

**DIRECTORATE GENERAL, CRPF**

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(Ministry of Home Affairs)

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**No. A.VII-53/2022-Prov-Ord-6 (Vol.II) (QRs)** **Dated, the 4 May'2023**

To,

**The DsG,**  
BSF, CISF, ITBP, SSB, Assam Rifle, NSG  
At Location

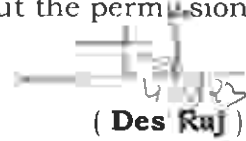
**The IG/Director (Mod)**  
BPR & D,  
Mahipalpur, New Delhi  
e.mail : [sushilkumar@bprd.nic.in](mailto:sushilkumar@bprd.nic.in)

**Subject : QR/TDs of Canine Remote Deployment System (CRDS) and K9 Vision System**

As per direction of MHA vide OM No. A-33-25/30/2021-PM-K9 Cell / 13 dated 11/01/2022, the Competent authority has approved the QRs & Trial Directives of the following dog related stores after due diligence of an inter CAPF Sub-group committee of technical experts :-

- i) Canine Remote Deployment System (CRDS)
- ii) K9 Vision System

2. Henceforth, all CAPFs should procure the above items strictly as per laid down technical specifications / QRs. It is also intimated that no deviation will be made from the approved QRs & trial directives without the permission of MHA  
Encl : As above



( Des Raj )

**DIG (Ord) Dte. Genl. CRPF**

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**Copy forwarded to:-**

- i) The Director (Proc) MHA / Police K9 Cell / PM Division, 26 Man Singh Road New Delhi for kind information with reference to MHA's OM under reference. e.mail [dclprocr-mha@gov.in](mailto:dclprocr-mha@gov.in)
- ii) Smt. M.P Suganthi, Senior Technical Director, Ministry of Home Affairs, 12-A, North Block, New Delhi for kind information with the request to upload finalised QR/TDs of dog related stores on MHA website under a special category "dogs and related stores" e-mail: [mepsugandhi@nic.in](mailto:mepsugandhi@nic.in) & [soit@nic.in](mailto:soit@nic.in)



( Des Raj )

**DIG (Ord) Dte. Genl. CRPF**

**Internal:**

DIG (IT) Dte. Genl. CRPF along with copies of finalised QRs and TDs of Dog related stores with the request to upload these QRs & TDs in CRPF Website under category QR/TDs. (Encl : QRs & TDs) [webitwing@crpf.gov.in](mailto:webitwing@crpf.gov.in)

## QUALITATIVE REQUIREMENTS OF CANINE REMOTE DEPLOYMENT SYSTEM (CRDS)

S/N	Qualitative Requirement	Trial Directives
1	<p><b>Introduction:-</b></p> <p>a) Canine Remote Deployment System (CRDS) is a remotely operated delivery system, which is attached below the dog with a remote release mechanism. It is extremely helpful in certain operational situations which are confronted quite often when human intervention is virtually impossible or not recommended in face of extreme threat.</p> <p>b) CRDS is very effective for delivering wide range of articles i.e. breaching charge, bugging device, portable, jammer, life saving medicines and technical gadgets inside the 'Hot Zone' by using a K9 and operated through a remote.</p>	To be physically checked by BOOs.
2	<p><b>Equipment Description:-</b></p> <p>a) The deployment system should be a combination of release mechanism and a harness to carry supplies during various operation conditions. Harness should be made of polyester cotton based fabric.</p> <p>b) The release mechanism should get clipped on the harness.</p> <p>c) The release mechanism should come with a battery charger. The same charger should be used to charge the remote.</p> <p>d) The remote should be able to release the supplies at a minimum distance of 100 meters.</p>	To be physically checked by BOOs.
	e) The equipment should come in a strong carrying case.	To be physically checked by BOOs.
	The battery capacity to release the deployment mechanism	To be physically checked by BOOs.
	The battery capacity to release the deployment mechanism	To be physically checked by BOO in the presence of representative of firm from 100 meter distance to check the release mechanism during trial.
	e) The equipment should come in a strong carrying case.	To be physically checked by BOO in the presence of representative of firm.
	The battery capacity to release the deployment mechanism	OEM certificate to be provided and to be

