



# 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

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Multi-mission capabilities

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Lightweight—weighs less than 2 kg

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Data transfer by voice or network

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

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Housed in a lightweight, transportable kit

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Fully PADS/JPADS compatible

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Situational awareness for mission planning

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Reports real-time atmospheric conditions to support:

- Embarked air cavalry operation
  - Aerial delivery
  - Artillery missions
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## TASK Specifications

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



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