

संख्या. पी-63013/36/2019/मोड-1/सीसुवल 330-32

भारत सरकार, गृह मंत्रालय  
महानिदेशालय सीमा सुरक्षा बल  
(सराद निदेशालय: आधुनिकीकरण सेल)  
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ब्लॉक संख्या . 10,  
सीजीओ काम्पलेक्स,  
लोधी रोड, नई दिल्ली-03

दिनांक 24 जनवरी 2021

वरिष्ठ तकनीकी निदेशक

The Senior Technical Director

राष्ट्रीय सूचना-विज्ञान केन्द्र, नोर्थ ब्लॉक,

गृह मंत्रालय, नई दिल्ली

NIC, North Block, MHA

New Delhi

(द्वारा ई-मेल)

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Sub: Request for comments of stakeholders/OEM on draft QRs.

कृपया गृह मंत्रालय के पत्र संख्या IV-24011/12/2011-Prov-I(part)(CFN 3300890)-1710 दिनांक 31<sup>st</sup> Aug 2015 के सन्दर्भ में।

2. उपरोक्त विध्यान्तर्गत यह सूचित किया जाता है कि तकनीकी विशेषज्ञों के उप समूह द्वारा "Perimeter Surveillance Radar for 500 & 1000 Meter range" के गुणात्मक आवश्यकता/परीक्षण निर्देशों का प्रारूप 28 जनवरी 2021 में आयोजित सभा के दौरान तैयार किया गया था जिसको इस आशय से प्रेषित किया जा रहा है कि उक्त गुणात्मक आवश्यकता/परीक्षण निर्देश को गृह मंत्रालय की वेबसाइट पर 15 दिन के लिए अपलोड करने का श्रम करें।

संलग्न : उपरोक्तानुसार

(दिगेन्द्र सिंह पेंवार)  
उप कमाण्डेंट (मोड)

प्रतिलिपि :-

1. SO (IT), North Block, MHA  
(Through E-mail)  
(E-mail address: soit@nic.in)
2. IT Wing, FHQ BSF

: उपरोक्त गुणात्मक आवश्यकता/परीक्षण निर्देश का मसौदा आपके सूचनार्थ एवं अग्रिम कार्यवाही हेतु।

: i) उपरोक्त गुणात्मक आवश्यकता/परीक्षण निर्देश का मसौदा सीमा सुरक्षा बल की वेबसाइट पर 15 दिन यानि 12 फरवरी 2021 तक अपलोड करने के लिए प्रेषित की जा रही है। उक्त मसौदे को सीमा सुरक्षा बल की वेबसाइट से दिनांक 13 फरवरी 2021 को हटाने का श्रम करें। आपसे अनुरोध है कि उक्त मसौदे को निम्नलिखित पत्तों पर ई-मेल करने का भी श्रम करें:-

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# DRAFT QUALITATIVE REQUIREMENT AND TRIAL DIRECTIVE OF PERIMETER SURVEILLANCE RADAR FOR 500 & 1000 METER RANGE

S/No.	Descriptions	Specifications	Procedure suggested for trial	Result expected/desired
The high performance perimeter surveillance radar system strengthen your perimeter security, it tracks and records targets 24 hrs a day. It can detect person and Type B vehicle intrusion even in the lowest visibility weather such as fog and rain.				
1.	Type	Non-rotating Electronic Array Radar	To be physically checked by the BOO.	The system must be Non-rotating electronic array radar.
2.	Frequency band	Any band without license fee.	The firm should submit OEM certificate in this regard.	The firm must submit OEM certificate in this regard.
3.	Weight (Radar)	Upto 5 Kgs.	Physically checked by the BOO.	The radar weight must be upto 5 Kg.
4.	Accuracy between two objects		To be physically checked by the BOO. Place two persons separated by a distance of 50 cms, move both the person horizontally.	The system accuracy in range must be 50 cm or better and in azimuth min 1°.
	(a)	Range resolution		
	(b)	Azimuth resolution		
5.	Coverage (at 3dB Beam Width)		To be physically checked by the BOO.	The system must be elevation coverage 30° or more in case of horizontal coverage at least 120 for 500 Mtr range. At least 100 for 1000 mtr range.
	(a)	Elevation Coverage (°)		
	(b)	Horizontal Coverage (°)		
6.	Operating Range (m): For human	05-500 or better for 500 mtr range 05-1000 or better for 1000 mtr range (To be decided by the user department at the time of indent)	To be physically checked by the BOO. Place one person at a range of 500 mtr and 1000 mtr and move the person horizontally.	The system must detect the human target at the range of 500 mtr and 1000 mtr respectively.