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g) The system should work on radio frequency	To be physically checked by BOO.
h) The transmission power should be not more than 60mW.	Firm to provide OEM certificate for same and to be physically checked by BOOs.
j) The transmission should be encrypted by 128 bit AES.	Firm to provide OEM certificate for same.
3 <b>Equipment Specifications</b>	
a) Dimension- 30 x 25 x 14 cm (carrying box). 10% tolerance is acceptable.	To be physically checked by BOOs.
b) Weight - Should be max up to 800 gm for complete Unit.	To be physically checked by BOOs.
c) Material - Rugged plastic with embedded electronic circuitry or better.	To be physically checked by BOOs. OEM certificate to be provided for Rugged plastic.
d) Colour - Black or can be customized as per user needs. User to specify colour at tender notice.	To be physically checked by BOOs.
e) Shelf life - 05 years or more.	Firm to provide an undertaking certificate in this regard.
f) Battery capacity - 400 - 500 releases on single charge. Battery provided should be Lithium ion battery with 500 mAh capacity.	OEM certificate to be provided and to be physically checked by BOOs in the presence of representative of firm.
g) Other features - Dog vest harness with clip and slide unit for attachment of main Unit. Harness should be made of durable and good quality soft fabric, which should not create any discomfort to dog.	To be physically checked by BOOs.
h) Weight of payload - System should carry the payload of up to 800g.	To be physically checked by BOO with the help of weighing machine in the presence of representative of firm.
j) Warranty - 2 year	Firm to provide an undertaking certificate in this regard.
k) Outer carrier case for transportation- The case should be provided with a rugged and heavy duty Outer carrier case.	To be checked physically by BOOs by following test:- <u>Hard Carrying Case</u> :- Firm to provide a rugged hard carrying case, which will sustain a drop test from 2m height on a hard surface. No deformation and breakage of box is acceptable. Equipment to be checked for operational use

deformation and breakage of box is acceptable.  
Equipment to be checked for operational use  
post drop test.

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Vinay Verma  
DC(Ord)  
Rep. of CRPF  
Dr. Sujayal Thansen  
2/c ( )

Rep. of SF  
Rep of CRPF (FOS) branch, CRPF

Rep. of NSG  
Maj Rishi sharma

Rep. of SSE  
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AC (Command), CRPF  
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Himangshu Majumdar, DCP/ST  
DCI (Ord) CRPF  
Dr. Uma Raghunathan  
SSO (LS) BPR & D

Presiding Officer

(Sd/-) (Sd/-) V Misra) IPS  
IG (Prov) Dte. CRPF

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Dr. Sujoyal Thansen IPS  
Director General CRPF

**QUALITATIVE REQUIREMENTS OF K-9 VISION SYSTEM**

S/N	Qualitative Requirements	Trial Directives
1	<p><b>MASK:-</b></p> <p>a) It should be made from breathable mesh capable to keep out debris, maximize airflow, and drain quickly for use in water.</p> <p>b) Should have provision of simple back buckle to make it easy to put on or take off.</p> <p>c) Should have adjustable side straps for a secure fit and lateral stability.</p> <p>d) Should have spherical, interchangeable, polycarbonate lenses with rating of at least UV 400.</p> <p>e) Should have durable foam edging of at least 5 mm for comfort.</p> <p>f) Should have elastic segment which allows for full jaw motion while still ensuring a stable fit.</p> <p>g) Should have adjustable tri-glide buckle for a snug custom fit around the muzzle.</p> <p>h) Should have dimensions of at least 160 mm x 80 mm x 40 mm (Length x Width x Depth) and total weight of 150 gm (max). Variation of ±5% is acceptable.</p>	<p>To be physically checked by BOO.</p> <p>To be physically checked by BOO.</p> <p>To be physically checked by BOO.</p> <p>Firm to provide any National or International lab certificate for UV400 level protection of lenses. BOO to check authenticity of the certificate.</p> <p>To be physically checked by BOO.</p> <p>To be physically checked by BOO.</p> <p>To be physically checked by BOO</p> <p>To be physically checked by BOO.</p>
2	<p><b>CAMERA:-</b></p> <p>a) Front camera should have the following features: -</p> <p>i) B&amp;W modes.</p> <p>OR</p> <p>ii) Color and B&amp;W modes with max latency of 300 mSec.</p>	<p>To be physically checked by BOO. OEM to provide certificate for latency.</p>

