MicroPilot is the world leading manufacturer of miniature autopilots for unmanned aerial vehicles (UAV) and micro aerial vehicles (MAV). The MP2128 is MicroPilot's premium UAV autopilot. Offering upward compatibility with the popular MP2028, MicroPilot's MP2128 provides a 50 fold increase in processor power, double the memory and twice as many input/output channels. Separate 24-bit ADC converters per gyro and a 1 kilohertz sample rate provide optimum performance for attitude estimation. The MP2128 is the UAV autopilot of choice for your high performance miniature UAV.

**ADVANCED FEATURES**

- 150 mips RISC processor gives scalability
- upward compatible with MP2028
- 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 ground control software
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
- 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
- altimeter max altitude: 12000 m
- 2G, 3-axis accelerometers
- 3-axis rate gyro
- max angular rate: 150° per sec.

Navigation
- 1 Hz GPS update rate
- optional 4 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

Telemetry, Datalog & Video
- telemetry (100 user defined fields transmitted each second)
- 5 Hz telemetry update rate
- 5 hz datalog update rate
- video overlay (16 user definable fields)

HORIZON™mp
- HORIZON™ ground control software included with system
- MP2028® 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
- 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