



## GENESYS GPS-WAAS RECEIVER

PRIMARY NAVIGATION RECEIVER FOR ENROUTE/APPROACH GUIDANCE  
FOR FIXED-WING AND HELICOPTER PLATFORMS

A Global Positioning Receiver (GPS) combined with the unparalleled accuracy and integrity monitoring of Wide Area Augmentation System (WAAS) meets requirements for primary navigation receiver for enroute and approach guidance.

Features of the GPS-WAAS Receiver include:

- Latest technology: TSO-C145c 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

# A GPS COMBINED WITH ACCURACY & INTEGRITY MONITORING WAAS

## GPS-WAAS SPECIFICATION

**GPS Type:** C/A code Sensor with SBAS capability

**Conformity:** DO-229D  
DO-254  
DO-178C, Level-B  
DO-160G  
ARINC 743A-4

**Certification:** TSO-C145c Class Beta 3: LPV

**Frequency:** 1575.42 MHz

**No. of Channels:** Total: 15 (GPS: 12 SBAS: 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:** Not available

**Output discrete:** Not available

**Software protocol:** Binary, proprietary software

**Upgrade:** Factory upgradeable

**DO-160E Qualification:** [(F2)X]BBBUXWXSFSZBAZ[ZC][YR]  
H[A3J33]XXAC

**MTBF:** 78,000 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



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