*Vinay Verma*  
DC (CRPF)

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	<p>User to specify (i) or (ii) at the time of tender.</p> <p>ii) Low light mode.</p> <p>iii) Capable of providing output with resolution of HD (1280x720) or better.</p> <p>b) Rear camera should have the following features:</p> <p>i) B&amp;W modes. OR ii) Color and B&amp;W modes with max latency of 300 mSec.</p>	<p>To be physically checked by BOO.</p> <p>To be physically checked by BOO. OEM to provide certificate for same.</p> <p>To be physically checked by BOO. OEM to provide certificate for latency.</p>
	<p>User to specify (i) or (ii).</p> <p>ii) Low Light mode</p> <p>iii) Capable of providing output with resolution of HD (1280x720) or better.</p>	<p>To be physically checked by BOO</p> <p>To be physically checked by BOO. OEM to provide certificate for same.</p>
3	<p><b>HP (HEARING PIECE):-</b></p> <p>a) Should be of miniature make with minimum dimensions of 22 x 28 mm.</p> <p>b) Should be made of flexible and water proof membrane.</p> <p>c) Should have minimum impedance rating of 8 Ω with maximum wattage of 2 watts.</p>	<p>To be physically checked by BOO</p> <p>To be physically checked by BOO.</p> <p>OEM certificate to be provided.</p>
4	<p><b>LEDs:-</b></p> <p>a) Should have high intensity white LED lights and high intensity infra-red LED lights.</p> <p>b) The LED lights should have minimum brightness of 01 watt.</p>	<p>To be physically checked by BOO.</p> <p>OEM certificate to be provided and to be physically checked by BOO.</p>
5	<p><b>COLLAR:-</b></p> <p>a) The collar should have a curved loop shape.</p> <p>b) Collar should be made of flexible and elastic material.</p> <p>c) It should have minimum dimensions of 545 mm</p>	<p>To be physically checked by BOO.</p> <p>To be physically checked by BOO</p> <p>To be physically checked by BOO.</p>

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	(length) and 35mm (width) and max weight of 200 gm	
6	<b>POUCH:-</b> a) It should be made of best quality soft fabric with water proofing feature, which will touch with dog's body.  b) Should have provision of zip fastened cover.	To be physically checked by BOOs.
7	<b>DOG TRANSMITTER:-</b> a) Should have provision of operating modes of audio and video transmission. b) Should have 1x built in recorder with micro SD card of 128 GB maximum capacity. c) Should have radio-frequency output power in the range of 60-250 mW. d) Should have maximum dimensions of 80 mm x 60 mm x 20 mm (L x W x D). 10% tolerance is acceptable. e) Should be capable of operating between temperature range of 0° C to 50° C.	To be physically checked by BOO.  To be physically checked by BOO  To be physically checked by BOO. OEM to provide certificate for same.  To be physically checked by BOO.
8	f) The eqpt should have an operating range of min 300 m in BUA (Built up area) and 500m in open terrain. <b>RECEIVER:-</b> a) Should have sensitivity rating of at least 90-dBm. b) Should have facility of recording with a memory of 64 GB or better. Both in-built or extendable memory is permissible. c) Should be capable of recording time of at least 10 hrs.	Firm to provide lab certificate from any NABL accredited or any international accredited lab for same.  To be physically checked by BOO.  OEM certificate to be provided.  To be physically checked by BOO.  To be physically checked by BOO.

