

संख्या. पी-63013/01/2018/मोड-1/सीसुबल 523-25  
भारत सरकार, गृह मंत्रालय  
महानिदेशालय सीमा सुरक्षा बल  
(रसद निदेशालय: आधुनिकीकरण सैल)  
(Email-comdtord@bsf.nic.in)  
(Fax: 011-24367683)

118

ब्लाक संख्या . 10,  
सीजीओ काम्प्लैक्स,  
लोधी रोड, नई दिल्ली-03

दिनांक 13 फरवरी 2020

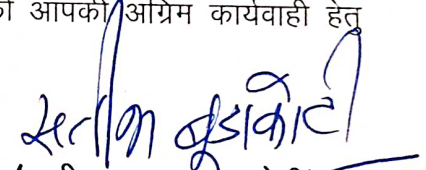
सेवा में,

महानिदेशक:- आसाम राईफलस (through LOAR), केन्द्रीय ओद्योगिक 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 सूत्रीकरण किए एवं महानिदेशक सीमा सुरक्षा बल द्वारा अनुमोदित “**Digital Night Vision Goggle (Communications Interface/ Advance Version)**” के गुणात्मक आवश्यकता/परीक्षण निर्देशों को आपकी अग्रिम कार्यवाही हेतु प्रेषित किया जाता है।

संलग्न : उपरोक्तनुसार

  
(सतीश चन्द्र बुडाकोटी)  
उप महानिरीक्षक (रसद)

प्रतिलिपि :-

1.	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 : <a href="mailto:mpsugandhi@nic.in">mpsugandhi@nic.in</a> )	:	आपसे अनुरोध है कि “Digital Night Vision Goggle (Communications Interface/ Advance Version)” के गुणात्मक आवश्यकता/परीक्षण निर्देशों को गृह मंत्रालय की वेबसाइट (पुलिस आधुनिकीकरण विभाग-गुणात्मक आवश्यकता) पर अपलोड करने का श्रम करें।
2.	SO (IT), North Block, MHA (Through E-mail) (E-mail address: <a href="mailto:soit@nic.in">soit@nic.in</a> )	:	आपसे अनुरोध है कि “Digital Night Vision Goggle (Communications Interface/ Advance Version)” के गुणात्मक आवश्यकता/परीक्षण निर्देशों को गृह मंत्रालय की वेबसाइट (पुलिस आधुनिकीकरण विभाग-गुणात्मक आवश्यकता) पर अपलोड करने का श्रम करें।
3.	तकनीकी विंग, सीमा सुरक्षा बल	:	आपसे अनुरोध है कि “Digital Night Vision Goggle (Communications Interface/ Advance Version)” के गुणात्मक आवश्यकता/परीक्षण निर्देशों को सीमा सुरक्षा बल की वेबसाइट पर अपलोड करने का श्रम करें।

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**DIRECTOR GENERAL BORDER SECURITY FORCE**  
**(PROVISIONING DIRECTORATE (MOD CELL))**

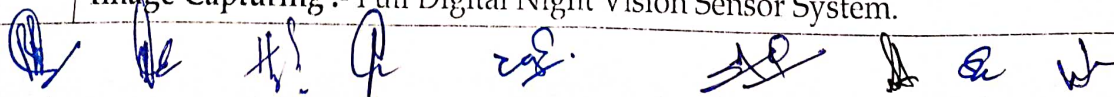
DIG (Prov)  
HQ DG BSF, Prov Dte (Ord Sec)  
Block No. 10, CGO Complex  
Lodhi Road, New Delhi  
(Tele/Fax No. 011-24367683)  
Mail id : comdtord.bsf.nic.in

The Sub-group of Technical Experts constituted by MHA vide their letter No. IV-24011/12/2011-Prov-I dated 13 Jun 2012, No. IV-24011/12/2011-Prov-I dated 28 Dec 2012 & UO No. IV-24011/12/2011-Prov-I- 350 dated 27 Jun 2013 held its meeting at BSF Headquarters on 03<sup>rd</sup> Jan 2018, 05<sup>th</sup> September 2018, 26<sup>th</sup> March 2019 and 08<sup>th</sup> August 2019 to formulate the Qualitative Requirement of '**Digital Night Vision Goggles (Communications Interface/ Advance Version)**'.

