

Part - VII  
Blank Price Bid

Tender Inviting Authority: DIRECTOR, LRDE, DRDO

Name of Work: "Development, Supply, Site Assembly, Integration and Installation of High-Resolution Radar Hardware" Qty 1 Lot

Contract No: Tender Enquiry No. LRDE/MMFD-PUR/26-27/27DCT007

COST BREAK UP									
SI No	Item Name	Item Code	Qty	A/U	Unit Price (Rs.)	Total Basic Price (Rs.)	GST(%)	GST amount (Rs.)	Total Price (Rs.)
1	Active Antenna Array Unit (AAAU)	Item 1	1	Set					
1.1	Antenna Emitter/Radiating Element	Item 1	2280	Nos.		0.00		0.00	0.00
1.2	Octal Digital T/R Module (ODTRM)	Item 1	279	Nos.		0.00		0.00	0.00
1.3	Space Control & Processing Unit (SCPU)	Item 1	12	Nos.		0.00		0.00	0.00
1.4	Space Time Control & Processing Unit (STCPU)	Item 1	3	Nos.		0.00		0.00	0.00
1.5	Power Distribution Box (PDB)	Item 1	12	Nos.		0.00		0.00	0.00
1.6	Test Tools, Test Jigs, Test Fixtures, Test Cables, Test GUI	Item 1	1	Set		0.00		0.00	0.00
	Sub-Total	Item 1				0.00		0.00	0.00
2	System Interconnection Cables (Optical, Power Control)	Item 2	1	Set					
2.1	Cable Routing and Harnessing	Item 2	1	Job		0.00		0.00	0.00
2.2	SCPU to ODTRM	Item 2	285	Nos.		0.00		0.00	0.00
2.3	SCPU to Final DBF	Item 2	12	Nos.		0.00		0.00	0.00
2.4	Final DBF to SP	Item 2	12	Nos.		0.00		0.00	0.00
2.5	RSU to Final DBF	Item 2	8	Nos.		0.00		0.00	0.00
2.6	RSU to SP	Item 2	8	Nos.		0.00		0.00	0.00

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2.7	RSU to AAAU	Item 2	6	Nos.			0.00		0.00	0.00
2.8	RSU to CCP	Item 2	4	Nos.			0.00		0.00	0.00
2.9	SP to CCP	Item 2	3	Nos.			0.00		0.00	0.00
2.10	AAAU to CAL/RTS Tower	Item 2	3	Nos.			0.00		0.00	0.00
2.11	CCP to Cooling System, Power System, THCS, etc	Item 2	8	Nos.			0.00		0.00	0.00
2.12	Radar system/subsystem earth/grounding cables	Item 2	1	Set			0.00		0.00	0.00
2.13	Power Distribution Box to Array Electronics	Item 2	1	Set			0.00		0.00	0.00
	<b>Sub-Total</b>	<b>Item 2</b>					0.00		0.00	0.00
3	<b>Automated Test Equipment (ATE)</b>	<b>Item 3</b>	<b>1</b>	<b>Set</b>						
3.1	Integrated ATE for ODIRM, SCPU, STCPU, PDU etc.	Item 3	1	Set			0.00		0.00	0.00
3.2	Integrated cooling unit for the ATE with Interconnection	Item 3	1	Set			0.00		0.00	0.00
3.3	Test Tools, Test Jigs, Test Fixtures, Test Cables, Test GUI	Item 3	1	Set			0.00		0.00	0.00
	<b>Sub-Total</b>	<b>Item 3</b>					0.00		0.00	0.00
4	<b>AAAU LRU Software &amp; Firmware</b>	<b>Item 4</b>	<b>1</b>	<b>Set</b>						
4.1	ODIRM Software & Firmware	Item 4	1	Set			0.00		0.00	0.00
4.2	SCPU Software & Firmware	Item 4	1	Set			0.00		0.00	0.00
4.3	STCPU Software & Firmware	Item 4	1	Set			0.00		0.00	0.00