	For type B vehicle	05-600 or better for 500 mtr range 05-1200 or better for 1000 mtr range <b>(To be decided by the user department at the time of indent)</b>	To be physically checked by the BOO. Place a type B vehicle at a range of 600 mtr and 1200 mtr and move the type B vehicle horizontally.	The system must detect the type B vehicle target at the range of 600 mtr and 1200 mtr respectively.	
7.	Range accuracy	0.5 mtr min.	To be physically checked by the BOO. Place a target (Human) at the maximum range, then measure the range with the help of perimeter RADAR, after that same measurement verified by the measuring tape.	The system must provide range accuracy of 0.5 mtr min.	
8.	Minimum Target speed detection	0.33m/sec	To be physically checked by the BOO.	The system must detect the min target speed of 0.33 m/sec.	
9.	Detection Range (m)	Walking Person	05-500 or better for 500 mtr range 05-1000 or better for 1000 mtr range <b>(To be decided by the user department at the time of indent)</b>	To be physically checked by the BOO. Place one person at a range of 500 mtr and 1000 mtr horizontally.	The system must detect the human target at the range of 500 mtr and 1000 mtr respectively.
		Running Person	05-500 or better for 500 mtr range 05-1000 or better for 1000 mtr range <b>(To be decided by the user department at the time of indent)</b>	To be physically checked by the BOO. Place one person at a range of 500 mtr and 1000 mtr and run the person horizontally.	The system must detect the human target at the range of 500 mtr and 1000 mtr respectively.
		Crawling person	05-100 or better for 500 mtr range 05-250 or better for 1000 mtr range <b>(To be decided by the user department at the time of indent)</b>	To be physically checked by the BOO. Place one person at a range of 500 mtr and 1000 mtr horizontally.	The system must detect the human target at the range of 500 mtr and 1000 mtr respectively.

			<b>department at the time of indent)</b>		
		Personnel Vehicles (Class B)	05-600 or better for 500 mtr range 05-1200 or better for 1000 mtr range <b>(To be decided by the user department at the time of indent)</b>	To be physically checked by the BOO. Place one type B vehicle at a range of 600 mtr and 1200 mtr and move the type B vehicle horizontally.	The system must detect the type B vehicle target at the range of 600 mtr and 1200 mtr respectively.
10.	RCS (Radar Cross Section) (m <sup>2</sup> )	(i) Crawling Human : 0.1 (ii) Walking Human : 1 (iii) Vehicle: 10		To be physically checked by the BOO.	The RCS must give 0.1 mtr (m <sup>2</sup> ) for crawling man. 1 mtr (m <sup>2</sup> ) for walking man and 10 mtr (m <sup>2</sup> ) for vehicle.
11.	False Alarm Rate	Less than 1 per 24 hrs		To be physically checked by the BOO. Simulating the 100 targets at a specific zone (decided by the BOO) at the time of trial during 24 hrs.	The system should not give more than 1 false alarm during 24 hrs detection.
12.	MTBF (Hr)	Minimum 50,000		The firm should submit OEM certificate in this regard.	The firm must submit OEM certificate regarding MTBF (Hrs) min 50000 Hrs.
13.	Endurance	24h x 365 days without any mandatory cooling period		The firm should submit OEM certificate in this regard.	The firm must submit OEM certificate regarding endurance of 24h x 365 days without any mandatory cooling period.
14.	Power Source	POE		To be physically checked by the BOO.	The firm must supply power source as POE.
15.	Radar Mounting	Multi-faced pole to be provided for radar		To be physically checked by the BOO.	The firm must supply multi faced pole for radar.
16.	Ratings & Protection	(i) NEMA-4/Equivalent, FCC, CE, MIL-HDBK 217-F:10,000, IP67. (ii) EMI and EMC compliant MIL Std 461.		The firm should submit NABL accreditation lab certificate in this regard.	The firm must submit NABL accreditation lab certificate in this regard.




