Cloud Cap Technology Piccolo II
Expanded Capability for Advanced Applications

Piccolo autopilots provide a complete integrated avionics solution that includes the flight control processor, inertial sensors, ported air data sensors, GPS receiver and datalink radio. The Piccolo II adds functionality and flexibility for advanced UAS applications. With over a decade in the field the Piccolo II Autopilot has become the UAS industry standard flight management system.

Key Features

Additional I/O support (16 configurable GPIO lines) for payload intensive applications

Onboard inertial, air data, and GPS sensors, datalink radio, and EMI shielded enclosure

Supports operation of a wide variety of UAV's in both fixed wing or VTOL configurations

Both Software and Hardware in the Loop (SWIL / HWIL) simulation modes for pre-flight testing

Plug and play support of peripherals including TASE payloads, servo based pan-tilt cameras, transponders, magnetometers, Iridium satcomm, RTK GPS receivers, laser altimeters and flight termination

Portable integrated ground station capable of managing the wireless link to multiple Piccolo avionics

UTC Aerospace Systems

Specifications

EMI shielded carbon / flanged / unflanged

RS232 Payload interface: 5

Sixteen (16) configurable GPIO lines. Four GPIO lines can be configured as analog inputs, 0-5V input, 10 bit conversion

CAN: Simulation / General interface

Flight termination: Deadman output

Integrated RF data link options: 900 MHz unlicensed ISM. 900 MHz Australian band. 2.4 GHz unlicensed ISM. 310-390 MHz discrete. 1350-1390 MHz discrete. 1670-1700 MHz discrete.

GPS: 4 Hz uBlox module GPS receiver, 5 volt

Pressure Sensors: Ported static. 15-115 KPa-ported pitot. 4 KPa differential. 155 kts max indicated airspeed

Waypoint navigation: 1000 waypoints saved in autopilot

Inertial Sensors: 3 axis gyroscopes, 300°/sec. 3 axis acceleration, 10g

Supported peripherals: Transponders, secondary comms radios, Iridium SatComm, TASE gimbals, servo PTZ gimbals, magnetometers, laser altimeters, payload passthrough, RTK GPS

Vin: 8 - 20 volts

Power: 4 W (typical including 900 MHz radio)

Size: 142.00 x 46.00 x 62.60 mm unflanged (5.59 x 1.81 x 2.46 inches)

Weight: 220 grams (7.7 oz) with 900 MHz radio

Operating temperature: -40C to +80 (calibrated range, no case)

Software Options

Standard Feature Set + Peripherals:
Adds new support for pan-tilt servos, improved GPS/INS performance, and more flexibility in configuring payload ports.

Laser Altimeter Autoland:
Provides accurate altitude information allowing the vehicle to perform a soft flared landing (Laser altimeter hardware sold separately).
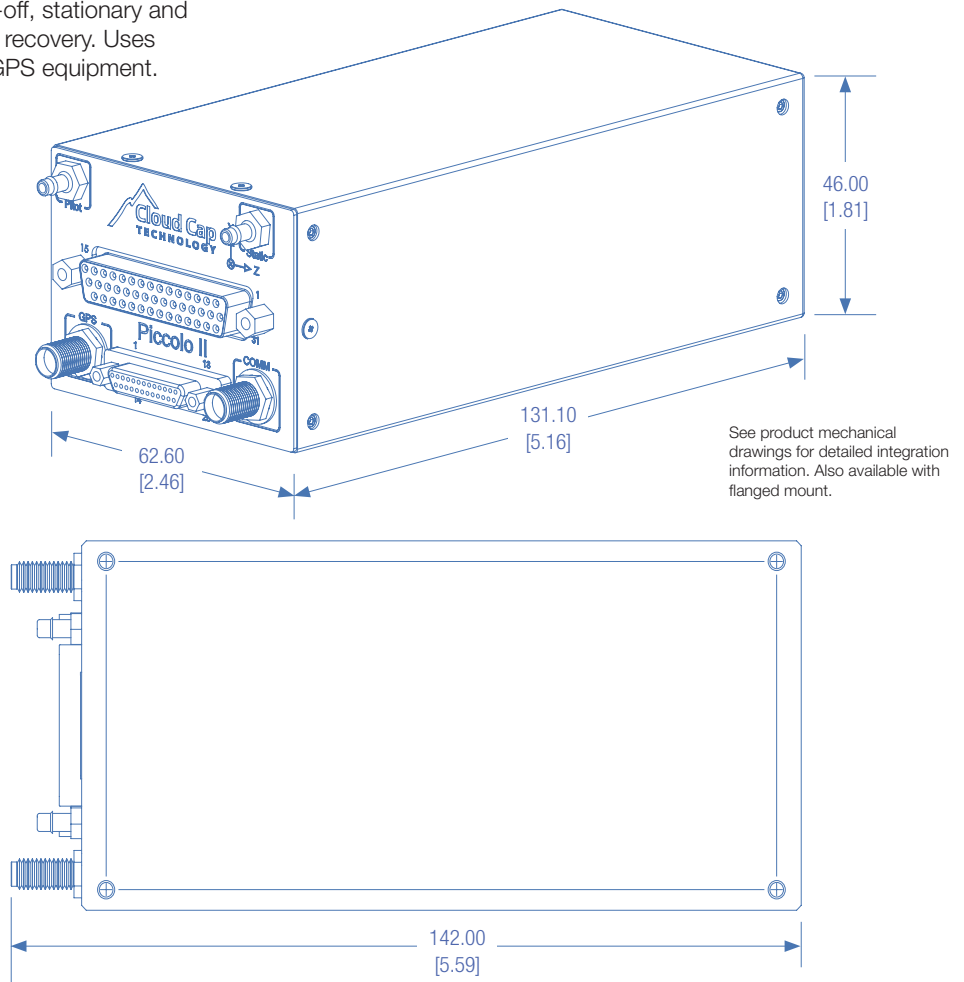
DGPS Autoloand:
Extends the autoland performance by using 2 cm accuracy DGPS. Supports autonomous taxi, rolling take-off, stationary and moving net recovery. Uses NovAtel DGPS equipment.

DGPS and Moving Net Recovery:
Adds support of moving net recovery needed for shipboard and other moving capture applications. Uses NovAtel DGPS equipment and associated antennas.

Helicopter Operations (VTOL):
Includes take-off and landing, precision hover, and automated path following along with autopilot assisted manual steering modes.

Radio Options

900 MHz unlicensed ISM

900 MHz Australian band

2.4 GHz unlicensed ISM

310-390 MHz discrete

1350-1390 MHz discrete

1670-1700 MHz discrete

46.00 [1.81]

131.10 [5.16]

62.60 [2.46]

See product mechanical drawings for detailed integration information. Also available with flanged mount.

142.00 [5.59]

Dimensions in mm [inches]

Cloud Cap Technology
Piccolo Flight
Management Systems

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