

The following items are required for the proposed Smart Marine Technology Centre of Excellence at NTCPWC, IIT Madras.

ITEM : Supply of RADAR (2 Nos)

1. The Scope of the supply

Supply of the Radars (Total Quantity = 2 Nos.) for the proposed Smart Marine Technology Centre of Excellence at NTCPWC, IIT Madras.

2. Bidder Eligibility Criteria:

- The Bidder's firm should be registered in India. (Necessary document proof should be submitted) – (to submit GST certificate / certificate of incorporation)
- Bidder should have supplied minimum of 5 similar equipment in Govt. Institutions / IITs / NITs / IISC in India for the last 5 years – (to submit End user certificate / purchase order reference / proof of supply (Invoice) to be provided by the bidder for the technical bid qualification.)
- Availability of service personnel in India (To provide Regional office Address with contact details)

The above eligibility criteria is Mandatory to be met by the bidder

3 (a) Technical Specification of RADAR - I WITH AIS for quantity (1 No.) is given in below table and technical bid and compliance sheet should be submitted in the below given format.

Sl. No.	Description	Specification	Parameter	compliance Yes/No
1	Antenna :	a. Type	Slotted waveguide array	
		b. Polarization	Horizontal	
		c. Wind Load	100 kN	
2	Transceiver :	X-band (Solid state) / -band (Solid state)	9 to 12GHz / 2 to 4 GHz	
		Output Power	<1000 W	
3	Processor Unit:	Minimum Range	22m	
		Range discrimination	26 m	
		Range accuracy	<2%	
4	Accessories	a. Power Supply (1 ϕ , 220V (\pm 10%),50Hz) unit for 1. Antenna & Transceiver unit 2. Display unit		
		b. Gear box for driving antenna c. Power supply cables LAN cables d. Hub/Switches e. Software drivers f. Fasteners and fittings g. And all other required accessories		

5	Temperature	a. Antenna unit	Operational	Upto 50°C	
			storage	upto +70°C	
		b. Indoor unit	Operational	Upto 50°C	
6	Relative humidity	95%			
7	Automatic Identification System (AIS)	a.Display capacity			< 300 targets
		b.Tracking			5/10 pts on activated targets
		c.Vector time			Off, 30 s, 1-60 min

3 (b) Technical Specification of RADAR -II for quantity (1 No.) is given in below table and technical bid and compliance sheet should be submitted in the below given format

Sl. No.	Parameter	Specification	Compliance Yes/No
1	Type	X-band solid-state transmitter with pulse compression technology	
2	Rotation speed	20 to 30 RPM	
3	Wind load	100 kN	
4	Dimension Dia/Height	<500 mm / <200 mm	
5	Antenna	Beam Width(Nominal)	Horizontal: < 4° Vertical:<15°
		Maximum wind speed	100kt
		Polarization	Horizontal
		Rotation speed	24rpm nominal
6	Transmitter	1.Frequency X band RADAR	8-12GHz
		2.Peak Power o/p	20W
		3.Duplexer	Circulator
		4.Pulse Width(3 dB)	20-40nS
		5.Chirp lengths	400 ns
		6.Pulse repetition frequency	2083 Hz
		7.Chirp bandwidth	Up to 32MHz

7	Operating modes	1.Standby mode	<10 W	
		2.Sleep mode	<5 W	
8	Doppler Target Tracking		Tracking of 10 simultaneous MARPA and / ARPA targets (with Doppler-assisted ARPA)	
9	Target Filtering		True Motion mode identifies only those objects that are moving relative to the vessel.	
10		1.Operating temp	Up to 50°C or better	
		2.Storage temperature range	Up to 60°C or better	
		3.Humidity:	Upto 95% at 35°C	
		4.Supply voltage:	Either 12V/24 V DC	
		5.Transmit mode (maximum)	Transmit mode (maximum): <20 W	
		6.Type of Display unit	9 inch Multi-function Display	
		7.SDK Toolkit	Software Development Toolkit compatible with Microsoft Windows.	
		8.Waterproofing: IPX6	IPX6	

4. Warranty:

One-year warranty

5. General

Price should be inclusive of cost, freight insurance, installation, commissioning and warranty for 1 Year.

6. Specification test on delivery of item:

Specification test will be carried out on all supplied items by IITM before acceptance of the item

7. Payment Terms

100% will be paid after supply, Installation, Commissioning, specification test and acceptance of End user.

8. Dispatch and Delivery Address

All items should be properly packed in the suitable box and it should be dispatched to NTCPCW, IIT Madras, Chennai - 600036.

9. Delivery Time

Items should be supplied within 6-7 weeks from the date of receipt of purchase order.

10. Validity

The offer should be valid for 90 days.

- 11.** Bidders should quote compulsorily for both the items, otherwise bidder will be technically disqualified. Order will be issued to the lowest qualified bidder (s) Item wise for Sl.No. 3(a) and Sl. No. 3(b)