

# MethaneTrack™ Endpoint

Intrinsically safe, battery-powered, and maintenance-free

NevadaNano's MethaneTrack™ Endpoint (Model: MTEP) is the key component of the MethaneTrack Automated Emissions Monitoring Platform. It is an intrinsically-safe, battery-powered, wireless gas sensor that uses 15-year, no-calibration MPS™ sensors for *Close-Proximity Continuous Monitoring™* of gas emissions.

Ideal for Upstream, Midstream, and Downstream oil and gas applications such as:

- Tanks / Floating Roof Tanks
- Pumps
- Compressors
- Separators
- Heater Treaters
- Vapor Recovery Units
- Wellheads
- Mines, landfills and wastewater applications



## Endpoint Features

- Certified *Intrinsically Safe* for *Close-Proximity, Continuous Monitoring™*
- Installs in minutes on existing infrastructure
- Utilizes Industry-leading MPS™ gas sensor
  - No field calibration required
  - Immune to poisoning and saturation
  - 15-year sensor life
- Up to 5-year battery life
- Wireless LoRaWAN
- Built-in-Self-Test ensures proper operation

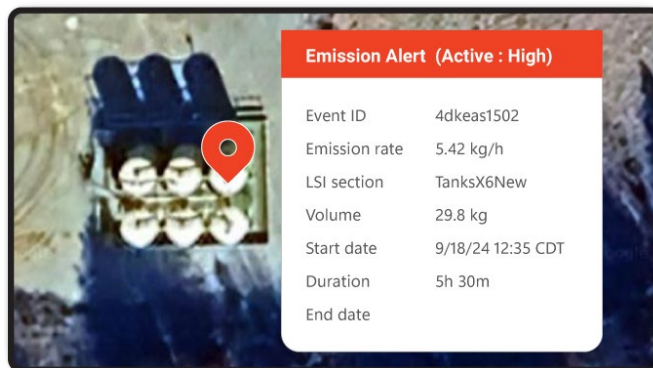
## Endpoint-enabled Software Features\*

- Intuitive display of real-time emissions data enables unprecedented control of LDAR operations to achieve emission reduction goals
- Prioritized alerts with location and volume data
- Fully customizable settings
  - Customizable alerts and notifications
  - Customizable Role Based Access
- Comprehensive encryption for data security
- Scalable platform for thousands of sites
- Reporting platform generates regulatory and operational reports to reduce workload
- Analytics platform displays emissions trends

\*Requires MethaneTrack™ SaaS subscription

## Gas Sensing Performance

- Highly accurate detection range from 50 to 1M parts per million (PPM)
- Dynamic Lower Limit of Detection (LLOD) enables near-zero false positives
- *Close-Proximity, Continuous Monitoring™* allows for immediate detection before the wind dilutes gas plumes
- Leak Source Isolation™ algorithms with associated MethaneTrack™ SaaS services provide highly accurate localization and quantification of emissions



## Typical Upstream Installation

- Endpoints are placed around assets and leak locations, within the hazardous zone, to pinpoint location and quantify emissions
- Endpoints mount to existing infrastructure with provided brackets or optional magnetic mounts
- No wiring required
- Typical full site installation takes a single technician just a few hours



## Hardened for all Environments

- Full global temperature and humidity range
- 24/7/365 continuous operation regardless of weather conditions
- IP65+

## Supports Regulatory Compliance

MethaneTrack™ SaaS Platform supports

- OGMP 2.0 Levels 4 and 5
- Fit for 55 legislation
- EPA 0000b and 0000c

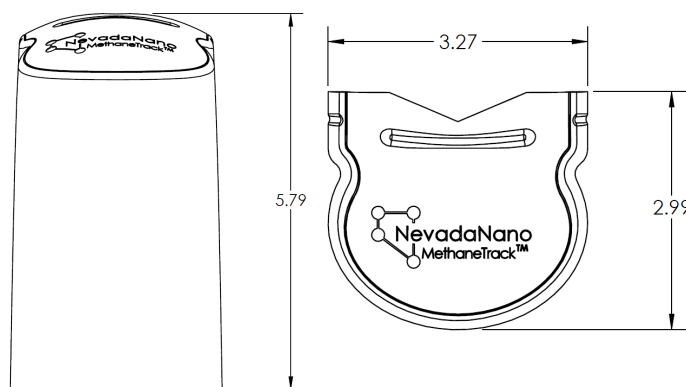
## MTEP Specifications

|                             |   |
|-----------------------------|---|
| Communication Protocol      | LoRaWAN (configurable for AS, AU, EU, and US bands)     |
| Communication Range         | Up to 2 km*   |
| Endpoint Duty Cycle         | 6-minutes on 2-minutes off (75% duty cycle)             |
| Measurement Frequency       | 1 reading every 4 seconds                               |
| Sensor Calibration          | Factory calibrated for methane                          |
| Sensor Accuracy (typical)   | ± 10% error (at concentrations > 500 ppm, 20°C, 50 %RH) |
| Operating Temperature Range | -40 to +75 °C (-40 to 167 °F)                           |
| Operating Humidity Range    | 0 to 100 %RH  |
| Operating Pressure Range    | 80 to 120 kPa   |
| Battery Type                | Li-SOCl <sub>2</sub>                                    |
| Battery Life                | Up to 5 years   |
| Power Supply                | Power Module Subassembly: P/N 55-000001                 |

\*The Endpoint's LoRa radio communications can achieve 8 km. In congested environments, 2 km transmit distances are more typical.

