

TECHNICAL SPECIFICATIONS

S.NO.	Items	A/U
A	<p>Installation of Firing Range Automatic Scoring System (FRASS) for automation of firing scoring of 08 targets with following sub-system specifications, its customisation, integration with appropriate software, installation, testing, commissioning and training at the firing range.</p> <p>Firing Range Automatic Scoring System of 08 targets is a Trunkey Project, provide everything needed for installation and its deployment/use of it on firing range along with demo and training to the users at user end. Minor civil work, electrical work, networking work along with Power on Ethernet Network switch as needed for installation and proper working of system is an essential is a part of this trunked project. 230 V AC Supply, either MES power supply or Generator Set power supply, will be provided by the user to the vendor on firing range on Butt End and Firing End.</p>	01 system For 08 targets
	<p><u>Camera based sensor sub-system</u></p> <p>This subsystem contains high resolution, high end auto-motorised very focal imaging sensors (cameras) customised for integration with the software sub-system, developed by MCTE Mhow. It includes associated APIs provided by the OEM required for integration with the software. This sensors be encapsulated in the Iron cover for rough handling and ricochet protection.</p>	08 Nos
	<p><u>Power on Ethernet (PoE) networking subsystem for interconnectivity all subsystems of the systems.</u></p> <p>It shall supply power to all the subsystem.</p>	01 Nos
	<p><u>Wireless communication link sub-system</u></p> <p>This subsystem provide uninterrupted real time data connectivity for at least 300 MBPS for more than 500 metres distance at low power consumption. It provide adequate data rate for real time seamless connectivity of camera syb system with processing unit for real time display and updating of firing results</p> <p>In addition to <u>Wireless communication sub-system</u> the sys also shall be have provision/option for using it on <u>Optical Fibler Comn link sub-system</u>. The OFC and associating accessories for OFC link option at extra cost not exceeding Rs 25,000/- shall also be available without changing any sub-system of the system</p>	02 Nos
	<p><u>High end processing unit and database management unit.</u></p> <p>This sub-system have advanced processor like i7 or higher with at least 08 GB RAM, at least 04 GB Nvidia (Advanced)Graphics Card and real time operation system for huge data processing capabilities. It provide adequate cooling arrangement.</p>	01 Nos
	<p><u>Stands for mounting sensor sub-system .</u></p> <p>Customised fabricated item /civil work as per requirement of range for secure placement of sensor subsystem.</p> <p>(Fabricated /build on range with IRON BOX, sun shade, Oil painted Iron Stand or brick work column/ Iron Stand (camera fixture to be fixed with concrete cement).</p>	01 Job
	<p><u>Modified Tgt Stands of fixing Figure-11 and Figure-12 targets.</u></p> <p>Customised fabricated item as per requirement of range for easy and firm placement of FRASS Figure-11 Target and Figure-12.</p> <p>(Fabrication with strong Iron angle/ plates of 05mm thickness, frame 3' x 4', oil paint black welded pegs to fix it on ground and target holding, other accessories)</p>	08 Nos

	Power backup sub-system It provide independent re-chargeable power supply for day and night firing for one day (02 hours of power back up on range)	01 Nos
	Firer Display Unit (FDU). FDU must be programed for display of firing results to firer, firing offr and armorer. It includes at least 1GB RAM, Minimum 7" screen size, High sensitive WiFi connectivity, It have with adjustable stand for display of Firing Result to individual firer, Firing Offr and Armorer with integration with software to display of live firing results with bullet hits, firing score, Groping result and Zeroing result with display of Mean Point of Impact (MPI), error in x-direction, error in y-direction and respective proposed corrections for zeroing of weapon.	08 Nos
	Portable storage and carrying Cabinet/Box for FRASS stores. The potable box have cushioned compartment to place each component of FRASS safely. It have latch for locking and strong handles for carrying/transportation. It must be waterproof.	01 Nos
	Combination/Integration of standard system to provide 08 Target System.	
	Brick/Civil work for Modified camera stand & target stand (Civil Work Job)	01 Job
	FRASS Target sheets (Forex sheets with Figure-11 paper)	-
	Network Cabling Job with high quality CABLES AND HIGH QUALITY CONNECTORS.	
	Electrical Wiring Job (Electrical wire /Power cables, Board with switches and sockets, cable laying, casing/ capping etc.)	
	Integration of all the hardware components and its integration with software subsystem to deploy it as complete working system for automation of firing scoring system.	
	Installation, commissioning, testing and training of integrated system.	