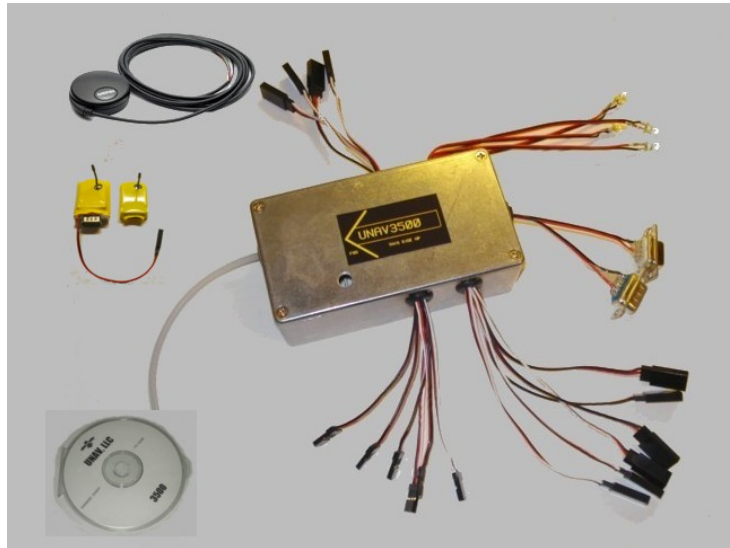


UNAV3500 *Full-featured* UAV Autopilot



The 3500 autopilot features an onboard AHRS & airdata sensors with a full-duplex telemetry link and feature rich GCS (groundstation software). Advanced features include integrated camera stabilization (3 servo outputs) and real-time map and waypoint control. The 3500 is designed for commercial UAVs and its feature set supports FAA proposed guidelines for Group II, III & IV sUAS operations. The 3500 is capable of operating in any weather, on any fixed-wing aircraft.

- **PCB:** 4.0" x 2.0" x 0.8" @ 35g
- **(7) RC input channels**
- **(7) RC servo outputs**
- **AHRS:** 6DOF IMU @ 1kHz sampling, 360deg all axes, temperature compensated
- **Onboard sensor suite:** IMU, Barometer, Airspeed
- **Telemetry:** full-duplex XBeeXSC - 6 mile range
- **GPS:** 32ch, 5Hz, waterproof
- **Smart Waypoint sequencer:** ignores invalid waypoint data or SPD & ALT out of limits
- **Waypoints:** 64 onboard storage in FLASH (LON, LAT, ALT, SPD)
- **Data logging:** FDR (20 channel data recorder @ 1Hz)
- **Program storage:** allows embedded program to be updated in the field
- **Sensor Calibration:** on command sensor calibration stored in FLASH
- **Robust design:** All data backed in FLASH (power dropout recovery < 1sec)
- **Fault detection:** fault detection, reporting and compensation
- **Payload Trigger:** 2 (controlled from the GCS)
- **Camera mount servos;** (3) integrated camera mount stabilization or manual control
- **Semi-autonomous mode:** autopilot stabilizes airplane, ground pilot controls flight path
- **Map:** real-time map display and waypoint creation.



Specifications

Enclosure:	4.8" x 2.6" x 1.5" (diecast aluminum enclosure)		
System weight:	12.5oz (PCB, enclosure, GPS, radio modem & cables)		
System power:	5.5v to 6.5v @ 250ma (autopilot + GPS + radio modem)		
Operating Temperature:	-20C +60C		
Processor:	16 bit @ 40MIPS		
FLASH memory:	256K		
Din:	(5) discrete in (5v)		
Dout:	(5) discrete out (5v @ 5ma)		
Serial ports:	(2) RS232 ports		
RC:	(7) In (7) Out		
Servos:	(4) flight control, (3) payload		
Analog:	(8) onboard sensors, (5) user analog in		
Max waypoints:	64 onboard FLASH	Max. altitude::	15,000 ft MSL
AHRS sample rate:	1 KHz	Max. Roll / Pitch rate:	150 deg/sec
GPS data rate:	5 Hz	Max. Linear Accel:	+/- 5g
Attitude control loop:	50 Hz	Attitude accuracy:	+/- 2 deg (dynamic)
Servo pulse rate:	50 Hz	Altitude accuracy:	+/- 2 ft
max. airspeed:	150 Kts	IMU bias stability	.02 deg/sec
Operating range:	6 miles	AHRS range:	360deg all axes