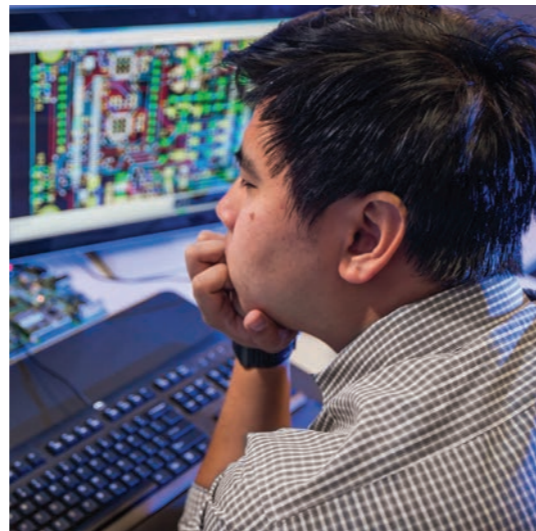


THREE GENERATIONS OF EXPERIENCE BEHIND NEXTGEN AVIONICS —

Building on systems engineering and integration know-how, FreeFlight Systems effectively implements comprehensive, high-integrity avionics solutions. We are focused on the practical application of NextGen technology to real-world operational needs — OEM, retro fit, platform or infrastructure.

FreeFlight Systems is a community of respected innovators in technologies of positioning, state-sensing, air traffic management datalinks — including rule-compliant ADS-B systems, data and flight management. An international brand, FreeFlight Systems is a trusted partner as well as a direct-source provider through an established network of relationships.



NEXTGEN LEADER. INDUSTRY EXPERT. TRUSTED PARTNER.
SHAPE THE SKIES.

A GLOBAL POSITION

SBAS/GNSS SENSORS FOR NEXTGEN APPLICATIONS

Certified ADS-B Position Source



SHAPE
THE
SKIES



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FreeFlight team members talk SBAS/GNSS solutions while touring our production facility in Waco, Texas.

SBAS/GNSS SENSOR SYSTEMS

A family of retrofit position sources that provide global ADS-B and NextGen capabilities to keep you flying.

The global airspace system is transitioning from ground radar-based Air Traffic Management (ATM) to satellite- or space-based ATM. The FreeFlight Family of SBAS/GNSS receivers provide all of the data aircraft need to operate in these new ATM environments.

Whether you need an ADS-B position source that is approved for all ICAO jurisdictions, a timing source for datalinks such as CPDLC, or a data source for your TAWS system, we have a low-cost, high-performance sensor that will meet your needs.

For light aircraft, the Model 1201 12-channel sensor provides a compact, lightweight package with a straightforward RS-232 interface through a D-Sub connector. As with all of our GPS sensors, there are no pilot controls. Once the unit is installed and configured to your aircraft, it begins outputting data as soon as power is applied. The 1201 has been in service for many years as an approved ADS-B position source and as a TAWS position sensor on multiple platforms. The 1201 has the proud distinction of being the first SBAS/GNSS receiver to be awarded FAA TSO Authorization, and has been the position source on multiple ADS-B "firsts."

Our flagship GPS sensor is the model 1203C. Designed for business, airline transport, and heavy rotary wing aircraft, this unit contains a high-performance 15-channel GPS engine, with improved interference protection and faster update rates than its small aircraft cousins. The unit is housed in a sealed, environmentally robust package (ARINC 743A Alternative Mounting Scheme), allowing it to be located in either the aircraft equipment bay or under the aircraft skin, which is close to the antenna location to minimize expensive coaxial cable runs. The data interface makes the unit compatible with most transponders – important for ADS-B applications. The 1203C is in service worldwide as an ADS-B position source, as a navigation sensor, and as a timing source for datalinks.

Because all of these units are self contained, self starting GPS position sources, they can be added to existing aircraft systems with little aircraft integration. This is particularly useful for ADS-B retrofits.



Model 1203C and 1201

Because of the high quality of these sensors, they do not need to be connected to the aircraft navigation system when they are used as an ADS-B position source. Installation is simple and ADS-B compliance is within reach without expensive modification to existing Navigation or Flight Management Systems.

As with all FreeFlight Systems products, the SBAS/GNSS family is fully approved for helicopter operations and are in service in harsh environments such as the Gulf of Mexico and desert regions.

For larger aircraft, the Model 1203C offers additional benefits. The unit meets the standards for advanced Required Navigation Performance (RNP) operations. Is currently operating in certified RNP (0.3) systems on airline transport aircraft with no other GPS equipment. In these aircraft, the unit also acts as the ADS-B position source, and in some cases as a datalink (CPDLC) timing source. These aircraft have achieved full compliance with all key NextGen ATM requirements using the simple and affordable 1203C sensor as the key system sensor.

The FreeFlight family of high-performance SBAS/GNSS receivers is inexpensive, easy to install, and meet all global requirements for NextGen applications such as ADS-B, TAWS, RNP, and datalink. There is a packaging option tailored for each aircraft class. The sensors have achieved several firsts in the challenging NextGen arena, and are in service worldwide delivering robust, high-reliability performance. It is FreeFlight Systems' goal to provide high-quality systems at reasonable prices. These values are exemplified in this family of GPS receivers.

SBAS/GNSS SENSOR SYSTEMS: 1201 AND 1203C

	1201	1203C
SPECIFICATIONS		
Model	1201	1203C
Type	12-channel GPS receiver	15-channel GPS receiver
Position Update Rate	2 times per second output at one/second	5 times per second output at one/second
Velocity	1,000 knots, steady state	1,000 knots, steady state
Performance	Complies with DO-229C	Complies with DO-229D

CERTIFICATIONS

System	TSO-C145a	TSO-C145c
Environmental	DO-160E	DO-160F
Software Assurance	DO-178B Level C	DO-178B Level C
Installation Approvals	Approved as ADS-B position source as defined in AC 20-165A	

PHYSICAL CHARACTERISTICS

Size	5.1" W 6.5" D 1.6" H	4.7" W 8.7" D 1.6" H
Antenna	3.0" W 4.7" D 0.8" H	3.0" W 4.7" D 0.8" H <small>*Any approved TSO-C144 antenna, and many legacy antenna types</small>
Weight	1.4 lbs (0.6 kg)	1.9 lbs (0.9 kg)
Antenna	0.5 lbs (0.2 kg)	0.5 lbs (0.2 kg)
Interface	RS-232	ARINC 429
Operating Temp	-55°C to +70°C	-40°C to +70°C
Antenna	-55°C to +85°C	-55°C to +85°C
Operating Humidity	95% at 65°C	95% at 50°C
Cooling	Ambient air	Ambient air
ADS-B Transponder Compatibility	Compatible with the FreeFlight Systems family of ADS-B radios, and other models including the GTX-330ES and Trig models	Fully ADS-B rule compliant position source - Compatible with DO-260B transponders that support the ARINC 743A/B protocol*
Input Voltage (Steady State)	14-28 VDC	10-32 VDC
Input Current (Steady State)	0.5 A at 14 VDC 0.3A at 28VDC	0.3 A at 14 VDC 0.2 A at 28 VDC

*STC's available for multiple ADS-B compliant transponder types. Contact Sales for additional details.

For additional product information and specifications please visit our website at www.freeflightsystems.com