

Q. Mahapatra Sr. Secy

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HQ DG BSF N DELHI
Office of IG (Prov)
Dv No. 3994
Date 4-12-12

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F. No. IV-21011/39/2009-Prov.I
Bharat Sarkar/Government of India
Griha Mantralaya/Ministry of Home Affairs
PM Division/Prov. I Desk

26, Man Singh Road, Jaisalmer House
New Delhi, Dated: 21st November, 2012

To,
DsG : AR (through LOAR), BSF, CISF, CRPF, ITBP, SSB, NSG & BPR&D.

Subject : QRs and Trial Directives for Multi-purpose Surveillance Camera

The QRs and Trial Directives in respect of Multi-purpose Surveillance Camera as per Annexure have been accepted by the Competent Authority in MHA

2. Henceforth, all the CAPFs should procure the above items required by them strictly as per the laid down Technical Specifications/QRs.

Encl: As above

Yours faithfully,

(S. B. Nanda)
Under Secretary to the Govt. of India
Tel : 23381278

P. N. Singh

DIG (Prov)

IA

u/n

Copy forwarded for necessary action to :-

- (i) Director, NIC, MHA : It is requested to host the QRs and Trial Directives (soft copy attached) on the MHA website (under the page of Organisational Set up-Police Modernisation Division- Qualitative Requirements)

Ritesh Kumar
21/11/12

(Ritesh Kumar)
Section Officer (Prov.II)

Copy to : Director (Procurement), MHA.
Copy for information to : PS to JS (PM)

DC (AIA)

Provide copy to SIW
SM

DM

Control No.	
DC (AIA)	<u>10812</u>
CO (S. O.)	
Serial No.	<u>1175</u>

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DIRECTOR GENERAL BORDER SECURITY FORCE

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(PROVISIONING DIRECTORATE)

The Sub-group of Technical Experts on Surveillance Equipments constituted by MHA vide their letter No. IV-17017/18/2011-Prov-I dated 05 Jul 2002 held its meeting at BSf headquarters on 25 Aug 2011, 02 Sep 2011 and 27 Sep 2012 to formulate the fresh QRs of Multipurpose Surveillance Camera as desired by MHA vide their letter No. IV-21011/4/2010-Prov-I dated 09 Jun 2011 and UO No. IV-21011/39/2009-Prov-I dated 14 Aug 2012.

After detailed deliberations the referred Sub-group has finalized the QRs and their Trial Directive of Multipurpose Surveillance Camera which are as under:-

QRs OF MULTIPURPOSE SURVEILLANCE CAMERA

S No	<u>PARAMETERS</u>	
1.	Camera (Body only)	
(a)	Type	Single Lens Reflex Digital Camera
(b)	Resolution	16.2 Mega Pixel or Higher
(c)	Screen Size (Inches)	3" (Minimum)
(d)	Optical View Finder	Anti fog view finder eye piece
(e)	Shutter Speed (Seconds)	30 Sec-1/8,000 Sec.
(f)	Optical Sensor Type	CMOS, Full frame
(g)	USB Connectivity	High speed USB 2.0 and TV Connectivity
(h)	Storage Media/Type of Card	CFC Type, SD minimum 16 GB
(i)	Compatibility	Latest Windows compatible
(j)	Built in flash	TTL balanced fill flash
(k)	Focus Adjustment	Auto and Manual.
(l)	Battery Type	Rechargeable Li-ion Battery
(m)	Weight (Grams)	Less than 2 kg.
(n)	Metering	TTL full aperture exposure metering
(o)	Exposure mode	Auto, Auto Shutter priority, Auto Aperture priority Manual
(p)	ISO	200 to 12800 or better
(q)	Environmental Conditions	Operating temperature : - 20 degree C to + 50 degree C.

