microPIMS® Global Solutions is a 2nd-generation, star-network topology system which leverages SNI’s success and experience in non-invasive corrosion monitoring. microPIMS is a fully wireless, non-intrusive, ultrasonic corrosion/erosion monitoring system. Powered by a long life battery, it operates using long range sub-Gigahertz LoRaWAN® wireless connectivity. Each microPIMS sensor is programmed to take readings at any user-defined time interval and automatically send data to webPIMS™, a cloud-based or on-premise software back-end for analysis, trending and more. Use microPIMS for:

- Applications where frequent thickness data is required to monitor corrosion/erosion rate issues.
- When short- or long-term corrosion rate data is needed to monitor crude-slate changes or to correlate operational system upsets.
- Areas not conducive to manual UT thickness surveys.
- Covering many discrete points with simple attachment.
- Situations where quick and easy installations are required.
- Easy repositioning—no welding required.

Monitor corrosion rate

- accurate to 0.001” (0.025mm) • high-risk areas • historically problematic locations

Monitor “low spots”

- post-NDE screening of pits to monitor remaining thickness • measures down to 0.040” (1.02mm)

Replace/augment intrusive methods

- validation of coupons, ER probes, etc.

Reduce costs

- reduce scaffolding and insulation removal/ refitting for internal corrosion monitoring • more accurate/reliable data improving operations

7-year battery life at 1 reading/day | 10-year at 1 reading/week* (Saft LM26500 battery).

Two models: dual element (up to 275°F/135°C) and ultra-high-temp (up to 932°F/500°C).

Built-in thermocouple provides surface temperature readings and temperature compensation.

Installed temporarily or permanently.

Wireless gateway supports >1000 microPIMS offers up to ~1 mile (1.6km) range in industrial settings

Cellular or ethernet back-haul through gateway.

Zone 2 Hazardous-area certified

ATEX, IECEx, UL/CSA and Japanese hazardous-area certifications.

Operates using LoRaWAN Sub-Gigahertz digital radio frequency.
 ultra-high-temp installed using a band clamp

 Dual element unit installed with a magnetic clamp

 Dual element unit with a magnetic clamp.

WebPIMS software offers trending and analysis for corrosion data, ultrasonic waveform, temperature-corrected thickness, and is able to quickly and easily export or integrate data for reporting.

### Specifications

<table>
<thead>
<tr>
<th>Element</th>
<th>Frequency</th>
<th>Measurement Range</th>
<th>Probe Surface Temperature</th>
<th>Weight</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>5 MHz</td>
<td>0.040-6&quot; (1-150mm)</td>
<td>-20°F (-28°C) up to 275°F (135°C)</td>
<td>20.5 oz. (580g)</td>
<td>9½×2.8” (241×70mm)</td>
</tr>
<tr>
<td>Single</td>
<td>7 MHz</td>
<td>0.125-1” (3-25mm)</td>
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- **Hazardous Location Rating:** Class I, Div. 2, Groups A-D, T4, Zone 2, IIC, T4
- **Ingress Protection Rating:** IP-65
- **Element Diameter:** 0.375” (10mm)
- **Resolution:** 0.001” (0.025mm)
- **Battery Life (Typical):** 10 yr. @ 1 reading/week; 7 yr. @ 1 reading/day at 68°F (20°C)
- **Construction:** 303 stainless steel
- **Mounting:** Magnetic base; band clamp
- **Data:** Digital thickness, RF waveform, temperature, time/date stamp
- **Data Access:** Cloud-based via webPIMS™ portal or on-premise
- **Local Network:** LoRa-WAN (node to gateway)
- **Connectivity:** Gateway to cloud or on-premise (cellular or ethernet)
- **Node Count:** 1000 microPIMS units per gateway
- **Gateway:** Outdoor, cast alum.; Approx. 11x8x4.5” (280x204x115mm); 6.0lb (2.7kg)
- **LoRa-Wan Compatible Gateway**
- **Ultra-High-Temp Gateway**

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PIMS: Permanently Installed Monitoring System.

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Offices in Houston, Hong Kong, and Osaka

† Typical Values. Results may vary site to site.