

संख्या. पी-63013/194/01/2024/मोड-1/सीसुबल/191-94  
भारत सरकार, गृह मंत्रालय  
महानिदेशालय सीमा सुरक्षा बल  
(रसद निदेशालय: आधुनिकीकरण सैल)  
(Email-comdtord@bsf.nic.in)  
(Fax: 011-24367683)

ब्लाक संख्या . 10,  
सीजीओ काम्प्लैक्स,  
लोधी रोड, नई दिल्ली-03  
दिनांक 23 जनवरी 2025

सेवा में,

महानिदेशक:- आसाम राईफलस (through LOAR), केन्द्रीय औद्योगिक सुरक्षा बल,  
केन्द्रीय रिजर्व पुलिस बल, भारतीय तिब्बत बोर्डर पुलिस, सशस्त्र सीमा बल,  
राष्ट्रीय सुरक्षा गार्ड एवं पुलिस अनुसन्धान एवं विकास ब्योरो

विषय: अनुमोदित गुणात्मक आवश्यकता / परीक्षण निर्देशों का प्रेषण

तकनीकी विशेषज्ञों के उप समूह द्वारा किए गये सूत्रीकरण एवं महानिदेशक सीमा सुरक्षा बल द्वारा अनुमोदित "Medium Range Night Vision Surveillance Equipment" के गुणात्मक आवश्यकता/परीक्षण निर्देशों को आपकी अग्रिम कार्यवाही हेतु प्रेषित किया जाता है।

संलग्न : उपरोक्तनुसार

आनन्द सिंह  
(आनन्द सिंह तक्षक)  
उप महानिरीक्षक (रसद)

प्रतिलिपि :-

- तकनीकी निदेशक  
The Technical Director  
राष्ट्रीय सूचना-विज्ञान केन्द्र, नोर्थ ब्लाक,  
गृह मंत्रालय, नई दिल्ली  
NIC, North Block, MHA  
New Delhi, (द्वारा ई-मेल)  
(ई-मेल पता : mpsugandhi@nic.in) : आपसे अनुरोध है कि "Medium Range Night Vision Surveillance Equipment" के सूत्रीकरण किये गये गुणात्मक आवश्यकता / परीक्षण निर्देशों को गृह मंत्रालय की वैबसाईट (MHA website Division of MHA+ - Police Modernization Division- Qualitative Requirements-Qualitative Requirements of Machinery & Eqpt Items with Surveillance item) पर अपलोड करने का श्रम करें।
- SO (IT), North Block, MHA  
(Through E-mail)  
(E-mail address: [soit@nic.in](mailto:soit@nic.in)) : कृपया उपरोक्तानुसार कार्यवाही करने का श्रम करें।
- तकनीकी विंग, सीमा सुरक्षा बल : कृपया उक्त उपकरण के गुणात्मक आवश्यकता/ परीक्षण निर्देशों को सीमा सुरक्षा बल की वैबसाईट पर अपलोड करने का श्रम करें।
- Sh. Anoop Dhanvijay, Director- Buyer  
Management (CPSEs & Central  
Ministries), GOI. Ministry of  
Commerce & Industry, Government  
e-Marketplace. Jeevan Tara  
Building.5-Parliament Street. New  
Delhi-110001  
E-mail:- [anoop.dhanvijay@gem.gov.in](mailto:anoop.dhanvijay@gem.gov.in)  
फाईल। For info with request to upload the approved Revised QRs & TDs of "Medium Range Night Vision Surveillance Equipment" on GeM Portal. Copy of QRs & TDs is attached with this letter.
- फाईल।