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4.4	Power Distribution Box	Item 4	1	Set		0.00	0.00	0.00
4.5	AAU BIT/ Technical Operator System Software	Item 4	1	Set		0.00	0.00	0.00
4.6	Software & Firmware IV&V compliance & certification	Item 4	1	Set		0.00	0.00	0.00
	<b>Sub-Total</b>	<b>Item 4</b>				<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>5</b>	<b>CAL/RTS System</b>	<b>Item 5</b>						
5.1	CAL/RTS System Electronic Equipments	Item 5	1	Set		0.00	0.00	0.00
5.2	CAL/RTS Antenna Sets	Item 5	1	Set		0.00	0.00	0.00
5.3	CAL/RTS System Software & Firmware	Item 5	1	Set		0.00	0.00	0.00
5.4	Electro-Mechanical Telescopic Mast	Item 5	1	Set		0.00	0.00	0.00
5.5	Interconnection cable set & Grounding Pit	Item 5	1	Set		0.00	0.00	0.00
5.6	All weather microwave absorbers	Item 5	1	Set		0.00	0.00	0.00
5.7	Multipath diffraction posts	Item 5	1	Set		0.00	0.00	0.00
5.8	System Installation, Training, Acceptance and commissioning	Item 5	1	Job		0.00	0.00	0.00
5.9	Test Tools, Test Jigs, Test Fixtures, Test Cables, Test GUI	Item 5	1	Set		0.00	0.00	0.00
	<b>Sub-Total</b>	<b>Item 5</b>				<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

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6	Command and Control Post (CCP)	Item 6	1	Set					
6.1	Radar Processing Hardware	Item 6	1	Set		0.00		0.00	0.00
6.1.1	HPE DL 580 Gen10 equivalent or above	Item 6	3	Nos.		0.00		0.00	0.00
6.1.2	HPE DL 360 Gen10 equivalent or above	Item 6	5	Nos.		0.00		0.00	0.00
6.1.3	Blade Server	Item 6	4	Nos.		0.00		0.00	0.00
6.1.4	10 G 16 Port Switch (CISCO, all ports with optical transceivers (single mode))	Item 6	2	Nos.		0.00		0.00	0.00
6.1.5	1G 24 Port Switch (CISCO, all ports with optical transceivers (single mode))	Item 6	2	Nos.		0.00		0.00	0.00
6.1.6	VGA LCD KVM switch	Item 6	2	Nos.		0.00		0.00	0.00
6.1.7	IP based KVM Switch	Item 6	2	Nos.		0.00		0.00	0.00
6.1.8	Smart Rack with cooling mechanism & UPS	Item 6	2	Nos.		0.00		0.00	0.00
6.1.9	24inch Ultra HD IPS 4K Freesync Monitor	Item 6	10	Nos.		0.00		0.00	0.00
6.1.10	Display Unit (55" LED TV)	Item 6	4	Nos.		0.00		0.00	0.00
6.1.11	Networking & Cabling for interconnection of all servers, OWS and visualization stations.	Item 6	2	Sets		0.00		0.00	0.00
6.1.12	System Integration For Networking And Computing Devices	Item 6	1	Job		0.00		0.00	0.00
6.1.13	Canon Image Runner advance DX C3730	Item 6	2	Nos.		0.00		0.00	0.00
6.1.14	Dell Mobile Work station with 32 GB RAM or Equivalent	Item 6	3	Nos.		0.00		0.00	0.00

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6.1.15	HP Z8 G4 work station with 192 GB RAM or Equivalent	Item 6	2	Nos.			0.00		0.00	0.00
6.1.16	APC or equivalent UPS for PCs	Item 6	15	Nos.			0.00		0.00	0.00
6.2	Sync & Timing Equipment	Item 6	2	Nos.			0.00		0.00	0.00
6.3	Test Tools, Test Jigs, Test Fixtures, Test Cables, Test GUI	Item 6	1	Set			0.00		0.00	0.00
	<b>Sub-Total</b>	<b>Item 6</b>					0.00		0.00	0.00
<b>7</b>	<b>COTS &amp; Test Instruments</b>	<b>Item 7</b>	<b>1</b>	<b>Set</b>						
7.1	Optical Time Domain Reflectometer (OTDR)	Item 7	1	No.			0.00		0.00	0.00
7.2	Digital Storage Oscilloscope	Item 7	1	No.			0.00		0.00	0.00
7.3	Function Generator	Item 7	1	No.			0.00		0.00	0.00
7.4	Handheld Two port VNA 9 KHz to 44 GHz	Item 7	1	No.			0.00		0.00	0.00
7.5	Handheld Spectrum analyzers 9 KHz to 44 GHz	Item 7	1	No.			0.00		0.00	0.00
7.6	Optical Splicing Kit Tools	Item 7	1	No.			0.00		0.00	0.00
	<b>Sub-Total</b>	<b>Item 7</b>					0.00		0.00	0.00
<b>8</b>	<b>System Lab Setup</b>	<b>Item 8</b>	<b>1</b>	<b>Set</b>						
8.1	System Lab Setup Workbench	Item 8	1	Set			0.00		0.00	0.00
8.1.1	Soldering And Desoldering Station With Digital Display	Item 8	1	No.			0.00		0.00	0.00
8.1.2	Modular Work Stations	Item 8	2	Nos.			0.00		0.00	0.00
8.1.3	Crimping Tools	Item 8	2	Nos.			0.00		0.00	0.00

