Atlas INS

Point One Navigation's Atlas INS is a standalone inertial navigation reference system delivering our highest precision positioning for a wide range of applications.



FEATURES

Multifrequency Antenna
High Precision GNSS Receiver

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

100Hz Position Update Rate with 6DOF output over Ethernet

Embedded ARM Processor
1.8GHz Quad Cortex A-53

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

CAN and wheel encoder vehicle odometry inputs (optional)

Configurable IO including PPS GPIO and Giagbit Ethernet

Hosted UI and REST API control interface

Lithium-ion battery powered (optional)

BENEFITS

Access to Point One RTK network, the industry's highest performance GNSS cloud RTK correction service

Positioning accuracy better than 10 cm on a global frame

Automatic calibration and continuous accuracy

Tightly coupled sensor fusion with integrated positioning engine software to achieve centimeter-level accuracy

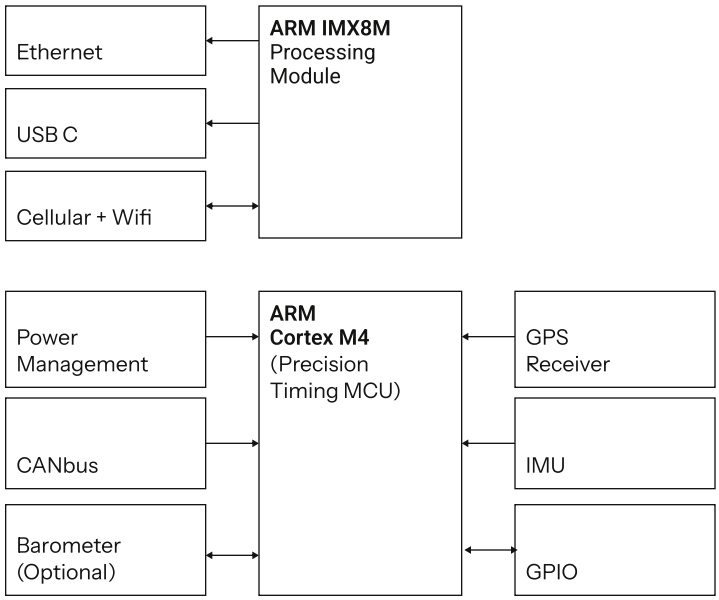
Simple plug-and-play setup with remote access configuration, control, and data logging

Schematics available for rapid integration into customer platforms

sales@pointonenav.com
pointonenav.com

ELECTRICAL

Input Voltage	5 – 48 VDC
Power (Typical)	2 Watts (non cellular)
Connections	Power, Ethernet, CAN, GPIO GPS RF (2x), Cellular (2x), Wifi
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	222 mm x 124 mm x 30mm
Enclosure	IP50
Weight	1.5 lbs
Storage	-40° C to +85° C (95% RH)
Operation	0° C to + 60° C (90% RH)
Vibration	TBD
Supports	1000BASE-T (Gigabit Ethernet) and 100BASE-TX

SUPPORT

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

NAVIGATION SPEC

Signal Tracking (Per Antenna)
GPS L1C/A, GLONASS G1, BeiDou B1-I, B1-C Galileo E1
GPS L2P codeless, L2C, GLONASS G2, BeiDou B2-
GPS L5, BeiDou B2a, Galileo E5a, BeiDou B3, Navic L5
QZSS, EGNOS, WAAS, GAGAN, MSAS, SDCM
Inertial
+/- 125 degrees/sec, +/- 6 g
Outputs
NMEA 0183 over Ethernet, Point One Fusion Engine 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
** Specification is in open sky, RMS values independent of antenna/body calibration

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