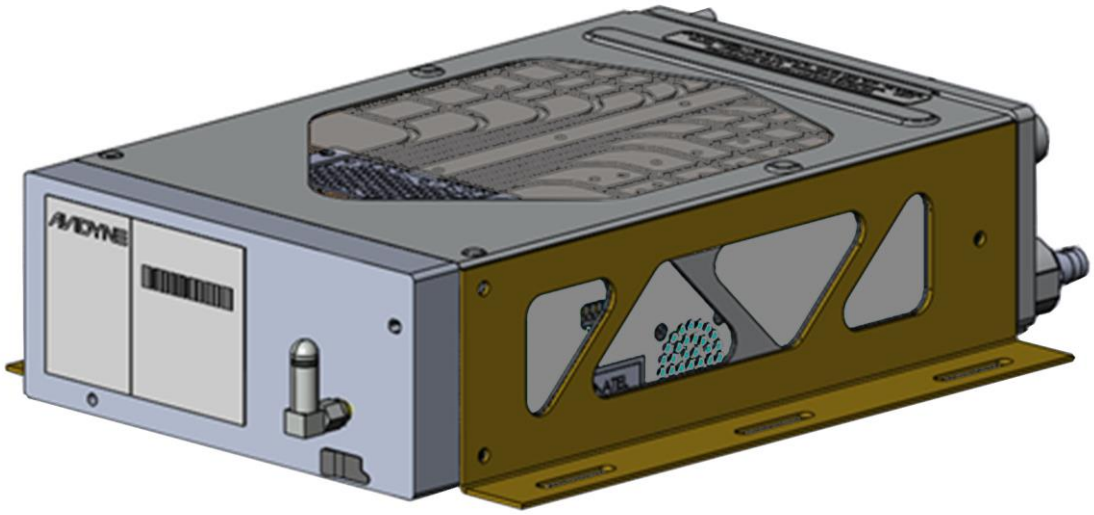
Quantum GPS & VHF NAV/COM

Remote Sensor Packs



Compact Navigation/Communication

Quantum Sensor Packs were developed by Avidyne to meet the needs of modern Part 23 light aircraft and piloted, remotely-piloted, and autonomous Advanced Air Mobility (AAM) aircraft including electric, hybrid Vertical Take Off and Landing (eVTOL).

Quantum Sensor Packs provide remote-mounted GPS and optional VHF Navigation & Communication radio capabilities that can be controlled via Quantum Flight Displays.

Versatile GPS

The integrated GPS receiver provides support for DAL B GNSS SBAS (multiple global augmentation systems) and supports RNAV5, RNAV1, RNP1, RNP0.3, RNP APCH LNAV, LNAV/VNAV, and LP/LPV.

Optional VHF

The optional VHF provides 118.00-136.975 frequency range with 25kHz/8.33kHz spacing and 10W transmit capability (16W optional), dual COM receive, VOR receive, and ILS receive functions.

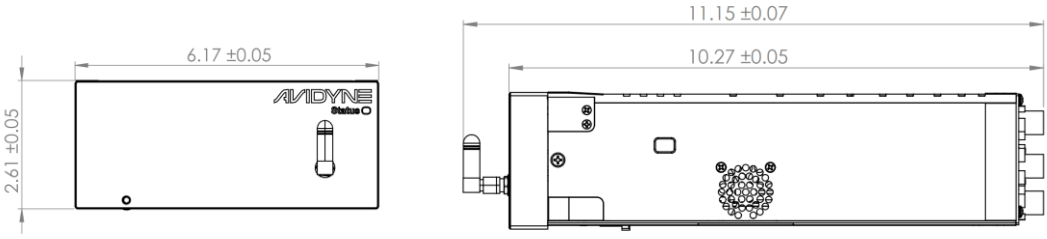
Flexible ACR Architecture

Quantum Sensor Packs are available with or without an integrated ACR4 processor for use when coupled with Quantum displays that do not include the ACR.