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8.1.4	Desktop Computers	Item 8	2	Nos.		0.00		0.00	0.00
8.1.5	Computer Workstation	Item 8	2	Nos.		0.00		0.00	0.00
8.2	Integrated Test Lab Setup *	Item 8	1	Set		0.00		0.00	0.00
8.2.1	Octal Digital TR Module (ODTRM)	Item 8	1	No.		0.00		0.00	0.00
8.2.2	Space Control and Processing Unit (SCPU)	Item 8	1	No.		0.00		0.00	0.00
8.2.3	Space Time Control & Processing Unit (STCPU)	Item 8	1	No.		0.00		0.00	0.00
8.2.4	Power Supply for ODTRM, SCPU, STCPU	Item 8	1	No.		0.00		0.00	0.00
8.2.5	Sync & Time Equipment	Item 8	1	No.		0.00		0.00	0.00
8.2.6	Radar Processing Hardware	Item 8	1	Set		0.00		0.00	0.00
8.2.7	Optical Splitters comprises	Item 8	1	Set		0.00		0.00	0.00
8.2.7.1	Optical cable assembly for interconnection	Item 8	1	Set		0.00		0.00	0.00
8.2.7.2	SFP Transceivers	Item 8	1	No.		0.00		0.00	0.00
8.2.8	Mounting Fixtures & Mechanical Enclosure	Item 8	1	Set		0.00		0.00	0.00

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8.2.9	Test Jigs, Test Tools, Interconnection & Assembly tools	Item 8	1	Set			0.00		0.00	0.00
8.2.10	Liquid Cooling for Lab Setup	Item 8	1	No.			0.00		0.00	0.00
8.2.11	Hardware Storage Rack	Item 8	1	No.			0.00		0.00	0.00
8.2.12	15kVA UPS	Item 8	1	No.			0.00		0.00	0.00
8.3	Software Tools/Development Platform	Item 8	1	Set			0.00		0.00	0.00
8.3.1	Xilinx vivado Enterprise Edition along with Model Composer – 3 license (Node lock)	Item 8	1	No.			0.00		0.00	0.00
8.3.2	Intel Software Tools	Item 8	1	No.			0.00		0.00	0.00
8.3.3	Xilinx Kintex UltraScale FPGA KCU1250 Characterization Kit	Item 8	1	No.			0.00		0.00	0.00
8.3.4	Xilinx Kintex UltraScale FPGA KCU105 Evaluation Kit	Item 8	1	No.			0.00		0.00	0.00
8.3.5	Zynq Ultrascale + MPSoC ZCU102 Evaluation Kit	Item 8	1	No.			0.00		0.00	0.00
8.3.6	Single Mode FHD MPO Cassette	Item 8	1	No.			0.00		0.00	0.00
8.3.7	10-port SFP+ (10G) FMC Module	Item 8	1	No.			0.00		0.00	0.00
8.3.8	Xilinx Software Tools with One Evaluation Board Programming cables (1 Set)	Item 8	1	No.			0.00		0.00	0.00
8.3.9	JTAG Programming kit	Item 8	2	Nos.			0.00		0.00	0.00
8.3.10	Smart synq programming cable	Item 8	2	Nos.			0.00		0.00	0.00

