

Atlas INS

Point One Navigation's Atlas Duo 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

64-bit Low-Power ARM Dual
Processor Architecture

Configurable IO including PPS GPIO
and Gigabit Ethernet

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 (optional)

Lithium-ion battery powered (optional)

BENEFITS

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

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

Positioning accuracy better than 10 cm
on a global frame

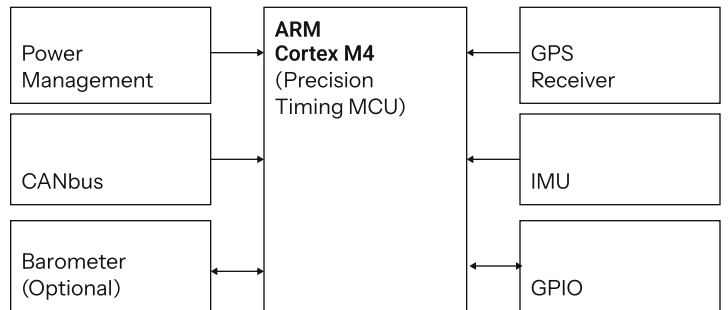
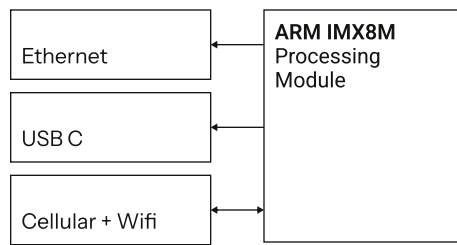
Simple plug-and-play setup with
remote access configuration, control,
and data logging

Automatic calibration and continuous
accuracy

Schematics available for rapid
integration into customer platforms

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

OZSS, 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