2. After detailed deliberation the referred Sub-group of technical experts has finalised the QRs and TDs of '**Digital Night Vision Goggles (Communications Interface/ Advance Version)**' on 28<sup>th</sup> Jan 2020 and subsequent dates which are as under :-

**Digital Night Vision Goggles (Communications Interface/ Advance Version)**

S/No.	SPECIFICATIONS
1	General
a	DNVG with communication interface allows a complete hands free operations and no blurred vision with normal head movements.
b	The ergonomic design should allow comfortable use in motion, even during extended operation.
c	Live firing or a flash bang should not create a blinding or blackout condition.
d	DNVG with communication interface will facilitate locating and identifying targets during night and in dark closed rooms/buildings in built up area.
e	Should have High Quality monochrome view for better target recognition and faster decision time.
f	Instant dark to light or light to dark conditions should compensated by the device and the user should be unaffected.
g	It should provide secured & encrypted video transmission to command centre or team about critical mission decision.
h	The message transmitted by command centre should be visible on screen.
SPECIFICATION (OPERATION AND MAINTENANCE)	
2	<b>Technology :-</b> Goggle with advanced photo sensitive sensors using highly sophisticated software algorithms and real time computing without any (image intensifier) II tube.
3	<b>Image Capturing :-</b> Full Digital Night Vision Sensor System.

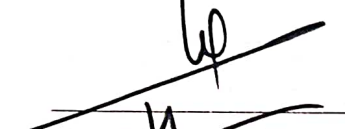





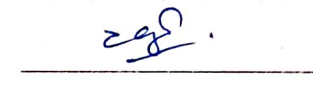
4	<b>Detection Capability :-</b>	
	a	To detect group of 4-5 men in a room having size min 5m x 4 m or better.
	b	Field replaceable 2X lens for static viewing.
	c	Light level conditions should be starlit for detection range.
5	<b>Dioptr Adjustment :-</b> -3 to +3 diopter.	
6	<b>Light Sensitivity :</b> 0.00029 Lux up to daylight, passive operation.	
7	Infrared Illuminator : Active control with digital indication from passive (0%) upto 100% (active).	
8	Focus : 30 cm to infinity.	
9	<b>Field of View :-</b>	
	a	56 Deg ± 2 Deg with .8 X Lens
	b	43 Deg ± 2 Deg with 1 X Lens
	c	16 Deg ± 2 Deg with 2 X Lens
10	<b>Wearing Capability :-</b>	
	a	The DNVG should be fully interfaces with combat and law enforcement helmet and can be worn underneath a visor.
	b	Can be worn with or without helmet just like a tactical goggle.
11	<b>Operating Conditions :-</b> The goggle can be used in night as well as daylight without harming the system and even without realizing the difference in picture quality as compared to night operation.	
12	<b>Operational Life and Operating Time :-</b>	
	a	The operational life of the DNVG should be min 5 years.
	b	More than 8 hrs with fully charged battery (on IR mode).
13	<b>Battery indicator :-</b> Should have battery status on the screen for low battery indication.	
14	<b>Battery Type :-</b> Rechargeable battery (Commercially available in the market)	
15	<b>Operating Temperature :-</b> -40 <sup>0</sup> C to +50 <sup>0</sup> C (OEM to provide a compliance certificate )	
16	<b>Capability :-</b> Provide unique analog and digital interfaces such as exporting the night vision image stream for recording or transmittance.	
17	<b>Ruggedness :-</b> As per MIL STD 810F or equivalent standards.	
18	<b>Weight :-</b> Weight of the equipment (DNVG etc) to be mounted on face/head must be below 450 gms.	