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8.3.11	USB based hardware license dongle (Xilinx Vivado Enterprise Edition along with Model Composer)	Item 8	2	Nos.		0.00		0.00	0.00
8.3.12	SO Microwave Imaging work bench	Item 8	1	Set		0.00		0.00	0.00
8.3.13	Millimeter RCS work bench	Item 8	1	Set		0.00		0.00	0.00
	<b>Sub-Total</b>	<b>Item 8</b>				0.00		0.00	0.00
<b>9</b>	<b>AAAU/Radar System Integration Activity</b>	<b>Item 9</b>	<b>1</b>	<b>Job</b>					
9.1	System Integration	Item 9	1	Job		0.00		0.00	0.00
9.2	AAAU/Radar System Integration 3D video Model	Item 9	1	Job		0.00		0.00	0.00
9.3	Functional AAAU Building Block for proof of concept (POC)	Item 9	1	Job		0.00		0.00	0.00
9.4	NFTR Fixture with 3-axis stabilization for Single BB	Item 9	1	No.		0.00		0.00	0.00
9.5	Collimation of AAAU BB & NFTR Fixture (3-axis stabilization)	Item 9	1	Job		0.00		0.00	0.00
9.6	Integration of AAAU & Pre- NFTR Activity	Item 9	1	Job		0.00		0.00	0.00
9.7	AAAU Interconnection Cables & Grounding Pit	Item 9	1	Job		0.00		0.00	0.00
9.8	NFTR Activity/Field Collimation	Item 9	1	Job		0.00		0.00	0.00
9.9	Radar Integration & RTS Demonstration	Item 9	1	Job		0.00		0.00	0.00
9.10	Site Activation and System Integration	Item 9	1	Job		0.00		0.00	0.00
9.11	Test Tools, Test Jigs, Test Fixtures, Test Cables, Test GUI	Item 9	1	Set		0.00		0.00	0.00
	<b>Sub-Total</b>	<b>Item 9</b>				0.00		0.00	0.00

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10	Radar Technical Complex	Item 10	1	Set						
10.1	Platform for Radar Subsystems (40mx40m)	Item 10	1	Set			0.00		0.00	0.00
	Sub-Total	Item 10					0.00		0.00	0.00
11	Antenna Post Mechanical Structure	Item 11	1	Set						
11.1	Antenna Post Y Pedestal for AAU	Item 11	1	No.			0.00		0.00	0.00
11.2	AAU Frame with coolant network	Item 11	1	No.			0.00		0.00	0.00
11.3	Building block assembly and ancillaries	Item 11	18	Nos.			0.00		0.00	0.00
11.4	NFTR Fixture	Item 11	1	No.			0.00		0.00	0.00
	Sub-Total	Item 11					0.00		0.00	0.00
12	Radome	Item 12	1	Set						
12.1	Spherical Radome	Item 12	1	No.			0.00		0.00	0.00
12.2	Radome Accessories	Item 12	1	No.			0.00		0.00	0.00
12.3	EM and structural analysis	Item 12	1	Job			0.00		0.00	0.00
12.4	Packaging & Transportation, Installation	Item 12	1	Job			0.00		0.00	0.00
	Sub-Total	Item 12					0.00		0.00	0.00

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<b>13</b>	<b>Liquid to Refrigerant Cooling System (LRCS)</b>	<b>Item 13</b>	<b>1</b>	<b>Set</b>						
13.1	Cooling System 2 x 110kW, HMI Panel, 20ft ISO Shelter	Item 13	2	Nos.		0.00		0.00		0.00
13.2	Cooling System Interconnection cables and Hydraulic Network	Item 13	1	Set		0.00		0.00		0.00
13.3	Integration, Testing and Functional Evaluation (Dummy Load)	Item 13	1	Job		0.00		0.00		0.00
	<b>Sub-Total</b>	<b>Item 13</b>				0.00		0.00		0.00
<b>14</b>	<b>Radar Power System (RPS)</b>	<b>Item 14</b>	<b>1</b>	<b>Set</b>						
14.1	2x250 KVA DGs with Load Bank and Ancillaries	Item 14	4	Nos.		0.00		0.00		0.00
14.2	30 kVA DG with Cables, Connectors and Ancillaries	Item 14	1	No.		0.00		0.00		0.00
14.3	Low Voltage Control Center (LVCC)	Item 14	1	No.		0.00		0.00		0.00
14.4	Central Power Distribution Center (CPDC)	Item 14	1	No.		0.00		0.00		0.00
14.5	24" Remote SCADA in Command Shelter	Item 14	1	No.		0.00		0.00		0.00
14.6	Power Cables with Connectors	Item 14	1	set		0.00		0.00		0.00
14.7	Control & Communication Cables with Connectors	Item 14	1	set		0.00		0.00		0.00
14.8	Maintenance Tools (as per detailed description of LOD)	Item 14	1	set		0.00		0.00		0.00
14.9	Tools & Test Equipment (as per detailed description of LOD)	Item 14	1	set		0.00		0.00		0.00
14.10	Cable Tray	Item 14	1	Set		0.00		0.00		0.00
14.11	Grounding Equipment	Item 14	1	No.		0.00		0.00		0.00
14.12	Lifting Device (spreader beam along with slings as per design ) with Ancillaries	Item 14	1	Set		0.00		0.00		0.00
	<b>Sub-Total</b>	<b>Item 14</b>				0.00		0.00		0.00

