

Geneva Aerospace

flightTEK® FLIGHT CONTROL TECHNOLOGIES

WHEN THE MISSION MATTERS

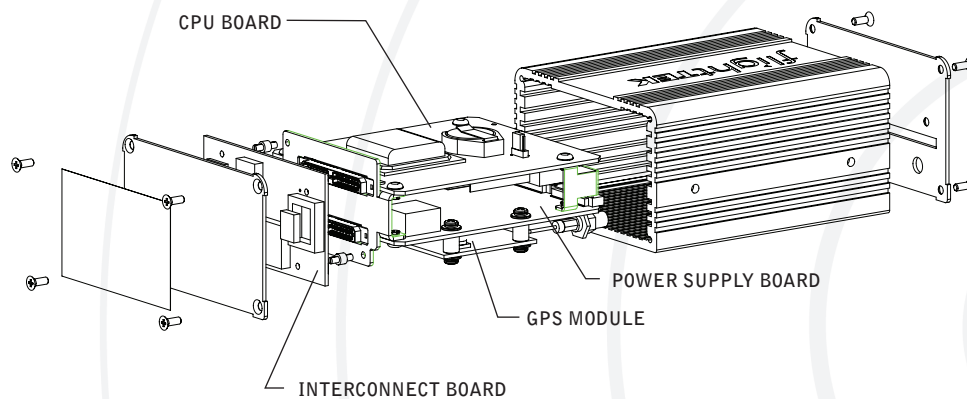


flightTEK® is L-3 Geneva's flight proven advanced UAS avionics package. It features Geneva's powerful, light-weight embedded flight control computer with selectable, integrated inertial measurement unit, inertial navigation system, air data sensors, and/or magnetometer.

flightTEK offers one of the most sophisticated and reliable autonomous flight control solutions available off-the-shelf today. *flightTEK* is more than just an autopilot, it serves as a complete mission management system by employing our patent-pending Variable Autonomy Control System (VACS®) architecture.

KEY FEATURES

- Automatic takeoff and landing
- Fault tolerant
- GPS denied navigation
- Vehicle agnostic
- Sensor agnostic payload API
- Radio agnostic UDP/IP



C³ISR > GOVERNMENT SERVICES > AM&M > SPECIALIZED PRODUCTS

This material is in the public domain and may be reprinted without permission; citation of this source is appreciated.
Cleared for Public Domain Release by Office of Freedom of Information and Security Review (OFOISR), dated September 17, 2007, reference number 07-S-2444.

flightTEK FEATURES

ADDITIONAL HARDWARE OPTIONS

IMU's:

- Honeywell HG 1700
- BEI Systron Donner MMQ50
- Crossbow[®] IMU300; IMU400; AHRS
- Microstrain[®] 3DM-GX1

INS:

- BEI Systron Donner CMIGITS[™] III

AUTO LANDING:

- *O-PALS* and *U-PALS*¹

flightTEK FEATURES

- Control modes
 - 3-D and 2-D waypoint navigation
 - Auto takeoff and landing²
 - Sensor slave
 - Loiter patterns
 - Remote directional steering
 - Preprogram maneuvers
 - Go point
 - Return to base on lost link
- Robust stabilization & control
- Extremely precise path control
- Real-time path reprogramming
- Sensor control of flight path
- UDP/IP based communications
- Integrated GPS/INS
- Configuration Manager
- Supports serial data link and Ethernet radios

flightTEK SPECIFICATIONS

Overview³

Size	4.65" L x 3.74" W x 2.30" H
Weight	21 oz
Power	6.5 W typical at 9 - 32 V
Enclosure	Aluminum

Environmental

Temperature (Operating)	-40 c° to +75 c°
Temperature (Non-Operating)	-40 c° to +85 c°
Humidity (Operating)	5-90%
Vibration (Expected)	20g/0-600Hz
Acceleration	Up to 53g 10 ms all axes ²
Altitude	0 to 35,000± (tested) 60,000 (expected)

¹ See L-3 Geneva *O-PALS* and *U-PALS* for specific data sheets

² Would require removal of battery

³ Please note - all information is defined for *flightTEK*, not for supporting equipment.

⁴ Performance varies based on IMU selected

Hardware

CPU	AMD Integrated Appliance (IA) Module SC2200 @ 300 MHz
PWM	8 Outputs, 0.1uS Res. Optically Isolated
Analog	8 Channel, 14bit Res. Programmable to: 0v to +5v or 0v to 10v differential
Serial	7 serial ports Ports 1-4 RS-232 (full modem) RS-422
Digital	12 inputs, 12 outputs, Optically Isolated
GPS	12 channel, Tx1, Rx1 and Rx2 RS-232. Support for 3.3v or 5v Active Antenna
LAN	One 10/100 mbps Ethernet Channel
W-D	Integrated Watchdog, Reset, SMI, or IRQ selectable on time-out
Datalog	85 mb

C/R Navigation Performance⁴

IMU: MMQ50	Systron Donner Inertial Division
Latitude/Longitude	4 meters (non-differential)
Heading	3 deg (one sigma)
Altitude	10 ft. (one sigma)
Velocity	0.6 meters per second (one sigma)
Pitch	1 deg (one sigma)
Roll	1 deg (one sigma)

Geneva Aerospace

4240 International Parkway
Suite 100

Carrollton, TX 75007

Tel: 888.320.AERO (2376)

Fax: 469.568.2100

www.L-3Com.com/Geneva



communications

Geneva Aerospace

L-3. Leading. Headquartered in New York City, L-3 Communications employs over 63,000 people worldwide and is a prime system contractor in aircraft modernization and maintenance, C3ISR (Command, Control, Communications, Intelligence, Surveillance and Reconnaissance) systems and government services. L-3 is also a leading provider of high technology products, systems and subsystems. The company reported 2006 sales of \$12.5 billion.