**Meteorological Sensor Suite**

### MAXMS Specifications
- **Accuracies and Ranges**
  - Wind Speed: ± 0.5 m/sec
  - Wind Direction: ± 1°
  - Atmospheric Pressure: ± 2 mbar, 10 to 1,100 mbar
  - Air Temperature: ± 2°C, -40°C to +60°C
  - Relative Humidity: ± 2.5%, 0 to 100%

### Transmitter
- Band: 400-406 MHz (UHF)
- Output Power: 50 to 500 mW
- Fully PADS®/JPADS Compatible
- MIL-STD 461 RE102 Compliant

### Physical
- Weight: 109 g (3.5 oz.)
- Dimensions: 3.5 cm diameter x 17.3 cm (1.37 in x 6.83 in)
- Shock Tolerance: 800 Gs

### Operational
- Sample Rate: 4 Hz
- Vertical Resolution: 2.5 m

### Riverine Drifter Specifications
- **Size:** 6 in diameter
- **Weight:** < 4 lb
- **Depth Range:** 0.5 to 17 m
- **Depth Accuracy:** ± 0.1 m
- **Temperature Accuracy:** ± 0.5°C
- **Communications:** Inland Modern (standard) RF (i.e., Bluetooth/WiFi) (optional)
- **Diagnostics:** built-in at turn-on
- **Operational Life:** > 24 hours
- **User Replaceable Batteries**

### TASK Specifications
- **Kit Dimensions:** 16 in w x 20 in l x 6.5 in d
- **Sensor Accuracies and Ranges**
  - Wind Speed: ± 0.5 m/s
  - Wind Direction: ± 1°
  - Pressure: ± 2 mbar, 10 to 1,100 mbar
  - Air Temperature: ± 2°C, -40°C to +60°C
  - Relative Humidity: ± 2.5%, 0 to 100%
  - Operational Performance Capabilities
    - Band: 400-406 MHz (UHF)
    - Vertical Resolution: < 1 m
  - Weight (balloon and radiosonde): 38.3 g
- **Radiosonde Transmitter**
  - RF Power: 30 - 500 mW
  - Line of Sight: > 70 nautical mi
- **Fully PADS®/JPADS Compatible**

### USB Transceiver
- **Dimensions:** 9.5 x 4.3 x 1.9 cm
- **Weight:** 112 g
- **Sensitivity:** 102 dBm nominal
- **Output Power:** 23 dBm nominal
- **Line of Sight:** > 35 nautical mi
- **Fully PADS®/JPADS Compatible**

### PADL® 4-Channel 3.0 Specifications
- **Operating Frequency:** 400.5 to 405.5 MHz
- **Output Power:** > 25 dBm (200 mW) (Minimum > 25 dBm 120 mW) (Normal)
- **Battery Life:** > 120 minutes
- **Wind Speed:** ± 1 m/s
- **Wind Direction:** ± 1°
- **Max Range:** 100,000 ft (see below)
- **Communication Band:** CATS-Ethernet Cable
- **GPS/Receiving System:** OPERATING FREQUENCY: G/G-15 Band 6.2
- **Operating Temperature:** -40°C to 40°C
- **Vertical Resolution:** < 1 m
- **User Replaceable Batteries**

### PADL® Dropsonde UHF Receiver (Block 4.0) LRU
- **Operating Frequency:** 400.10 to 401.50 MHz
- **Frequency Steps:** 50 MHz steps
- **Sensitivity:** ± 0.5 dBm
- **Modulation:** FM FSK
- **Output:** Formatted TCP/IP Ethernet
- **Length:** 22.0 in (55.88 cm)
- **Width:** 10.5 in (26.67 cm)
- **Height:** 6.5 in (16.51 cm)
- **Input Power:** 24 to 32 VDC
- **Power Consumption:** 1.03 Amps during operation
- **Visual Signaling:** PADS® Compatible Leds

### Riverine Drifter Specifications
- **Size:** 6 in diameter
- **Weight:** < 4 lb
- **Depth Range:** 0.5 to 17 m
- **Depth Accuracy:** ± 0.1 m
- **Temperature Accuracy:** ± 0.5°C
- **Communications:** Inland Modern (standard) RF (i.e., Bluetooth/WiFi) (optional)
- **Diagnostics:** built-in at turn-on
- **Operational Life:** > 24 hours
- **User Replaceable Batteries**