**QRS & TDS OF MEDIUM RANGE NIGHT VISION SURVEILLANCE EQUIPMENT**

S/No	QRs/ Specification	Trial Directives																					
1.	<b>General Description.</b> The device should be compact with a dimension of max 210 x 250 x 300 mm or less (handheld), lightweight (max 4 Kg with battery) Surveillance Camera to detect, recognise and identify human target during day and night time. The camera should consist of: -																						
	(a) Day and Night sensor (Integrated)	To be physically checked by BOO																					
	(b) Rechargeable Bty for camera Qty-02 sets	To be physically checked by BOO																					
	(c) Bty charger for rechargeable Bty	To be physically checked by BOO																					
	(d) AC/ DC adaptor with power cable for Bty charger	To be physically checked by BOO																					
	(e) Tripod with plate & Screw for 1/4 inch	To be physically checked by BOO																					
	(f) <b>Ports and Connectors.</b> Suitable connectors should be provided for transfer of High definition video output to a TV and DVR.	To be physically checked by BOO																					
2.	<b>Physical Characteristics</b>																						
(a)	Lightweight portable to be carried by single operator	Max weight of 4 Kg with Battery excluding accessories.	To be physically checked by BOO																				
(b)	Time for deployment	5 minutes or less.	To be physically checked by BOO																				
(c)	Recording Media	64 GB SD Card or more	To be physically checked by BOO																				
(d)	Quick start on switching on	Start-up time of 1 minute or less	To be physically checked by BOO																				
3.	<b>Operational Characteristics.</b> Eqpt should be able to clearly view "a human target" in total darkness in situation invisible to the human eyes. Eqpt should provide following ranges for a human target:-																						
(a)	<table border="1"> <thead> <tr> <th>S.No</th> <th></th> <th>Day Mode</th> <th>Up to Quarter Moon</th> <th>Deep Night</th> </tr> </thead> <tbody> <tr> <td>(i)</td> <td>Detection</td> <td>6000 Mtr</td> <td>3000 Mtr</td> <td>1000 Mtr</td> </tr> <tr> <td>(ii)</td> <td>Recognition</td> <td>4000 Mtr</td> <td>2000 Mtr</td> <td>600 Mtr</td> </tr> <tr> <td>(iii)</td> <td>Identification</td> <td>2000 Mtr</td> <td>1000 Mtr</td> <td>400 Mtr</td> </tr> </tbody> </table>	S.No		Day Mode	Up to Quarter Moon	Deep Night	(i)	Detection	6000 Mtr	3000 Mtr	1000 Mtr	(ii)	Recognition	4000 Mtr	2000 Mtr	600 Mtr	(iii)	Identification	2000 Mtr	1000 Mtr	400 Mtr		i) <u>Day Mode</u> : To be practically checked during day time by BOO. (ii) <u>Up to Quarter Moon</u> : To be practically checked in low light and moon light by BOO. (iii) <u>Deep Night</u> : To be practically checked
S.No		Day Mode	Up to Quarter Moon	Deep Night																			
(i)	Detection	6000 Mtr	3000 Mtr	1000 Mtr																			
(ii)	Recognition	4000 Mtr	2000 Mtr	600 Mtr																			
(iii)	Identification	2000 Mtr	1000 Mtr	400 Mtr																			

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S/No	QRs/ Specification		Trial Directives
(b)	Eqpt should have autofocus features.		in dark pitch night by BOO. To be practically checked by BOO
(c)	Camera should have minimum resolution of 1080p (HD) or better.		Firm will produce OEM certificate.
(d)	Camera should have facility to enhance Digital magnification of 4X.		To be checked in any approved Govt. lab
(e)	Recording – Minimum 8 Hrs (recording day and night) in a HD quality.		To be practically checked by BOO
(f)	Endurance – The camera should provide endurance of 6 hrs or more on battery.		To be checked in any approved Govt. lab
(g)	The eqpt should be able to function in a temperature range of -10 <sup>0</sup> C to +55 <sup>0</sup> C.		To be checked in any approved Govt. lab
(h)	Field of View – 2.3 <sup>0</sup> (H) x 1.3 <sup>0</sup> (V) or more		To be checked in any approved Govt. lab
(j)	<b>Power</b>		To be checked in any approved Govt. lab
(i)	Battery	Alkaline / Li-ion /Li-ion polymer.	To be checked in any approved Govt. lab
(ii)	Battery Charger	Bty charger should charge one set of bty fully in less than 3 hrs.	To be checked in any approved Govt. Lab
(iii)	Charging Cycle	Min 500 charge – discharge cycles	Firm will produce OEM certificate
(iv)	Power adaptor	Equipment should be capable to operate on direct power supply (AC & DC) and suitable adaptors should be provided accordingly.	To be practically checked by BOO
(k)	<b>Video</b>		To be practically checked by BOO
(i)	Line Standard	HD-SDI	To be practically checked by BOO
(ii)	Latency	Is (max)	To be practically checked by BOO
(iii)	Data Interface	HDMI/ AV/ USB	To be practically checked by BOO