(h)	Quick Charger for camera battery.		
(j)	U V filter		
(k)	Additional battery for camera		
5.	<u>Casing.</u>		
(a)	Soft casings for camera body, lenses, night vision attachments and individual accessories.		
(b)	Rugged hard suitcase type casing for the entire system.		
6.	<u>Literature.</u> Operating and Technical literature for each discrete component of system, in English and Hindi language.		
7.	<u>Tools and Spares</u> Tool set and user changeable spares of critical items to be provided. Preservation and maintenance equipment to be provided.		
8.	<u>Demonstration and Training.</u> Demonstration of the complete system to be given in Delhi on no cost no commitment basis before acceptance of the equipment. In situ training of users for 14 days on operation, maintenance, fault finding and user level repairs.		
9.	<u>Repair Cover.</u> Repair Cover to be made available ex Delhi. Down time not to exceed 5 days from the time of reporting, without penalty.		
10.	<u>Life and Warranty.</u> Vendor to specify life of system component wise on acceptance of the equipment. Vendor to accordingly provide warranty and AMC facilities for the specified life Minimum specified life for entire system should not be less than Five years excluding Image Intensifier Tube. The life of Image intensifier should at least 10,000 hours of use or more.		
11.	<u>Qualitative Requirement fore Mobile Data Processing Unit.</u>		
	Srl No.	Specification	Remarks
	i.	Operating System	Genuine Windows 7 Professional or latest
	ii.	Processor	Intel core i5 or better
	iii.	Memory (RAM)	4 GB or more
	iv.	Hard Disk Drive	500 GB or more
	v.	Wireless LAN	Wi-Fi Link 5100 or better
	vi.	Blue tooth	Version 2.0 + EDR or better
	vii.	LAN	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab
	viii.	Modem	Inbuilt
	ix.	Sound	WAVE and MIDI playback, Intel high definition audio subsystem support.

**TRIAL DIRECTIVE
FOR**

MULTIPURPOSE SURVEILLANCE CAMERA

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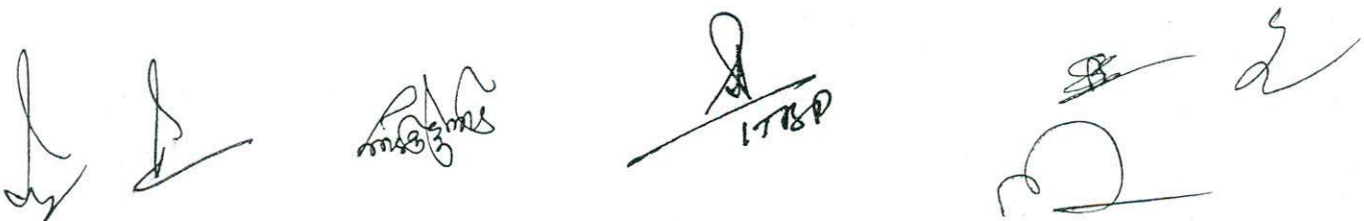
INTRODUCTION:-

Multi Purpose Surveillance Camera is a camera used to observe the target during day & night. It consists of colour CMOS camera for day surveillance and Image Intensifier Tube based attachment for Night surveillance. It is cells / battery operated and has different mounting lenses or attachments to enhance the features. It is light weight, tripod mounted surveillance camera.

There is a provision of mobile data processing unit to edit the images. One can also store the images on the hard disc memory of the mobile data processing unit. Mobile data processing unit is nothing but is a ruggedized PC which has all the facilities of image editing and storage. With the help of optical Zoom attachment, one can identify a human target during night from a distance of 1 Km.

AIM:-

To frame trial directives to facilitate Board of Officers to carry out physical/technical evaluation of Tender sample of Multi Purpose Surveillance Camera at the time of procurement.

The bottom of the page contains several handwritten signatures and initials. From left to right, there are two distinct signatures, a set of initials that appear to be 'msb', a signature with 'ITBP' written below it, and another signature with a large circular flourish.

