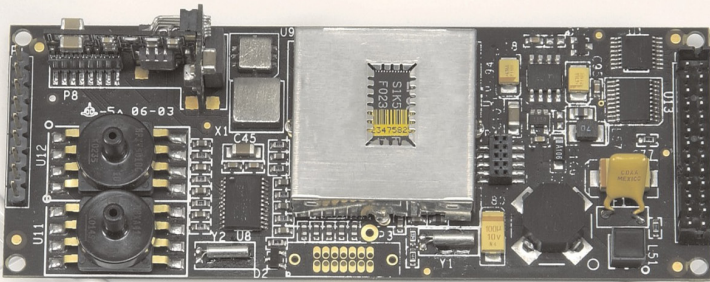


# MP1028<sup>g</sup>

## Low Cost Miniature UAV Autopilot

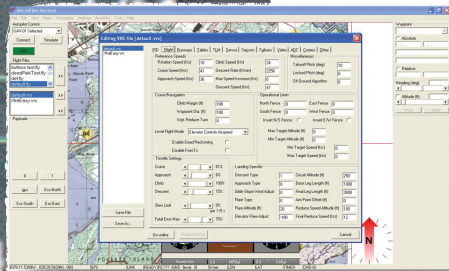


Max 2kg d=1g/2g Max 5lb d=1/8 oz

g  
28

KG LB ON ZERO

HORIZON<sup>mp</sup> Ground Control Software provides a user-friendly point-and-click interface with the autopilot.



Over 600 clients in 60 countries.

MicroPilot is the world leader in miniature autopilots for unmanned aerial vehicles (UAV) and micro aerial vehicles (MAV). The MP1028<sup>g</sup> is the lowest cost member of the MicroPilot MP2028 Series of autopilots. With the same small size and weight as the MP2028<sup>g</sup>, the MP1028<sup>g</sup> offers all the reliability and the most important features of the MP2028<sup>g</sup>. This autopilot is suitable for entry level UAV applications where cost is the overriding consideration.

- World's smallest UAV autopilot; 28 grams, 4cm by 10cm
- GPS waypoint navigation with altitude and airspeed hold
- Powerful script language command set allows tremendous flexibility when describing your mission
- Fully integrated with 3-axis gyros/2axis accelerometers, GPS, pressure altimeter, pressure airspeed sensors, all on a single circuit board
- Autonomous launch methods include runway takeoff, hand launch, bungee launch and catapult launch
- Supports manually directed and autonomous flight modes as well as an integrated RC override
- Extensive user programmable feedback gains and flight parameters tailor the MP1028<sup>g</sup> to your airframe and mission



World Leader in Small UAV Autopilots

micropilot.com  
info@micropilot.com  
1.204.344.5558

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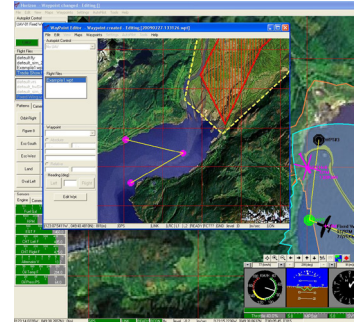
# Specifications

## Servos and Mixing

- elevon
- flaperons
- 4 servo flap/aileron
- split aileron
- 8 servos
- 50Hz 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

## Navigation

- 1Hz GPS update rate
- move servo at waypoint
- change altitude at waypoint
- change airspeed at waypoint
- RPV and UAV modes
- 1000 waypoints

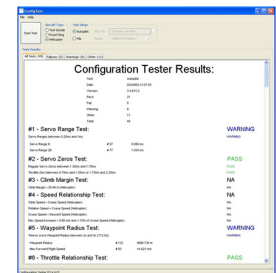


## Telemetry, Datalog and Video

- 5Hz telemetry update rate
- 5Hz datalog update rate
- 16 video overlay user definable fields
- video overlay uses low cost industry standard video overlay boards
- pressure altitude and pressure airspeed available on video overlay

## Control System

- 30Hz inner 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



## Ground Control Station

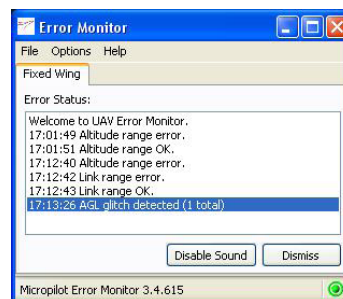
- HORIZON<sup>mp</sup> Ground Control Software optional with the system
- MP2028<sup>g</sup> autopilot simulator for training
- payload servos controlled from ground station
- optional point and click waypoint editor

## Sensors

- 150kph airspeed sensor range
- 2500 altimeter range (feet above launch point)
- pitch, roll and yaw gyros
- y-accelerometer to coordinate turns

## Physical Characteristics

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



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