17.	Wind Resistance after installation on site (knots)	Wind Resistance after installation on site (Kmph)-120	The firm should submit NABL accreditation lab certificate in this regard.	The firm must submit NABL accreditation lab certificate in this regard.
18.	Operating temp	-30° C to +55° C	The firm should submit NABL accreditation lab certificate in this regard	The firm must submit NABL accreditation lab certificate in this regard.
19.	Radar Control & Display Unit compatibility	(i) Web-based client server system. (ii) Should be able to integrated with third party C2 (iii) Firm will also share SDK or API	To be physically checked by the BOO. An undertaking in this regard should also be obtained from the firm.	The RADAR control & display unit must support web based client server system and integrated with third party C2.
20.	Control Unit Display	This must be comprising of a ruggedized Laptop of size 13 inch, Processor-Intel i5 or better, 5th Generation or better, Ram-4 GB or more and Hard Disk-128 GB or better. <b>(To be decided by the user department at the time of indent)</b>	To be checked physically by BOO. Firm has to submit National /International accredited Lab certificate. If no such lab available in India then , firm has to submit any Indian Govt Lab / OEM certificate in respect the same .	Control Unit Display must be as per the requirement mentioned in the QRs.
21.	Radar Control & Display Unit, receiving detection data from Radar sensor	i) Filter detections according to zone defined by users. ii) Turn detection into tracks. iii) Aim (Pan, Tilt, Zoom) PTZ camera/Electro Optical camera/Thermal Imager at very track. iv) If target is present in defined zone, trigger alarm in VMS and PTZ/Electro Optical camera/Thermal Imager. should move on target.	To be physically checked by the BOO.	Radar Control & Display Unit must support following feature at receiving detection data from Radar sensor- i) Filter detections according to zone defined by users. ii) Turn detection into tracks. iii) Aim (Pan, Tilt, Zoom) PTZ camera/Electro Optical camera/Thermal Imager at very track. iv) If target is present in defined zone, trigger alarm

				in VMS and PTZ/Electro Optical Camera/Thermal Imager should move on target.
22.	Miscellaneous			
(a)	Operational (user) manual to be provided with each equipment.	Not applicable		Applicable at the time of supply
(b)	Technical maintenance manual to be provided as specified by the user.	Not applicable		Applicable at the time of supply
(c)	Operational training and base level repair & maintenance training to be provided to the user (trainees) as per number specified by the user department.	Not applicable		Applicable at the time of supply
(d)	Supplier to agree to provide spare parts for next 10 years minimum from the date of supply.	Not applicable		Applicable at the time of supply

तकनीकी विशेषज्ञों के उप समूह द्वारा यह निश्चित किया गया है कि उक्त गुणात्मक आवश्यकता को अधिक बेहतर बनाने के लिए गृह मंत्रालय एवं सीमा सुरक्षा बल की वेबसाईट पर विक्रेताओं/फर्मों के सुझाव प्राप्त करने हेतु 15 दिनों के लिए अपलोड किया जाए।

नोट - सभी विक्रेताओं/फर्मों से निवेदन है कि अपने सुझावों के साथ निम्नलिखित कागजात भी संलग्न करने का श्रम करें:-

1. उत्पाद की वास्तविक विवरण पुस्तिका।
2. उत्पाद की साहित्यिक रचना का ब्यौरा।
3. गुणात्मक आवश्यकताओं के उपर व्यापक टिप्पणीयों।

  
 11/11/2021  
 20/01/2021  
 (दिगेन्द्र सिंह पँवार)  
 उप कमांडेण्ट (आधुनिकीकरण)