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15	Radar System Ancillaries	Item 15	1	Set					
15.1	Maintenance Shelter	Item 15	1	Set		0.00		0.00	0.00
15.2	Lightening Protection System	Item 15	1	Set		0.00		0.00	0.00
15.3	Fire Protection System	Item 15	1	Set		0.00		0.00	0.00
15.4	Air Ventilation System	Item 15	1	Set		0.00		0.00	0.00
15.5	Temperature and Humidity Control System (THCS)	Item 15	1	Set		0.00		0.00	0.00
	Sub-Total	Item 15				0.00		0.00	0.00
16	CAL/RTS Shelter	Item 16	1	Set		0.00		0.00	0.00
17	Command and Control Post Shelter	Item 17	1	Set		0.00		0.00	0.00
18	Radar Site Equipment	Item 18	1	Set					
18.1	Unmanned Aerial Vehicle & Payload Systems	Item 18	1	Set		0.00		0.00	0.00
18.2	Geological Compass	Item 18	1	Set		0.00		0.00	0.00
18.3	Digital Electronic Spirit Level (Digital Inclinator)	Item 18	2	Set		0.00		0.00	0.00
18.4	Compact Weather Station	Item 18	1	Set		0.00		0.00	0.00
18.5	Laser Range Finder	Item 18	1	Set		0.00		0.00	0.00
18.6	Telescopic Tripods - Surveying Accessories	Item 18	2	Set		0.00		0.00	0.00

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18.7	Telescopes	Item 18	1	Set			0.00		0.00	0.00
18.8	Cable Tray Systems And Cable Ladder Systems	Item 18	20	Set			0.00		0.00	0.00
18.9	Outdoor RF Antenna	Item 18	2	Set			0.00		0.00	0.00
18.10	Steel Porta Cabin	Item 18	2	Set			0.00		0.00	0.00
18.11	Rubber Equipment Trolley	Item 18	2	Set			0.00		0.00	0.00
18.12	Assembly Tool Kit	Item 18	2	Set			0.00		0.00	0.00
18.13	All weather microwave absorbers	Item 18	1	Set			0.00		0.00	0.00
	Sub-Total	Item 18					0.00		0.00	0.00
19	Technical Data Package (TDP) as in Appendix 'B' B.1 in LOD document	Item 19	1	Set			0.00		0.00	0.00
20	CDRL Documents as per CDRL List as in Appendix 'B' - B.2. in LOD document	Item 20	1	Set			0.00		0.00	0.00
	TOTAL COST						0.00		0.00	0.00
21	Additional 1 Year Warranty	Item 21	1	Job			0.00		0.00	0.00
22	AMC for 3 Years after completion of Warranty	Item 22	1	Job						
22.1	AMC for 1st Year	Item 22	1	Job			0.00		0.00	0.00
22.2	AMC for 2nd Year	Item 22	1	Job			0.00		0.00	0.00
22.3	AMC for 3rd Year	Item 22	1	Job			0.00		0.00	0.00
	Sub-Total	Item 22					0.00		0.00	0.00
	GRAND TOTAL (Inclg. Addl. Warranty & AMC)						0.00		0.00	0.00

Note 1 : Only Colored cells to be filled. Other cells not to be edited.

Note 2 : Price of Additional Warranty and AMC for 3 years will also be considered for deciding L1.

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