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S/No	QRs/ Specification	Trial Directives	
4.	<b>Environmental Characteristics</b>	Firm will produce certificate of any Govt. Lab, DRDO or NABL	
	(a) Ruggedisation		Mil. Std. 810G
	(b) Operating Temperature		- 10 <sup>0</sup> C to + 50 <sup>0</sup> C
	(c) Storage Temperature		- 20 <sup>0</sup> C to + 60 <sup>0</sup> C
	(d) Enclosure		Metal/ Mil. grade (Mil -810G) material to sustain accidental drops, scratches and water splashes.
5.	<b>Optional features (Inbuilt/ External)</b>		
	(a) <b>IR Illuminator-</b> In case there is requirement of separate IR illuminator, it should be possible to integrate it with camera and following accessories/ features to be provided with the eqpt:-	During Night: To be practically checked in low light, dark pitch night and in moon light by BOO at the distance specified.	
	(i) IR illuminator with range of 1000 mtr or more i.e. camera should be able to detect a human target at a dist of 1000 mtr, recognition at a dist of 700 mtr and identification at a dist of 400 mtr during total darkness.	Eqpt performance will be checked without IR illuminator in low light to ascertain conditions when eqpt is unable to detect human target at 1000 mtr. Thereafter, IR illuminator to be switched on and eqpt to be tested accordingly.	
	(ii) IR illuminator Bty Charger (Qty 01) with Bty (Qty-02).		
	(iii) Picatinny Rail for IR illuminator to be mounted on eqpt.		
	(iv) There should be provision to mount IR illuminator on camera itself.		
	(v) Weight of IR illuminator should not exceed 500 gm, in case of external IR illuminator.		
	(b) <b>Digital Magnetic Compass and Inclinor (inbuilt)</b>	To be practically checked by BOO	
	(i) Angular Range Azimuth - 360 <sup>0</sup>		
	(ii) Angular Range Elevation- ± 15 <sup>0</sup> or higher		
(iii) Accuracy on Azimuth: - ± 3 <sup>0</sup> Accuracy on elevation: ± 3 <sup>0</sup>			
(c) Recorded image and video should have day, time and year stamp.	To be practically checked by BOO		
(d) Exposure Mode – Camera should have Auto & Manual settings of exposure	To be practically checked by BOO		
(e) <b>Laser Range Finder (Inbuilt/ External as per user requirement)</b>			
(i) Type	Class 1 Eye safe LASER min 1550 nm	To be checked by BOO	

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	(ii)	Range 30 m to 2000 m	To be checked by BOO
	(iii)	Accuracy ± 5 m	To be checked by BOO
	(iv)	Weight Weight should not be more than 200 gm, in case of external LRF	To be checked by BOO
	(f)	Image Processing	To be practically checked by BOO
	(i)	Image Stabilization Software based image stabilization should be available	To be practically checked by BOO
	(ii)	Metadata Overlay Target specific information like date, time, elevation, Azimuth, distance should be displayed to the user while observing the target.	To be practically checked by BOO
	(iii)	Adaptive Contrast Enhancement Mode User selectable mode for enabling/ disabling adaptive contrast enhancement should be available.	To be practically checked by BOO
6	<b>Portability and Storage.</b> The equipment to be provided in suitable pelican box for ease of carriage ruggedized case with roller wheels.		To be physically checked by BOO and firm will produce OEM certificate also.
7	<b>Literature.</b> Operating and Technical literature for each discrete component of system should be provided in English language.		To be physically checked by BOO
8	<b>Training.</b> Training on complete system with its full accessories should be arranged at buyer's premises. In situ training of user for minimum seven days or more as deemed appropriate on operation, maintenance, fault finding and user level repairs. Trg should be conducted at least once during the conduct of any exercise.		Firm will provide OEM certificate
9.	<b>Miscellaneous</b>		Firm will provide OEM certificate
	(a)	The warranty period of the Camera should be at least three years. The warranty of the eqpt should start after completion of training by the OEM.	Firm will provide OEM certificate
	(b)	The total technical life of camera should not be less than 8 years.	Firm will provide OEM certificate
	(c)	Life cycle of Camera Battery should be 5 years.	Firm will provide OEM certificate

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S/No	QRs/ Specification	Trial Directives
2	(d) Product support after warranty period should be at least Five years.	Firm will provide OEM certificate
10.	<b>Repair &amp; Maint.</b> OEM to keep additional spare parts to include bty, buttons, lens, tripod components either at user loc/ warehouse.	Firm will provide OEM certificate
11.	<b>Eqpt Down Time.</b> OEM to keep one spare eqpt with all accessories at all times at his loc which should be provided as a replacement for faulty eqpt to reduce eqpt down time.	Firm will provide OEM certificate

**Note**

- (a) **Detection.** Means target to be detected as a human or animal.
- (b) **Recognition.** Target confirmed as a human with standing/ laying position.
- (c) **Identification.** Target to be identified as enemy target with weapon, dress code etc.

(Puneet Rastogi), IPS, ADG (Log), BSF

(Dinesh Kumar), Comdt, SIW, BSF

(Happy Verma), Comdt(Ord), BSF

(K L Puri), SP, BPR&D

(Mukesh Kumar), 2IC, SIW, BSF

(Navdeep Sharma), JAD, DCPW

(Maj Anand Singh), Sqn Cdr, NSG

(S S Vipin), AC, CISF

(Lalit Kumar), AC/Comn, SSB

(Inspr/Tele Puran Singh), ITBP

(Inspr M K Tiwari), CRPF

(Nb/Sub R D Ansari), Assam Rifles

**Approved/Not approved**

Director General,  
Border Security Force

21/11