Extensive I/O

The Quantum Sensor Pack's extensive I/O provides support for interfaces to over 150 external avionics product and includes ARINC429 In, ARINC429 Out, ARINC453, RS-232, USB, and RS-170 video in, plus multiple discretes and analog interfaces. Additional non-certified I/O includes WiFi, Bluetooth, Ethernet, and CAN interfaces.

Quantum Remote Sensor Packs for GPS & VHF NAV/COM



Specifications

	w/GPS	w/GPS+VHF
Weight:	4.30lbs (1.95kg)	4.80lbs (2.17kg)
w/optional ACR	5.71 lbs (2.59kg)	6.21lbs (2.81kg)

Height:	2.96” (7.51cm)
Width:	6.25” (15.87cm)
Depth: with connectors	12.47” (31.67cm)

GPS Receiver

16-Channel GPS/SBAS
•3 meters (CEP 50%)
•5 meters (95%)
SBAS Differential Position
•1 meter (CEP)
•3 meters (95%)
Velocity Accuracy
0.1 knots (95%)
Dynamics:
Acceleration - 10g max.
Speed - 1,000 knots
Altitude - 50,000 ft

Power Requirements

Power: 11-33vdc
2.2A @ 28vdc
4.0A xmit

Environmental

DO160G qualified

- To 50,000ft
- -20 ° C to +55°C
- Short Term -40°C to +70°C

Cooling

No external cooling required

I/O	QTY
ARINC429 In	3
ARINC429 Out	2
ARINC453	1
RS232	4-6
USB	1
Discretes	44
Analog I/O	35
Non certified I/OI	
WiFi	1
Bluetooth®	1
Ethernet	1
CAN	1

Compliance

DO-178: DAL B, C, and D for software, DAL B for GPS, ARS, ADC, and certified I/O.
DO-254: DAL B for all complex hardware functions.
DO-160: F2/F2/W/F2, B, A, E, U/G, X, X, X, X, X, Z, B, A, B, ZC, W, M, B4HZL4/B3K4L4, X, X, A, X

TSOs: TSO-C2d, TSO-C3e, TSO-C4c, TSO-C6e (MAG), TSO-C8e, TSO-C10b, TSO-C34e, TSO36e, TSO-C40c, TSO-C63e, TSO-C106a (ADC), TSO-C110a, TSO-C112e, TSO-C113b, TSO-C118a,TSO-C146e, TSO-C147a, TSO-C151d, TSO-C157c, TSO-C165b, TSO-C194, and TSO-C195b and additional TSOs as required for aircraft systems integration.

Optional VHF Radio

COM Transceiver

- 118.000MHz to 136.975MHz
- 8.33kHz or 25kHz spacing
- 10 Watt transmitter (Class 3, 5)
  - Optional 16 Watt (28VDC Only)
- Capable of simultaneous reception of active & standby frequencies

VHF NAV/VOR Receiver

- Flag sensitivity Set to –103dBm
- 108.0 MHZ to 117.95 MHZ operation
- CDI output: ±150 mV full scale
- DME channeling: 2x5, BCD, Slip Code Narco 890/891, King Serial
- Audio sensitivity: –103.5 dBm for 6 dB S/N with 1 kHz 30% mod.
- Audio output: 100 mW minimum into 500 ohm load; external amplifier req’d

VHF Localizer Receiver

- Flag sensitivity set to –101dBm (Actual sensitivity exceeds –107dBm)
- CDI output: ±150 mV full scale
- Centering accuracy: < 4.5 mV
- Flag sensitivity: –103.5 dBm
- Audio sensitivity: –103.5 dBm for 6 dB S/N with 1 kHz 30% mod.
- Audio output: 100 mW minimum into 500 ohm load; external amplifier required to drive cockpit speaker

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Avidyne reserves the right to make changes to product specifications and design features without notice.

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By AVIDYNE