LATEST TECHNOLOGY

LIGHTWEIGHT

COMPACT

EASY INSTALLATION

GPS-WAAS Receiver

Meets requirements for primary navigation receiver for enroute and approach guidance

Latest Technology: TSO-C145b BETA 3 for LPV approaches.

Lightweight: Less than 1.0 lb.

Compact: 1.4”H x 2.6”W x 4.0”D.

Easy installation: Stand alone or display integrated.

Greater precision

The GPS-WAAS receiver from Genesys Aerosystems utilizes the signals coming from Global Positioning System (GPS) Satellite Constellation and Satellite-Based Augmentation System (SBAS) such as WAAS or EGNOS. The primary function of the unit is to compute the Position, Velocity of an aircraft, and the Precise Time (PVT). It also computes the integrity of the PVT from the SBAS signal, if available. The GPS detects and excludes failed satellites (FD/FDE) using Receiver Autonomous Integrity Monitoring (RAIM) algorithm, whenever there are enough number of satellites, regardless of SBAS availability.

GPS-WAAS Receiver

A Global Positioning Receiver (GPS) combined with the unparalleled accuracy and integrity monitoring of Wide Area Augmentation System (WAAS)

GPS-WAAS Specifications

GPS Type:	C/A code Sensor with WAAS capability
Conformity:	DO-229D DO-254, Level-B DO-178B, Level-B DO-160E ARINC 743A-4
Certification:	TSO-C145b Class Beta 3: LPV
Frequency:	1575.42 MHz
No. of Channels:	Total: 15 (GPS: 12 WAAS: 3)
Architecture:	Digital Signal Processor with FPGA and RF Front-end
Measurement Accuracy:	Receiver noise per DO-229D
Time:	100 ns, Synchronized to either GPS or UTC (SA off)
Sensitivity:	Acquisition: -136 dBm Tracking: -140 dBm
Update Rate:	5 Hz
Dynamics:	Speed, acceleration and jerk per DO-229D requirements for en-route, terminal, non-precision approach and precision approach
Alert:	Alert in the form of data available as per DO-229D
Integrity Monitoring:	SBAS integrity (if available), FD and FDE RAIM, Predictive RAIM, all as per DO-229D
BITE:	Power-on Self Test and Online BITE
Communication:	RS-232: One host port, 19.2 kbps One maintenance port 19.2 kbps Input discrete: Air/ground, self test, data load, master reset Output discrete: Fail navigation, fault discrete, power fail Software protocol: Binary, proprietary
Software Upgrade:	Field upgradeable
DO-160E Qualification:	[(F2)V]BBBRXWXSFSZZAZ[ZC][YL]M[A3J33]XXAC
MTBF:	40,000 hrs. (MIL-HDBK 217)
COM Ports:	RS232, 19,200 bps
Main Connector Type:	MIL-C 38999 Souriau PN: 8D0C-13F35PN
Airframe Side:	Souriau PN: 8D5-13F35SN
Antenna Connector Type:	Amphenol TNC
Thermal Protection:	Internal thermal regulation and monitoring
Input Voltage:	Nominal 14 to 28V, dual bus
Maximum Input Voltage:	Spikes to 80V
Minimum Input Voltage:	Down to 10V for 30 seconds
Size:	1.4”H x 2.6”W x 4.0”D (excluding connectors and mounting flange)
Weight:	0.95 lbs.
Enclosure:	Machined 6061-T6 aluminum
Finish:	Black anodized

GENESYS AEROSYSTEMS

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