



# Space and Naval Warfare Systems Center Atlantic

## Joint Threat Warning System Technical Challenges

**Presented to:**

Charleston Defense Contractors Association  
C5ISR Conference

**Michael Niermann**

# Airborne System

- **Direction Finding Subsystem**
  - ❖ 20M-3GHz Direction Finding Subsystem for C-130 & NonStd aircraft
  - ❖ No or Minimal calibration
  
- **Communication System**
  - ❖ BLOS communication system for NonStd aircraft
  - ❖ Carry-on/off
  - ❖ 115 VAC
  - ❖ 16"X16"X7-1/2" case + antenna/mount



# Airborne System

## ➤ Components

- ❖ **UPS**
  - ❖ **EMI/EMC certified 200 W**
  - ❖ **5"X5"X1"**
  - ❖ **<1 lb.**
- ❖ **Cool Running Processor**
  - ❖ **Better than Dual Core 2.6GHz**
  - ❖ **25W TDP**
- ❖ **4 CH Software Defined Rcvr**
  - ❖ **2M–8GHz**
  - ❖ **+24 DDR**
  - ❖ **Ethernet output +1GHz**



# Maritime System

- **Antennas:**
  - ❖ Low profile/RCS, concealable
  - ❖ 20M-3GHz OMNI w/ no preamp
  - ❖ Direction Finding for grey hull and NonStd vessels w/ no calibration rqm; concealed
  
- **SWAP Objectives**
  - ❖ EMI/EMC certified 200 W UPS; 5"X5"X1"; <1#
  - ❖ Cool running Processor; better than Quad Core 2.6GHz, 25W TDP
  - ❖ 4 CH Software Defined Transcvr; < 30W; 2M–8 GHz; +24 DDR; Ethernet output +1GHz per channel
  - ❖ Smaller battery w/ longer life



# Maritime System

- **Cross domain NSA approved device (Unclass/S/TS)**
- **Sunlight-readable Tablet/Android**
- **Accredited Wireless for Command & Control**
- **Antenna mount for fiberglass and metal vessels that supports multiple antenna types**
- **Auto-acquiring SATCOM accredited by NSA that can handle maritime environment**

