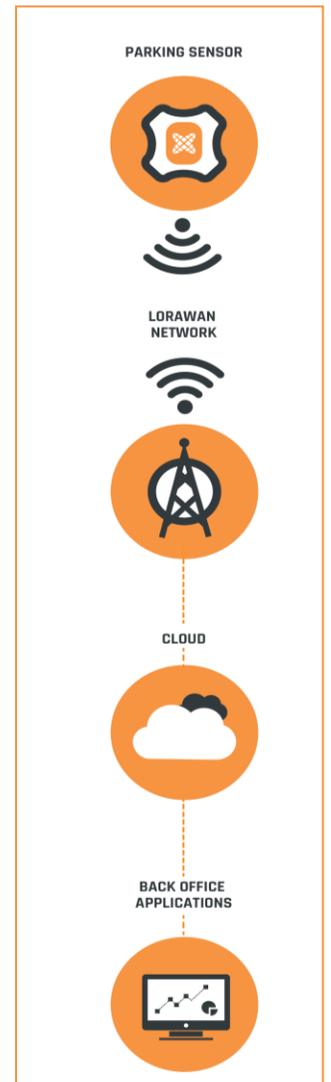
**Environments**

|                       |                 |
|-----------------------|-----------------|
| Operating Temperature | -40°C to 85°C   |
| Battery Life          | Up to 10 years  |
| Battery Parameters    | 3.6V, 19,000mAh |
| Humidity              | 0% - 100%       |

**Certifications**

FCC Part 15.247  
 ISED RSS-247  
 ETSI EN 300 220  
 ETSI EN 300 489

\*Specifications subject to change



FOR MORE INFORMATION: web: [www.eleven-x.com](http://www.eleven-x.com) | email: [collaborate@eleven-x.com](mailto:collaborate@eleven-x.com)