



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
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TASK Specifications

Kit Dimensions	16"/40 cm x 20"/50.8 cm x 6.5"/16.5 cm (W x L x D) 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.
Sensor Accuracies and Ranges	Wind Speed: 0-165m/s range; ± 0.5 m/s error Wind Direction: $\pm 1^\circ$ Pressure: ± 1.8 hPa; 4.0-1,100 hPa Air Temperature: ± 0.3 ; -80 to + 60 ($^\circ\text{C}$) Relative Humidity: $\pm 2.5\%$; 0-100%
Operational Performance Capabilities	Band: 400-406 MHz (UHF) Vertical Resolution: <1 m/3 ft Dimensions: 4.8"/12.3 cm x 14.9"/37.9 cm x 13.6"/34.7 cm (W x L x D) Weight (balloon and radiosonde): 38.3 g or 88 g
Radiosonde Transmitter	Band: 400-406 MHz (UHF) RF Power: 50 – 500 mW Line of Sight: >1 km/3,280 ft
USB Transceiver	Dimensions: 3.7"/9.5 cm x 1.6"/4.3 cm x .74"/1.9 cm (W x L x D) Antenna Length: 3.5"/9 cm USB Cable Length: 36"/92 cm Weight: .24 lb/112 g Interface: USB Band: 400-406 MHz (UHF) Sensitivity: 102 dBm nominal Output Power: 23 dBm nominal Power: USB 5Vdc @500 mA Line of Sight: >1 km/3,280 ft
High-Pressure Helium Bottle	Weight: 3.7 lbs/1.7 kg (empty) Volume: 1.15 L @ 4500 psi Balloon Fill Capacity: 352 L (15 cu ft) at sea level Dimensions: 13"/34.3 cm x 4.3"/11 cm diameter Filling-tube Length: 32.4"/82.5 cm (coiled)



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For further information please contact:

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