### TASK Specifications
- **Kit Dimensions:** 16 in w x 20 in l x 6.5 in d
- **Sensor Accuracies and Ranges**
  - Wind Speed: ± 0.5 m/s
  - Wind Direction: ± 1°
  - Pressure: ± 2 mbar, 10 to 1,100 mbar
  - Air Temperature: ± 2°C, -40°C to +60°C
  - Relative Humidity: ± 2.5%, 0 to 100%

### Operational Performance Capabilities
- **Band:** 400-406 MHz (UHF)
- **Vertical Resolution:** < 1 m
- **Weight (balloon and radiosonde):** 38.3 g
- **Radiosonde Transmitter**
  - RF Power: 30 - 500 mW
  - Line of Sight: > 70 nautical mi
- **Fully PADS®/JPADS Compatible**

### USB Transceiver
- **Dimensions:** 9.5 x 4.3 x 1.9 cm
- **Weight:** 112 g
- **Sensitivity:** 102 dBm nominal
- **Output Power:** 23 dBm nominal
- **Line of Sight:** > 35 nautical mi
- **Fully PADS®/JPADS Compatible**

### PADL® A-Sonde 3.0 Specifications
- **Operating Frequency:** 400.5 to 405.5 MHz
- **Output Power:** > 25 dBm (200 mW) (Minimum > 25 dBm 120 mW) (Normal)
- **Battery Life:** > 120 minutes
- **Wind Speed:** ± 1 m/s
- **Wind Direction:** ± 1°
- **Max Range:** 100,000 ft (see below)
- **Communication Band:** CATS-Ethernet Cable
- **GPS/Receiving System:** OPERATING FREQUENCY: G/G-15 Band 6.2
- **Operating Temperature:** -40°C to 40°C
- **Vertical Resolution:** < 1 m
- **User Replaceable Batteries**

### PADL® Dropsonde UHF Receiver (Block 4.0) LRU
- **Operating Frequency:** 400.10 to 401.50 MHz
- **Frequency Steps:** 50 MHz steps
- **Sensitivity:** ± 0.5 dBm
- **Modulation:** FM FSK
- **Output:** Formatted TCP/IP Ethernet
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### Riverine Drifter Specifications
- **Size:** 6 in diameter
- **Weight:** < 4 lb
- **Depth Range:** 0.5 to 17 m
- **Depth Accuracy:** ± 0.1 m
- **Temperature Accuracy:** ± 0.5°C
- **Communications:** Inland Modern (standard) RF (i.e., Bluetooth/WiFi) (optional)
- **Diagnostics:** built-in at turn-on
- **Operational Life:** > 24 hours
- **User Replaceable Batteries**
QinetiQ North America’s suite of meteorological sensors delivers accurate, actionable information to end users in all environments. Low cost and expendable, these sensors provide precise, real-time readings to support decisions and missions based on current conditions. Designed for diverse and challenging environments, QinetiQ’s cutting edge meteorological sensors are developed by experts who understand your challenges.

### TASK™ Tactical Atmospheric Sounding Kit
- Real-time, in-situ atmospheric and winds aloft data
- Fully PADS®/JPADS compatible for precision air delivery operations
- Calculate HALO/HAHO release points
- Sounding to altitudes >45K ft MSL
- Kit weighs less than five pounds and can be deployed in three minutes

The TASK™ Tactical Atmospheric Sounding Kit enables forward deployed personnel to observe and report real-time atmospheric data, including winds aloft, in support of localized weather forecasting or tactical weather-dependent missions such as embarked air cavalry operations, aerial delivery or artillery support.

### MAXW2™ Micro Air-Launched eXpendable Wind/Wave Buoy
- Supports short-term, tactical deployments in near-shore or deep-water environments
- Provides real-time winds aloft data for calculation of aerial release points
- Continuous measurement of real-time surface currents, significant wave height, dominant and average wave periods and sea surface temperature
- Fully PADS®/JPADS compatible for precision air delivery operations

MAXW2 provides critical, real-time meteorological data in support of tactical missions requiring air delivery of equipment or operators to the ocean’s surface. The MAXW2 continuously measures wind speed and wind direction while descending through the air column. Upon reaching the ocean surface, MAXW2 transitions into a mini wave buoy measuring real-time surface currents, significant wave height, dominant and average wave periods and sea surface temperature.