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	d) Should have LCD/LED screen of at least 4.5 inches size.	To be physically checked by BOO.
	e) Should have maximum dimensions of 165 mm x 130 mm x 30 mm (L x W x D). 10% tolerance is acceptable.	To be physically checked by BOO.
	f) Should be capable of operating between temperature range of 0° C to 50° C.	Firm to provide lab reports from any NABL /Internationally accredited lab for same.
	g) Should have internal battery with a back up of at least 2 hrs and capable of charging with supplied external AC/DC converter.	To be physically checked by BOO.
	h) Should have 2 channel stereo audio with band width between 20 Hz to 6 kHz.	To be physically checked by BOO.
	i) Should be at least capable of video standards of HD with minimum resolution of 1280 x 720 and fps of 25 or better.	To be physically checked by BOO. Firm to provide OEM certificate for same.
	j) Should have facility of data encryption and password.	To be physically checked by BOO.
9	<b>DIGITAL RADIO:-</b>	
	a) Should have UHF (Ultra High Frequency) frequency range between 400-470 MHz.	To be physically checked by BOO and OEM certificate to be provided for same.
	b) Should have channel capacity of 256 with 16 zones with 16 channels per zone.	To be physically checked by BOO.
	c) Should have maximum dimensions of 125 mm x 60 mm x 25 mm (L x W x D).10% tolerance is acceptable.	To be physically checked by BOO.
	d) Weight should be less than 165 grams.	To be physically checked by BOO.
	e) Should be supplied with battery of at least 1800 mAh capacity with run time of at least 9 hrs on analogue mode and 11 hrs on digital mode.	To be physically checked by BOO.
10	<b>WRIST SCREEN:-</b>	
	a) Should be rugged and made of ABS (Acrylonitrile Butadiene Styrene) or any better	To be physically checked by BOO and OEM certificate to be provided for same.



<p>technology.</p>	
<p>b) Screen should be TFT or higher, have minimum size of 3 inches with resolution of 320 x 240.</p>	<p>To be physically checked by BOO and OEM certificate to be provided for same.</p>
<p>c) Should be supplied with battery of minimum 200 mAh capacity with 5V/1000mA charger.</p>	<p>To be physically checked by BOO.</p>
<p>d) Weight of the monitor should not exceed 160 grams.</p>	<p>To be checked physically by BOO.</p>
<p>e) Should be capable of operating between temperature range of 0° C to 50°C.</p>	<p>Firm to provide lab certificate from any NABL accredited or any international accredited lab for same.</p>
<p>f) Should be supplied with enclosed strap with minimum length of 20 cm.</p>	<p>To be physically checked by BOO.</p>
<p>g) Should be capable of audio and video output.</p>	<p>To be physically checked by BOO.</p>
<p>h) Should have battery back-up of minimum 12 hrs, when working continuously.</p>	<p>To be physically checked by BOO.</p>
<p>i) One additional battery and one power bank of minimum 5000 mAh should be provided.</p>	<p>Firm to provide undertaking certificate for same.</p>
<p><b>11 ADDITIONAL PARAMETERS:-</b></p>	
<p>a) Warranty – 2 years.</p>	<p>Firm to provide an undertaking certificate for same.</p>
<p>b) Product should be provided with a rugged, heavy duty carrying case which should be water resistant.</p>	<p>To be checked physically by BOOs by following test:-  <u>Hard Carrying Case:-</u> Firm to provide a rugged hard carrying case, which will sustain a drop test from 1m height on a hard surface. No deformation and breakage of box is acceptable. Equipment to be checked for operational use post drop test.                      OEM to provide certificate for its water resistance capability and to be checked physically by BOOs also.</p>
<p>c) Should provide Operating manual in English.</p>	<p>To be physically checked by BOO.</p>

d) Provision to incorporate any future updates in software.	OEM certificate to be provided.
e) It should be water resistant with IP-67 grading	Firm to provide any NABL/International accredited lab certificate for same.
f) Total weight of system to be worn by K9 should be less than 350 gm (mask-150 gm, collar-200gm).	To be physically checked by BOO.
g) The eqpt should have an operating range of min 300 m in BUA, 500m in open terrain.	To be physically checked by BOO.

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