TRIAL DIRECTIVE FOR MULTIPURPOSE SURVEILLANCE

CAMERA

Srl no.	Parameter	specifications	Trial procedure suggested for BOOs	Result expected / desired	Complied / Not Complied
1.	Camera (Body Only):				
a)	Type	Single Lens Reflex Digital Camera.	Check the Digital Camera for Single Lens Reflex (SLR) type Physically and also check the supporting documents produced by the firm to verify it.	The equipment must have Single Lens Reflex Digital Camera.	
b)	Resolution	16.2 Mega Pixel or Higher.	The firm should provide National / International accredited Lab report/ certificate for the resolution.	Check the national/ international accredited lab test report for the same. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab.	
c)	Screen size (Inches)	3" (Minimum).	Measure the screen size diagonally with the help of measuring scale.	The screen size must be 3" (Minimum).	
d)	Optical View Finder	Anti fog view finder eye piece.	<ul style="list-style-type: none"> ➤ Physically check the view finder in the foggy weather for anti fog feature. ➤ The firm should also provide National / International accredited Lab report/ certificate for the same. 	<ul style="list-style-type: none"> ➤ Fog/moisture must not be appears on the view finder screen as obstacle in the view. ➤ Check the national/ international accredited lab test report for the same. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab. 	
e)	Shutter Speed (Seconds)	30 Sec - 1/8000 Sec.	The firm should provide National / International accredited Lab report/ certificate for the resolution.	Check the national/ international accredited lab test report for the same. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab.	

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k)	Focus adjustment	Auto and manual.	<ul style="list-style-type: none"> ➤ Select a target at a distance of more than 50 meters away. Focused focus adjustment control or key. ➤ Similarly, select the same target and focus it the target with the help of provided auto focus mode. 	The target must be focussed to a sharp focussed image manually and automatically with the help of respective control / key.	
l)	Battery type	Rechargeable Li-ion Battery.	Physically Check the type of Battery provided.	Battery must be Rechargeable and Lithium-ion.	
m)	Weight (Gms)	Less than 2 Kg.	Measure the weight with the help of weighing machine.	Weight of the camera must be less than 2 kg.	
n)	Metering	TTL full aperture exposure metering.	<ul style="list-style-type: none"> ➤ Switch 'ON' the camera with flash and take a snap of an object at a distance of Minimum 30 feet away during low light condition i.e. during sun-rise or sun-set. ➤ The firm should also submit supporting document for verification of TTL balanced fill Flash. 	<ul style="list-style-type: none"> ➤ The image captured must have all the details of the scene clear and full of contrast especially shadow portion. 	
o)	Exposure mode	Auto, Auto Shutter priority, Auto Aperture priority Manual.	Check the camera from different distances for Auto exposure, Auto Shutter priority and Auto & manual Aperture priority.	The camera must have Auto exposure, Auto Shutter priority, Auto & manual Aperture priority.	
p)	ISO	200 to 12800 or better	The firm should submit National / International accredited Lab report / certificate in respect of the same.	The national/ international accredited lab test report must confirm the ISO from 200 to 12800 or better. In case of any doubt in the test report, the veracity of the same may be checked	

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3. Night Vision Attachment. (Qty 1 per camera)			
a)	Image Intensifier Tube: All parameters of II Tube mentioned below should be supported by certificate of II Tube manufacturer and data sheet of each II Tube must be provided.	<ul style="list-style-type: none"> ➤ Send the equipment to verify/check the QRS Para 3 (a) (i) & (ii) to IRDE Dehradun or any other institution where such testing facilities is available and check the report submitted by the IRDE or other institution. ➤ The firm should submit OEM certificate/report in respect of QRS Para 3 (a) (iii) to (v) from original manufacturer of II Tube. 	The certificate /reports from IRDE Dehradun or any other institution and OEM must confirm the QRS Para 3 (a) (i) to (v).
	i) Resolution	64 lp/mm or better	
	ii) Signal to Noise Ratio (SNR)	22 or better	
	iii) Mean Time To Failure (MTTF)	Minimum operational hours. 10,000	
	iv) II Tube should be a Military grade		
	v) It should have inbuilt AGC & BSP		
b)	Detachable assembly compatible with camera and Lenses above.	Physically Check the compatibility of Detachable assembly with camera and Lenses above.	Should have Detachable assembly compatible with camera and Lenses above.
c)	Built in battery compartment.	Check built in battery compartment Physically.	Must have built in battery compartment.
d)	Built in protection from over illumination.	Check the system for over illumination protection due to excess light exposure.	It must have built in protection from over illumination.
e)	Battery	Check the operation of Night vision attachment on Rechargeable Li-ion battery/cell provided.	Battery provided must be Li-ion, rechargeable and with quick charger.
	Rechargeable Li-ion cell/battery with quick charger.	Check the charger to charge fully discharged battery within 2 to 3 hrs.	
f)	Coaxial Laser illuminator with a range greater than 1000 meters for identification of human target in pitch dark night conditions using 2400 mm lens mentioned above.	<ul style="list-style-type: none"> ➤ Check the system for Coaxial Laser illuminator. ➤ Place a human target at a distance of 1000 meters during pitch dark night condition. ➤ Switch 'ON' the Laser illuminator. ➤ Check and identify the human target by using 2400 mm lens on the system. 	<ul style="list-style-type: none"> ➤ The system must have Coaxial Laser illuminator for 1000 meters. ➤ The human target must be identified from a distance of 1 Km in pitch dark night conditions using 2400 mm lens mentioned above.

