point one

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

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

100Hz Position Update Rate with 6DOF output over Ethernet

64-bit Low-Power ARM Dual Processor Architecture

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

CAN and wheel encoder vehicle odometry inputs

Configurable IO including PPS and event output

Hosted UI and REST API control interface

Lithium-Ion battery powered (optional)

Benefits

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

Position accuracy better than 10 cm global frame

Automatic calibration

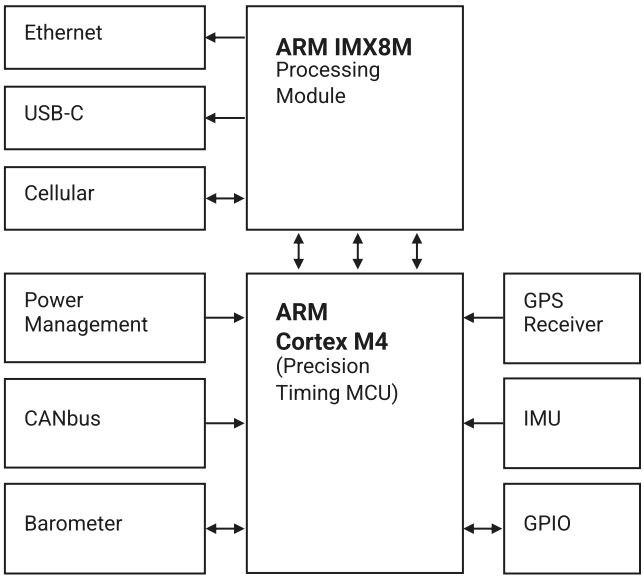
Tightly coupled sensor fusion with integrated FusionEngine to achieve centimeter-level accuracy

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

Available schematics for rapid integration into customer platforms

Electrical

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



Performance

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

Mechanical

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

Support

GitHub	github.com/PointOneNav/
Documents	pointonenav.com/docs/

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