Multi-Sensor Data Acquisition Unit

MSDAU

RHOIch Systems

- Seven sensors integrated into a waterproof enclosure
- Real-time collection and transmission via the internet
- Dual external USB ports for expansion
- Optional industry-standard camera mount
- Power and Ethernet over a single PoE+ cable
- Multiple fixed and mobile mounting options

SYSTEM OVERVIEW

The MSDAU contains a high-speed Linux-based computer and a suite of precision sensors and Ethernet connectivity in a rugged, environmental enclosure. Sensors include a magnetometer, gyroscope, rate and position accelerometers, barometer, temperature and humidity plus a GPS receiver for position and time. Optional external USB devices are supported by two external connectors and a universal camera mount is available on top of the enclosure. All power and signals are provided by a single PoE+ Ethernet connector with power/signal sharing for the MSDAU and camera functions provided internally. Mounting options include wall, poll and tripod mounts.

TECHNICAL SPECIFICATIONS

- Gyroscope – 3D angular rate sensor: +/-245/500/2000dps

- Accelerometer – 3D Linear acceleration sensor: +/-2/4/8/16 g

- Magnetometer – 3D Magnetic Sensor: +/- 4/8/12/16 Gauss

- Barometer: 260 - 1260 hPa absolute range (accuracy depends on the temperature and pressure, +/- 0.1 hPa under normal conditions)

- Temperature sensor: (Temperature accurate to +/- 2 deg C in the 0-65 deg C range)

- Relative Humidity sensor: (accurate to +/- 4.5% in the 20-80%rH range, accurate to +/- 0.5 deg C in 15-40 deg C range)

- GPS: SiRF STAR IV GSD4e chipset, 48 ch, -163dBm sens.

- 32GB microSD card with OS and custom software for data collection and communication with UFODAS Mission Control

ENVIRONMENTAL

Operating Conditions: -40° C to 60° C (-40° F to 140° F) Less than 90% RH

Ingress Protection: IP67

CONSTRUCTION

Casing: Plastic, clear door with snap latches and locking provision

Dimensions: 179.8 mm H x 179.8 mm W x 149.6 mm D (7.08 in. H x 7.08 in.W x 5.89 in. D)

Weight: 3.49 kg (7.69 lb) camera mount version but without camera

MOUNTING PROVISIONS

Includes System Mounting Assembly with bottom 5/8"-11 threaded heavy-duty tripod mount and four M8 threaded holes on the back for Dahua mounting brackets for pole or corner mounting. MSDAU enclosure is mounted to the rear plate of this assembly.

OPTIONS AND ORDERING

HW-MSDAU-NOCAM
MSDAU only without camera mount

HW-MSDAU-XX
MSDAU with selected camera (XX) universal camera mount, 1-1/2" NPT female thread, includes PoE+ switch for power/signal sharing

HW-POLEMT
PFA-150 Pole mount

HW-CORNETMT
PFA-151 Corner mount