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<p>i) U V Filter.</p>	<ul style="list-style-type: none"> ➤ Ensure one number UV Filter provided with the camera. ➤ The firm should submit National / International accredited Lab report/ certificate in respect of Ultra Violet filter. 	<ul style="list-style-type: none"> ➤ One number UV Filter must be provided with the system. ➤ A National / International accredited Lab certificate/ report must confirm the filter for Ultra Violet exposure. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab. 	
<p>j) Additional battery for camera.</p>	<p>Ensure one number additional rechargeable Li-ion battery is provided with the camera.</p>	<p>One number additional battery must be provided for camera.</p>	
<p>5. Casing:</p> <p>a) Soft casing for camera body, lenses, night vision attachments and individual accessories.</p>	<p>Check the camera soft casing to accommodate the camera body, lenses provided as per the QRS Para 2, night vision attachments and all other accessories mentioned in the QRS Para 3 & 4 respectively.</p>	<p>Soft casing must be provided to accommodate the camera body, lenses, night vision attachments and individual accessories safely & comfortably.</p>	
<p>b) Rugged hard suitcase type casing for the entire system.</p>	<ul style="list-style-type: none"> ➤ Ensure a hard suitcase type casing is provided to accommodate the entire system properly. ➤ The firm should submit National / International accredited Lab report/ certificate in respect of ruggedness of the hard suitcase type casing. 	<ul style="list-style-type: none"> ➤ The entire system must be supplied / provided in a hard suitcase type casing properly. ➤ A National / International accredited Lab certificate/ report must confirm the ruggedness of the hard suitcase type casing. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab. 	

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11. Qualitative Requirement for Mobile Data Processing Unit:			
S No.	SPECIFICATION:		
i.	Operating System	Genuine Windows 7 Professional or latest	Check the mobile data processing unit for Windows Operating System.
ii.	Processor	Intel core i5 or better	Check the processor in the Mobile data processing unit. The mobile data processing unit must have processor 'Intel core i5 or better'.
iii.	Memory (RAM)	4 GB or more	Check the RAM installed in the motherboard. The RAM must be minimum 4 GB or more.
iv.	Hard Disk Drive	500 GB or more	Check the capacity of the Hard Disk Drive installed. Hard Disc Drive must be minimum 500 GB or more.
v.	Wireless LAN	Wi-Fi Link 5100 or better	Check the unit for installed wireless LAN. It must have Wi-Fi link LAN 5100 or better.
vi.	Blue tooth	Version 2.0 + EDR or better	Check the unit for Blue tooth & its version. Blue tooth installed must have version 2.0 + EDR or better.
vii.	LAN	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab.	Check the LAN configuration. LAN must be of IEEE 802.3, 802.3U, 802.3ab.
viii.	Modem	Inbuilt	Check the unit for inbuilt modem. Unit must have inbuilt modem.
ix.	Sound	WAVE and MIDI playback, Intel high definition audio subsystem support.	Check the unit for Intel high definition audio subsystem support and for Wave and Mini playback facility. The unit must have Wave and Midi playback options and Intel high definition audio subsystem support.

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