### Riverine Drifter™
- Free-floating, expendable, launch and leave capability
- Continuous, real-time measurement of riverine and littoral depths, currents and temperatures for >24-hours
- Iridium communication allows deployment in tactical or difficult environments
- Reusable for science and research applications

Riverine Drifter is a low cost, free-floating, deploy and forget, real-time, situational awareness buoy that collects and broadcasts river depth, surface temperature and surface current as a function of GPS location as it travels down the river. Riverine Drifter provides real-time situational awareness of unknown river conditions to increase the precision of mission planning and execution for tactical operations.

### MAXMS™ Micro Air-Launched eXpendable Meteorological Sonde
- Continuous, real-time pressure, temperature, humidity and winds aloft data
- Hand launch, UAV launch or deploy from a standard military Counter Measure Dispenser System
- Fully PADS®/JPADS compatible for precision air delivery operations
- Operational to 25,000 ft MSL
- Withstands 800G explosive launch

MAXMS dropsonde continuously measures wind speed, wind direction, pressure, temperature and humidity while descending through the air column. The data collected is transmitted via UHF to either a towing UAV or a PADS equipped airdrop platform.

### PADS® Self-Contained Kit
- Complete PADS System housed in rugged container
- Optimized for non-standard or rotary wing aircraft
- Internal power system based BA-5590/U
- Provides real-time wind information for personnel or cargo air drops
- Provides GPS signal inside aircraft to support situational awareness prior to exit

The PADS Precision Air Drop System Self-Contained Kit provides operators the ability to calculate a wind profile used to generate a precise air drop release point for military parachute personnel or cargo air-dropped from a variety of DoD, foreign, military and non-military aircraft (fixed and rotary wing). The system can also be used with guided or ballistic air drop loads.

### PADS® A-Sonde 3.0
- User-replaceable batteries
- 11 programmable frequencies add flexibility to operations
- Single indicator for power and GPS lock
- Operational in excess of 25,000 ft MSL
- Parachute color options allow for training or combat operations
- Run-time feature allows operator to determine remaining operational life

The PADS Precision Air Drop System A-Sonde enables aircrews to obtain in-situ weather information for mission execution. The use of data provided by the QinetiQ North America Dropsonde, in conjunction with the PADS UHIF Dropsonde Receiver Sub-system (UHF-DRS) has resulted in a 70% improvement for impact point accuracy for high-altitude ballistic air drop systems. For guided air drop systems, the real-time data provided by the PADS Dropsonde allows mission planners to increase standoff distance and deliver cargo and personnel from higher altitudes, with greater precision and safety, than conventional methods.

### PADS® Dropsonde UHF Receiver (Block 4.0) LRU
- Provides real-time wind information for airdrop operations
- Easy to install: Roll on/Roll off with no permanent modifications required
- Certified for use on C-130 variants and C-17
- Operates using aircraft power and UHF antenna
- Passed testing of a variety of MIL-STD requirements

The PADS Precision AirDrop System UHF Dropsonde Receive Subsystem (UHF-DRS) contains a Dropsonde UHF Receiver, a UHF Test Tool, associated cabling, electrical wiring and call the necessary components required to install the system on an aircraft. All components are contained in a watertight transportation and storage case. The UHF-DRS allows aircrews to receive PADS Dropsonde data through an aircraft UHF antenna and it feeds the data to the JPADS Mission Planning System (MPS).

### PADS® WiPPR Wind Profiling Portable RADAR
- Simple to operate
- Works in “clear air” and inclement weather conditions
- Low power
- Wind information can be sent to air drop aircraft outfitted with PADS equipment
- Wind data can be used for updating weather forecasts, modeling, air drop operations or any application where real-time wind information is critical

The WiPPR Wind Profiling Portable RADAR provides in-situ weather data during clear and inclement conditions for mission execution and data gathering support, delivering real-time wind information for a wide variety of applications. WiPPR provides vertical wind measurement resolution superior to existing technologies, increasing forecast model accuracy and decreasing miss distances for air operations.