संख्या. पी-63013/36/2019/मोड-I/सीसुबल 4090-92
भारत सरकार, गृह मंत्रालय
महानिदेशालय सीमा सुरक्षा बल
(रसद निदेशालय: आधुनिकीकरण सैल)
(Email-comdtord@bsf.nic.in)
(Fax: 011-24367683)

ब्लाक संख्या . 10,
सीजीओ काम्पलैक्स,
लोधी रोड, नई दिल्ली–03

दिनांक 16 सितम्बर 2021

वरिष्ठ तकनीकी निदेशक
The Senior Technical Director
राष्ट्रीय सूचना–विज्ञान केन्द्र, नोर्थ ब्लाक,
गृह मंत्रालय, नई दिल्ली
NIC, North Block, MHA, New Delhi
(द्वारा ई–मेल- पता : mpsugandhi@nic.in)
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 31st Aug 2015 के सन्दर्भ में।

2. उपरोक्त विष्यान्तर्गत यह सूचित किया जाता है कि तकनीकी विशेषज्ञों के उप समूह द्वारा Perimeter Surveillance Radar for 500 & 1000 Meter Range के गुणातमक आवश्यकता/परीक्षण निर्देशों का प्रारुप 10 सितम्बर 2021 में आयोजित सभा के दौरान तैयार किया गया था जिसको इस आश्य से प्रेषित किया जा रहा है कि उक्त गुणातमक आवश्यकता/परीक्षण निर्देश को गृह मंत्रालय की वैबसाईट पर 15 दिन के लिए अपलोड करने का श्रम करें।

संल्गन : उपरोक्तनुसार

16/08/2021
(दिगेन्द्र सिंह पंवार)
उप0 कमाण्डेंट (आधुनिकीकरण)

प्रतिलिपि :-

1. SO (IT), North Block, MHA
   (Through E-mail)
   (E-mail address: soit@nic.in)
   : उपरोक्त गुणातमक आवश्यकता/परीक्षण निर्देश का मसौदा आपके सूचनार्थ एवं अग्रिम कार्यवाही हेतु।
2. IT Wing, FHQ BSF
   : i) उपरोक्त गुणातमक आवश्यकता/परीक्षण निर्देश का मसौदा सीमा सुरक्षा बल की वैबसाईट पर 15 दिन यानि 28 सितम्बर 2021 तक अपलोड करने के लिए प्रेषित की जा रही है। उक्त मसौदे को सीमा सुरक्षा बल की वैबसाईट से दिनांक 29 सितम्बर 2021 को हटाने का श्रम करें। आपसे अनुरोध है कि उक्त मसौदे को निम्नलिखित पतों पर ई–मेल करने का भी श्रम करें:-
   (a) Technical Director, NIC, North Block, MHA **(E-mail : mpsugandhi@nic.in)**
   (b) SO (IT), North Block, MHA
   (E-mail : soit@nic.in)

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			
	(a) Range resolution	50 cm or better	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 8^0.
	(b) Azimuth resolution	**Minimum 8^0**		
5.	Coverage (at 3dB Beam Width)			
	(a) Elevation Coverage (°) (Straight from the antenna)	30 Deg or more **(To be decided by the user department at the time of indent)**	To be physically checked by the BOO. The firm should submit OEM certificate in this regard.	The system must be elevation coverage 30^0 or more in case of horizontal coverage at least 120^0 for 500 Mtr range. At least 100 for 1000 mtr range.
	(b) Horizontal Coverage (°) (Straight from the antenna)	At least 120^0 for 500 mtr range At least 100^0 for 1000 mtr range **(To be decided by the user department at the time of indent)**		
6.	Operating Range (m): For human (Straight from the antenna)	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	To be physically checked	The system must detect

S/No.	Descriptions		Specifications	Procedure suggested for trial	Result expected/desired
	(Straight from the antenna)		range 05-1200 or better for 1000 mtr range **(To be decided by the user department at the time of indent)**	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 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		0.20 m/sec	To be physically checked by the BOO.	The system must detect the min target speed of 0.20 m/sec.
9.	Detection Range (m) (For raising Visual and Audio Alarm)	Walking Person	05-500 or better for 500 mtr range (Straight from the antenna) 05-1000 or better for 1000 mtr range (Straight from the antenna) **(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 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 (Straight from the antenna) 05-1000 or better for 1000 mtr range (Straight from the antenna) **(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 run the person horizontally.	The system must detect the human target at the range of 500 mtr and 1000 mtr respectively.
		Crawling	05-100 or better for 500 mtr	To be physically checked	The system must detect

S/No.	Descriptions		Specifications	Procedure suggested for trial	Result expected/desired
		person	range (Straight from the antenna) 05-250 or better for 1000 mtr range (Straight from the antenna) **(To be decided by the user department at the time of indent)**	by the BOO. Place one person at a range of 500 mtr and 1000 mtr horizontally.	the human target at the range of 500 mtr and 1000 mtr respectively.
		For type B Vehicles	05-600 or better for 500 mtr range (Straight from the antenna) 05-1200 or better for 1000 mtr range (Straight from the antenna) **(To be decided by the user department at the time of indent)**	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) (m2)		(i) Crawling Human : 0.1 min (ii) Walking Human : 1 (iii) Vehicle: 10	To be physically checked by the BOO.	The RCS must give 0.1 mtr min (m^2) for crawling man. 1 mtr (m^2) for walking man and 10 mtr (m^2) 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 (Hours)		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.

S/No.	Descriptions	Specifications	Procedure suggested for trial	Result expected/desired
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 or Equivalent (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 (Kmph)	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	-30^0 C to $+55^0$ 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 and 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. (**To be decided by the user department at the time of indent**)	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 Day and Night/Thermal Imager camera at very track. iv) If target is present in	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.

S/No.	Descriptions	Specifications	Procedure suggested for trial	Result expected/desired
		defined zone, trigger alarm in Video Management System (VMS) and PTZ/Electro Optical Day and Night/Thermal Imager camera should move on target.		ii) Turn detection into tracks. iii) Aim (Pan, Tilt, Zoom) PTZ camera/ Electro Optical Day and Night/Thermal Imager camera at very track. iv) If target is present in defined zone, trigger alarm in VMS and PTZ/ Electro Optical Day and Night/Thermal Imager camera 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 & location 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 गुणातमक आवश्यकता को अधिक बेहतर बनाने के लिए गृह मंत्रालय एवं सीमा सुरक्षा बल की वैबसाईट पर विक्रेताओं/फर्मों के सुझाव प्राप्त करने हेतु 15 दिनों के लिए अपलोड किया जाए।

नोट – सभी विकताओं/फर्मों से निवेदन है कि अपने सुझावों के साथ निम्नलिखित कागजात संल्गन कर ई–मेल पता comdtord@bsf.nic.in पर भेजने का श्रम करें:–

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

16/09/2021

(दिगेन्द्र सिंह पँवार)
उप कमांडेण्ट (आधुनिकीकरण)