

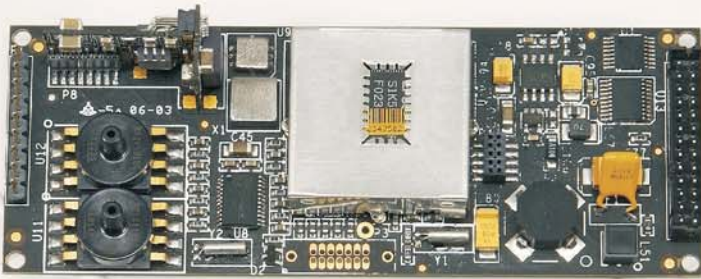
MP2028^{XP} Expendable Single Use Miniature UAV Autopilot

OVER 300 CLIENTS IN 47 COUNTRIES

MicroPilot is the world leading manufacturer of miniature autopilots for unmanned aerial vehicles (UAV) and micro aerial vehicles (MAV). Building on the reputation of the MP2028⁹, the MP2028^{XP} Expendable is the first UAV autopilot specifically designed for aerial targets and other disposable UAVs. The MP2028^{XP} Expendable provides all the capability of the MP2028⁹ at a price point suitable for expendable applications

FULL FEATURED

- optimized for disposable UAVs and targets
- world's smallest UAV autopilot; 28 grams, 4 cm by 10 cm
- GPS waypoint navigation with altitude and airspeed hold
- completely independent operation including autonomous takeoff, bungee launch, hand launch and landing
- powerful command set
- fully integrated with 3-axis gyros / accelerometers, GPS, pressure altimeter, pressure airspeed sensors, all on a single circuit board
- extensive data logging and telemetry collects the data you need
- UAV configuration wizard and installation video simplifies setup and speeds time to market
- includes HORIZON^{mp} ground control software
- pay per flight licensing reduces costs for disposable UAVs and kill targets



World Leaders in Small UAV Autopilots

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Specifications

Navigation

- 1 Hz GPS update rate
- move servo at waypoint
- change altitude at waypoint
- change airspeed at waypoint
- user definable holding patterns
- user definable error handlers
- RPV and UAV modes
- supports DGPS accuracy
- 1000 waypoint command buffer

Servos

- elevon, flaperons, 4 servo flap/aileron, separate flaps, v-tail, x-tail, split rudders
- 8 / 16 / 24 servos
- 50 Hz servo update rate
- separate servo and main battery power supply
- separate voltage monitor for main and servo battery power supplies
- integrated RC override
- 11 bit servo resolution
- extra ADC channels and 3-axis magnetometer available as an option

Control System

- 30 Hz PID loop update rate
- gain scheduling for optimum performance
- rudder aileron feed forward for improved turn performance
- aileron elevator feed forward for improved altitude hold during turns
- autonomous takeoff and landing
- user definable PID feedback loops
- user definable table lookup functions
- MP plugin compatible

Sensors

- airspeed max speed: 500 kph
- altimeter max altitude: 12000 m
- 2G, 3-axis accelerometers
- 3-axis rate gyro
- max angular rate: 150° per sec.

Telemetry, Datalog & Video

- telemetry (100 user defined fields transmitted each second)
- 5 Hz telemetry update rate
- onboard datalog: 47 fields, 1.5 MB
- 5 hz datalog update rate
- video overlay (16 user definable fields)

HORIZON^{mp}

- HORIZON^{mp} ground control software included with system
- MP2028^g simulator for operator training
- in-flight adjustable gains
- change waypoints in-flight
- payload servos controlled from ground station
- point and click waypoint editor

Physical Characteristics

- weight (including GPS receiver, gyros and all sensors): 28 grams
- measured current (including GPS receiver, gyros, all sensors and GPS antenna): 140mA @ 6.5V
- 4.2 to 26V supply voltage
- 10 cm in length, 4 cm in width, 1.5 cm in height
- software upgradable in the field

DRAFT - Specifications may change without notice



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