

Multi-Sensor Data Acquisition Unit

MSDAU

RHOIch Systems



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 intended for continuous outdoor operation. Sensors include a magnetometer, gyroscope, rate and position accelerometers, barometer, temperature and humidity plus a GPS receiver for position and time. A wideband receiver for RF spectrum monitoring is also included. Optional external USB devices are supported by two external connectors. All power and signals are provided by a single waterproof PoE Ethernet connector. Mounting options include wall, poll and tripod mounts. All data may be monitored, displayed and stored by UFODAP Mission Control software.

FUNCTIONS

- 14 sensors integrated into a rugged, waterproof enclosure
- Real-time collection and transmission via the internet
- Dual external USB ports for expansion
- GPS and Software-Defined Radio
- Power and Ethernet over a single PoE+ cable
- Multiple fixed and mobile mounting options

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 channels, -163dBm sensitivity
- SDR can sample any frequencies between 25MHz to 1750MHz. SMA antenna connector.
- 32GB microSD card with OS and custom software for data collection and communication with UFODAS Mission Control
- System status is indicated by an 8x8 color LED display

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

External Size L x W x D: 8.27" x 6.30" x 3.94"

Weight: 1.19 kg (2.63 lb)

POWER SUPPLY

PoE (IEEE 802.3af, Class 0)

3.8 watts, maximum

OPTIONS AND ORDERING

MSDAU-TRIPOD

MSDAU on System Mounting Assembly with bottom mount for 5/8"-11 threaded heavy-duty tripod

MSDAU-POLE

MSDAU with mounting plate and adapter for pole-mounting

MSDAU-CORNER

MSDAU with mounting plate and adapter for building corner-mounting

MSDAU-WALL

MSDAU with mounting plate for building wall-mounting

The MSDAU and other hardware and software options for a complete UAP/UFO/AAP data collection solution may be ordered through the UFODAP website:

ufodap.com