Miscellaneous :-

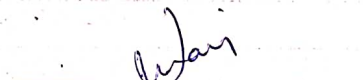
19	<b>Accessories :-</b> The accessories to be provided :-
a	Battery Pack -01
b	Battery Charger- 01
c	User Manual (Quick Guide)- 01
d	Goggle Cleaning Kit-01
e	Rugged Carrying Case -01
	<b>Optional Accessories :-</b>
a	.8 X filed replaceable lens.
b	2X field replaceable lens.
c	Additional battery pack.
d	Video transmitter/receiver kit (if specifically asked)
e	Portable video recorder (if specifically asked).


  
 S S Chahar, VSM  
 ADG (Log) BSF

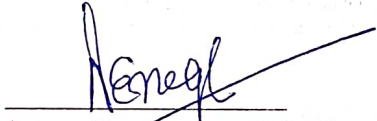
  
 (B B Sidhra), DIG  
 SIW BSF

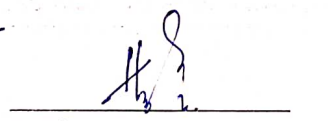
  
 (Gagan Bhardwaj),  
 AC, SIW BSF

  
 (Sandesh Kuamr), AC  
 SSB


  
 (Insp/Exe Ravi Ranjan)  
 CISF

  
 (Insp Ashwani Kumar)  
 SIW BSF

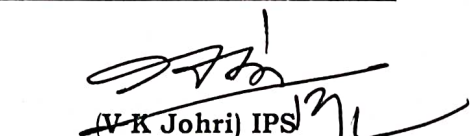
  
 (Insp Narendra Singh)  
 ITBP

  
 (W/o Harmail Singh)  
 AR.

  
 (Partha Sarathi Sahoo)  
 DC, CRPF

  
 SSO(T)  
 BPRAD

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APPROVED/ NOT APPROVED

  
 (V K Johri) IPS  
 DIRECTOR GENERAL  
 BORDER SECURITY FORCE



**TRIAL DIRECTIVES OF DIGITAL NIGHT VISION GOGGLE (COMMUNICATION INTERFACE/ADVANCE VERSION)**

S/ No.	SPECIFICATIONS	Trial procedure suggested for BOOs	Result expected / desired	Complied / Not Complied
1.	<b>General</b>			
a)	DNVG with communication interface allows a complete hands free operations and no blurred vision with normal head movements.	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.	
b)	The ergonomic design should allow comfortable use in motion, even during extended operation.	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.	
c)	Live firing or a flash bang should not create a blinding or blackout condition.	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.	
d)	DNVG with communication interface will facilitate locating and identifying targets during night and in dark closed rooms/buildings in built up area.	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.	
e)	Should have High Quality monochrome view for better target recognition and faster decision time.	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.	
f)	Instant dark to light or light to dark conditions should be compensated by the device and the user should be unaffected.	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.	
g)	It should provide secured & encrypted video transmission to command centre or team about critical mission decision.	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.	
h)	The message transmitted by command centre should be visible on screen.	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.	
	<b>SPECIFICATION (OPERATION AND MAINTENANCE)</b>			
2.	<b>Technology</b> :- Goggle with advanced photo sensitive sensors using highly sophisticated software algorithms and real time computing without any (image intensifier) II tube	Firm has to submit Govt lab/National /International accredited Lab certificate.	The certificate submitted by the firm must confirm the same.	


  
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3.	<b>Image Capturing :- Full Digital Night Vision Sensor System.</b>	Firm has to submit Govt lab/National /International accredited Lab certificate.	The certificate submitted by the firm must confirm the same.
4.	<b>Detection Capability :-</b>		
	a To detect group of 4-5 men in a room having size min 5m x 4 m or better.	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.
	b Field replaceable 2X lens for static viewing.	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.
c Light level conditions should be starlit for detection range.	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.	
5.	<b>Diopter Adjustment :- -3 to +3 diopter.</b>	Send the equipment to SIW BSF New Delhi to check the parameters mentioned in the QRs.	
6.	<b>Light Sensitivity : 0.00029 Lux up to daylight, passive operation.</b>	Firm has to submit Govt lab/National /International accredited Lab certificate.	The certificate submitted by the firm must confirm the same.
7.	<b>Infrared Illuminator :- Active control with digital indication from passive (0%) upto 100% (active).</b>	To be checked physically by Board of officers.	The DNVG's should be as per the requirement mentioned the QR's.
8.	<b>Focus : 30 cm to infinity.</b>	To be checked physically by Board of officers.	The target at a distance from 30 meters or above must be focused easily.
9.	<b>Field of View :-</b>		
	a 56 Deg ± 2 Deg with .8 X Lens.		The DNVG's field of view should be as per the requirement mentioned the QR's.
	b 43 Deg ± 2 Deg with 1 X Lens.		
c 16 Deg ± 2 Deg with 2 X Lens.			
10.	<b>Wearing Capability :-</b>		
	a The DNVG should be fully interfaces with combat and law enforcement helmet and can be worn underneath a visor.	To be physically checked by board of Officer.	The DNVG's wearing capability should be as per the requirement mentioned the