## MTEP Mechanical

|                     |   |
|---------------------|---|
| Dimensions<br>LxWxH | 3.27 x 2.99 x 5.79 in<br>(8.31 x 7.59 x 14.71 cm) |
| Mass                | 1.30 lbs (590 g)                                  |
| Body material       | UV-Stabilized Polycarbonate                       |



All units in inches

## MTEP Certifications

| IECEX                                  | ATEX                                      | UL   | CSA  |
|--|---|--|--|
| IEC 60079-0:2017<br>IEC 60079-11: 2011 | EN IEC 60079-0: 2018<br>EN 60079-11: 2012 | UL 60079-0 (Ed7) 2019 rev<br>2020, IEC 60079-0:2017<br>+NDs<br>UL 60079-11 (Ed6) 2013 rev<br>2018, IEC 60079-11:2011<br>+NDs | CSA 60079-0 (Ed4) 2019,<br>IEC 60079- 0:2017+NDs<br>CSA 60079-11 (Ed2) 2014<br>R 2018, IEC 60079-<br>11:2011+NDs |
| Ex ia IIC T4 Ga<br>-40 to +75 °C       | II1 G Ex ia IIC T4 Ga<br>-40 to +75 °C    | Class I, Division 1, Group<br>A,B,C,D<br>Zone 0 AEx ia IIC T4 Ga<br>-40 to +75 °C  | Class I, Division 1, Group<br>A,B,C,D<br>Zone 0 Ex ia IIC T4 Ga<br>-40 to +75 °C                                 |
| IECEX EXV 24.0048X                     | ExVeritas<br>24ATEX1912X                  | Listing #: E116116<br>Report #: 133364   |  |

| Certificates of Compliance                                  | Specification  | Test Lab/Certification Body   | Certificate/Report Number   |
|---|--|---|---|
| Certificate of Registration of<br>Quality Management System | ISO 9001:2015  | National Standards<br>Authority of Ireland (NSAI)   | 19.8213   |
| RoHS (2 and 3) Compliant                                    | 2011/65/EU and 2015/863  | Nevada Nanotech Systems,<br>Inc.  | QA-DC-0022-01   |
| REACH Compliant   | EC 1907/2006 with<br>exemptions, SCIP database<br>registration is pending  | Nevada Nanotech Systems,<br>Inc.  | QA-DC-0022-01   |
| FCC Rule Part 15C   | Part 15 Spread Spectrum<br>Transmitter (902.3 - 914.9<br>MHz)<br>Digital Transmission System<br>(903.0 - 914.2 MHz)            | Bay Area Compliance<br>Laboratories Corporation   | FCC Identifier: 2BAGY-MTEP  |
| European Conformity   | Article 3.1(a), 3.1(b), and 3.2<br>of Radio Equipment Directive<br>2014/53/EU<br>Regulation (EU) 2019/290;<br>WEEE             | Nevada Nanotech Systems,<br>Inc.  | QA-DC-0022-01   |
| AS LoRa Band Conformity                                     | 923 MHz – 924 MHz<br>ESTI EN 300 220-2 V3.2.1<br>(2018-06); ESTI EN 300 220-1<br>V3.1.1 (2017-02)                              | Nemko USA Inc.  | Test report REP111260-<br>1TRFWL  |
| AU LoRa Band Conformity                                     | Argentina: ENACOM-Q2-<br>63.03V23.1<br><br>Brazil: ANATEL No 14448<br>(2017); No 423 (2022); No<br>4776 (2020); No 1120 (2018) | Instituto Nacional de<br>Tecnologia Industrial (INTI)<br><br>Instituto de Pesquisas<br>Eldorado | OT N° 225-3264 - Type:<br>Unique LT 25-RC-0289<br><br>LET-ID 2395-17555-01, 01-C,<br>& 01-C [900] |

## MTEP Part Number

|              |  |
|--------------|--|
| 60-000111-01 | MethaneTrack™ Endpoint (MTEP), IS Certified with vertical mounting bracket.<br>AS, AU, EU, and / or US LoRa Bands available, specify when ordering |
|--------------|--|

Please note: Information contained in this document is subject to change without notice.