

# Atlas INS Data Sheet

Point One Navigation is pleased to offer Atlas, a standalone Inertial Navigation reference system delivering our highest precision positioning for a wide range of applications.



## Features

**Multifrequency** High Precision GNSS receiver

**64-bit Low-Power ARM** Dual Processor Architecture

**Configurable IO** including PPS and event output

**Automotive grade (ASIL-B) IMU** with 6 Axis Gyro / Accelerometer

**Multi frequency GNSS antenna** with mag-mount, RF and USB Cabling

**Hosted UI and REST API** control interface

**100Hz Position Update Rate** with 6DOF output over Ethernet

**CAN and wheel encoder** vehicle odometry inputs

**Lithium-Ion battery** powered (optional)

## Benefits

**Access to Polaris**, the industry's highest performance GNSS cloud correction service

**Tightly coupled sensor fusion** with integrated FusionEngine to achieve centimeter-level accuracy

**Position accuracy** better than 10 cm global frame

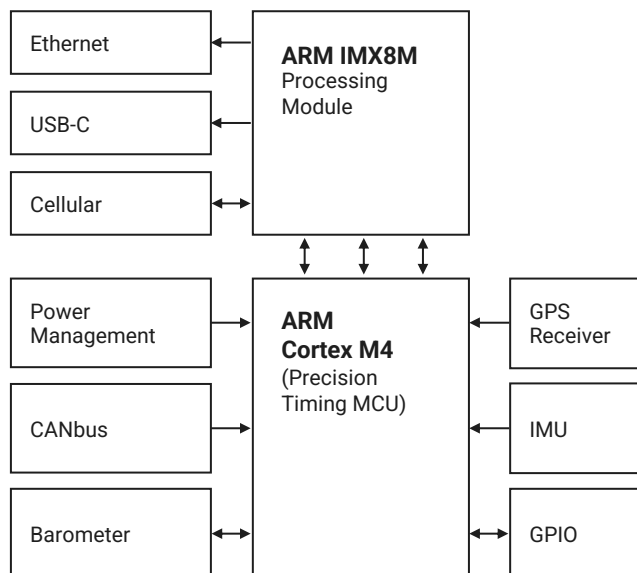
**Simple plug and play setup** with remote access configuration, control, and data logging

**Automatic** lever arm and rotation calibration

**Available schematics** for rapid integration into customer platforms

# Electrical

|                          |   |
|--------------------------|---|
| <b>Input Voltage</b>     | 5 – 48 VDC  |
| <b>Power (Typical)</b>   | 2 Watts (non cellular)  |
| <b>Connections</b>       | Power, USB, Ethernet, CAN, GPIO   |
| <b>Configurable GPIO</b> | Programmable time-locked pulse generator (2 channels), or singular wheel tick input |



# Performance

|                 |   |
|-----------------|---|
| <b>Open Sky</b> | <10 cm, 1-sigma accuracy; 1 m PL, TIR = 10 <sup>-7</sup> , availability = 99% |
| <b>Urban</b>    | <30 cm, 1-sigma accuracy; 3 m PL, TIR = 10 <sup>-7</sup> , availability = 99% |

# Mechanical

|                   |                           |
|-------------------|---------------------------|
| <b>Dimensions</b> | 100 mm x 225 mm x 30mm    |
| <b>Enclosure</b>  | IP-50                     |
| <b>Weight</b>     | 1.5 lbs                   |
| <b>Storage</b>    | -40° C to +85° C (95% RH) |
| <b>Operation</b>  | 0° C to + 60° C (90% RH)  |
| <b>Vibration</b>  | TBD                       |

# Support

|                  |   |
|------------------|---|
| <b>GitHub</b>    | <a href="https://github.com/PointOneNav/">github.com/PointOneNav/</a> |
| <b>Documents</b> | <a href="https://pointonenav.com/docs/">pointonenav.com/docs/</a>     |

# Navigation Specification

## Signal Tracking

GPS L1C/A, GLONASS G1, BeiDou B1-I, B1-C, GALILEO E1

GPS L2P codeless, L2C, GLONASS G2, BeiDou B2-I, Galileo E5b

GPS L5, BeiDou B2a, Galileo E5a

QZSS, SBAS, EGNOS

## Inertial

+/- 125 degrees/sec, +/- 6 g

## Outputs

NMEA 0183 over Ethernet, Point One FusionEngine open-source library

Position Update 100 Hz

Dead Reckoning < 1.5 meters error over 10 minutes\*

\* Performance measured as typical with in-vehicle calibration and vehicle wheel speeds