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	QR's.	
b	Firm has to submit Govt lab/National /International accredited Lab certificate.	Can be worn with or without helmet just like a tactical goggle.
11.	The certificate submitted by the firm must confirm the same.	<b>Operating Conditions :-</b> The goggle can be used in night as well as daylight without harming the system and even without realizing the difference in picture quality as compared to night operation.
12.	The certificate submitted by the firm must confirm the same.	<b>Operational Life and Operating Time :-</b>
a	Firm has to submit Govt lab/National /International accredited Lab certificate.	The operational life of the DNVG should be min 5 years.
b	To be physically checked by BOO.	More than 8 hrs with fully charged battery (on IR mode).
13.	To be physically checked by board of Officer.	<b>Battery indicator :-</b> Should have battery status on the screen for low battery indication.
14.	To be physically checked by board of Officer.	<b>Battery Type :-</b> Rechargeable battery (Commercially available in the market)
15.	Firm has to submit Govt lab/National /International accredited Lab certificate.	<b>Operating Temperature :-</b> -40° C to +50° C (OEM to provide a compliance certificate )
16.	To be physically checked by board of Officer.	<b>Capability :-</b> Provide unique analog and digital interfaces such as exporting the night vision image stream for recording or transmittance.
17.	Firm has to submit Govt lab/National /International accredited Lab certificate.	<b>Ruggedness :-</b> As per MIL STD 810F or equivalent standards.
18.	BOO to measure the weight with the help of weighing machine.	<b>Weight :-</b> Weight of the equipment (DNVG etc) to be mounted on face/head must be below 450 gms
<b>Miscellaneous :-</b>	The DNVG's should be as per the requirement mentioned the	
19.	To be physically checked by board of Officer.	<b>Accessories :-</b> The accessories to be provided :-
a		Battery Pack -01
b		Battery Charger- 01



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		QR's.
c	User Manual (Quick Guide)- 01	
d	Goggle Cleaning Kit-01	
e	Rugged Carrying Case -01	
<b>Optional Accessories :-</b>		
a	.8 X filed replaceable lens.	The DNVG's accessories should be as per the requirement mentioned the QR's.
b	2X field replaceable lens.	
c	Additional battery pack.	
d	Video transmitter/ receiver kit (if specifically asked)	
e	Portable video recorder (if specifically asked).	


  
 S S Chahar, VSM  
 ADG (Log) BSF


  
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 SIW BSF

  
 (Partha Sarathi Sahoo), DC  
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 (Gagan Bhardwaj),  
 AC, SIW BSF

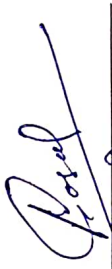
  
 (Sandesh Kuamr), AC  
 SSB

  
 (Insp/Exe Ravi Ranjan)  
 CISF

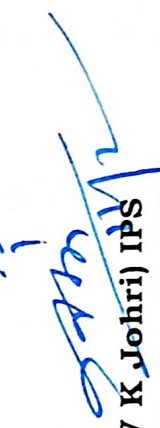
  
 (Insp Ashwani Kumar)  
 SIW BSF

  
 (Insp Narender Singh)  
 ITBP

  
 (W/o Harmail Singh)  
 AR

  
 Insp/Exe Ravi Ranjan  
 CISF

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 (V K Johri) IPS  
 DIRECTOR GENERAL  
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