



TASK

Tactical Atmospheric Sounding Kit

The Tactical Atmospheric Sounding Kit (TASK) measures wind speed, wind direction, pressure, temperature and humidity. This information provides real-time atmospheric data, including winds aloft, to support localized weather forecasting for tactical, weather-dependent missions such as embarked air cavalry operations, aerial delivery and artillery support.

How It Works

Measurements are made through the air column, to altitudes greater than 40,000 ft, on a six cubic foot weather balloon (approx 32" in diameter). TASK Radiosonde atmospheric data is relayed by the TASK UHF Transceiver to a standard laptop/computer via USB where it can be used to calculate High Altitude-Low Opening/High Altitude-High Opening (HALO/ HAHO) mission release points or Container Delivery System (CDS) drops during precision air delivery operations.

With TASK, forward deployed units can report real-time atmospheric conditions either by voice or net-centric data transmission. The data can also be imported into standard weather forecasting software to produce tactical weather reports for mission planning and modeling.

Key Features and Benefits

Multi-mission capabilities

Lightweight—weighs less than 2 kg

Data transfer by voice or network

Data can be imported into forecasting software to produce tactical weather reports

Housed in a lightweight, transportable kit

Fully PADS/JPADS compatible

Situational awareness for mission planning

Reports real-time atmospheric conditions to support:

- Embarked air cavalry operation
 - Aerial delivery
 - Artillery missions
-

TASK Specifications

Kit Dimensions	<p>16"/40 cm x 20"/50.8 cm x 6.5"/16.5 cm (W x L x D)</p> <p>The TASK system consists of a lightweight TASK Ultra High Frequency (UHF) Radiosonde; a small, lightweight composite tank (capable of holding enough pressurized helium to support one to two radiosonde deployments depending on balloon size); an inflatable 30 gram weather balloon; and a small, wearable TASK UHF Transceiver.</p>
Sensor Accuracies and Ranges	<p>Wind Speed: 0-165m/s range; ± 0.5 m/s error</p> <p>Wind Direction: ± 1°</p> <p>Pressure: ± 1.8 hPa; 4.0-1,100 hPa</p> <p>Air Temperature: ± 0.3; -80 to + 60 (°C)</p> <p>Relative Humidity: ± 2.5%; 0-100%</p>
Operational Performance Capabilities	<p>Band: 400-406 MHz (UHF)</p> <p>Vertical Resolution: <1 m/3 ft</p> <p>Dimensions: 4.8"/12.3 cm x 14.9"/37.9 cm x 13.6"/34.7 cm (W x L x D)</p> <p>Weight (balloon and radiosonde): 38.3 g or 88 g</p>
Radiosonde Transmitter	<p>Band: 400-406 MHz (UHF)</p> <p>RF Power: 50 – 500 mW</p> <p>Line of Sight: >1 km/3,280 ft</p>
USB Transceiver	<p>Dimensions: 3.7"/9.5 cm x 1.6"/4.3 cm x .74"/1.9 cm (W x L x D)</p> <p>Antenna Length: 3.5"/9 cm</p> <p>USB Cable Length: 36"/92 cm</p> <p>Weight: .24 lb/112 g</p> <p>Interface: USB</p> <p>Band: 400-406 MHz (UHF)</p> <p>Sensitivity: 102 dBm nominal</p> <p>Output Power: 23 dBm nominal</p> <p>Power: USB 5Vdc @500 mA</p> <p>Line of Sight: >1 km/3,280 ft</p>
High-Pressure Helium Bottle	<p>Weight: 3.7 lbs/1.7 kg (empty)</p> <p>Volume: 1.15 L @ 4500 psi</p> <p>Balloon Fill Capacity: 352 L (15 cu ft) at sea level</p> <p>Dimensions: 13"/34.3 cm x 4.3"/11 cm diameter</p> <p>Filling-tube Length: 32.4"/82.5 cm (coiled)</p>



Collaborating with QinetiQ

At QinetiQ we bring organizations and people together to provide innovative solutions to real world problems, creating customer advantage. Working with our partners and customers, we collaborate widely, working in partnership, listening hard and thinking through what customers need. Building trusted partnerships, we are helping customers anticipate and shape future requirements, adding value and future advantage.

www.QinetiQ.com

© QinetiQ 2021 | TASK 21v3

PADS is a registered trademark of QinetiQ.

For further information please contact:

350 Second Avenue
Waltham, MA USA
+1 781 684 4000
MetSense@US.QinetiQ.com