

FMS Receiving System Antenna Requirements

Req's: 1103203A-1103204A

NSWCDD Telemetry group has a need to procure seven Dual Circular Polarized telemetry antennas to support shipboard reception of in-flight Missile Telemetry Data. Each unit shall be a singular antenna and pre-amplifier unit. The unit shall be powered via DC. The specific requirements for each antenna are listed below, as well as source selection criteria ranked by importance to the Government.

Antenna Specifications

- Frequency Range: 2.1 to 2.4 Ghz
- 3dB Antenna Beam width: 25 ° horizontal and vertical
- Polarization: RHCP and LHCP
- Gain: 16dBi

Electronics/Pre Amplifier

- Bandpass filter: 2.0-2.5 Ghz filter applied to each polarization
- Gain: Minimum 25 dB
- Shall provide amplified outputs for both LHCP and RHCP
 - o N-Type Female connectors
- Power:
 - o Shall be powered via DC over one of the RF output connectors
 - o Shall draw less than 500mA
 - o Each Antenna shall be delivered with a separate AC to DC convertor.
 - AC power will be either 110-120V 60hz or 220-230V 50Hz
 - Option for each antenna to be specified upon order
 - o Shall provide an indicator (light) on the Antenna that it is powered

Packaging Requirements

- Antenna system shall be weatherproof/sealed and suitable for use on the deck of a ship
- Antenna system shall provide capability to be tripod mountable
 - o 1/4" or 3/8" tripod socket
- Antenna system shall weigh 10lbs or less
- Antenna system shall be less than 30" long by 8" by 8" in wide
- Each antenna system shall be delivered with its own Shipping/Carrying case
 - o Case shall be foam lined with antenna specific area cut out
 - o Case shall be suitable for shipping, and protect the antenna and electronics during routine shipping

Selection Criteria in order of Importance to the Gov't:

- Meets all requirements
- Overall antenna system performance
 - o Antenna specs
 - o LNA specs
- History of shipboard missile TM reception performance
- Size and weight
 - o Smaller and lighter solutions will be preferred.
- Cost