F.No. P-63013/24/2013-Ord/BSF
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 12 August, 2014

To,

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

Subject: QRs and Trial Directive for Mini Surveillance Control Centre.

The QRs and Trial Directives in respect of Mini Surveillance Control Centre as per Annexure have been accepted by the Competent Authority in MHA.

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

Yours faithfully,

Encl: as above

12/8/14
(M.K. Chahar)
Under Secretary to the Govt of India
Tel: 23381278

Copy forwarded for necessary action to :-

The Section Officer (IT), MHA: It is requested to host the QRs and Trial Directives (soft copy attached) on the MHA website (under the page of Organizational Set up- Police Modernization Division- Qualitative Requirement under Surveillance Equipment.

(R.K. Soni)
Section Officer (Prov-I)

Copy to: Director (Procurement), MHA.

DIRECTOR GENERAL BORDER SECURITY FORCE
(PROVISIONING DIRECTORATE (ORD SECTION)

The Sub-group of Technical Experts on Surveillance Equipments 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 25th Oct 2013, 02 Jan 2014 and 03 Mar 2014 to formulate the QRs of 'Mini Surveillance Control Centre.

After detailed deliberations the referred Sub-group has finalized the QRs of 'Mini Surveillance Control Centre which are as under:-

QUALITATIVE REQUIREMENT OF MINI SURVEILLANCE CONTROL CENTRE

S/ No	Qualitative Requirements		
1.	**Introduction**		
	(a)	The system is required for integration of multiple Analog and IP cameras for controlling surveillance of the target area.	
	(b)	The system should be lightweight and compact for ease of carriage and deployment.	
2.	**Transmitter**		
	(a)	**Transmitter**	
		(i)	The transmitter should be compact and **lightweight** such that it can be carried by a Soldier during operation. **Over all weight of transmitter, accessories and battery pack not to exceed 3 Kg.**
		(ii)	Should incorporate suitable Digital Transmission Technology to provide video transmission ranges of **500 meter or better** in Non Line of Sight environment.
		(iii)	**The power output** of the transmitter should be **1 Watt** or better.
		(iv)	**The form factor of the transmitter should be compact, with least number of wires and all components should be hermetically sealed in a single unit.**
		(v)	The transmitter should have suitable **video in ports** to support analog and IP cameras.
		(vi)	The transmitter should have the provision of being operated on rechargeable batteries and also on **220 V AC**.
		(vii)	Rechargeable battery pack for the transmitter should offer **6 hours of endurance or better**. Spare rechargeable battery pack to be provided.

		(viii)	Suitable **Battery Charger** should be provided to charge the transmitter batteries through AC/DC.
		(ix)	The transmitter should be able to operate from -10 degree Celsius to 50 degree Celsius.
		(x)	The Transmitter should comply to **IP 67** level.
		(xi)	The transmitter, battery pack, antennas and battery charger should be supplied in **suitable hard and rugged** box for ease of carriage.
		(xii)	The transmitter should offer **128 bit** coding or better.
		(xiii)	Universal **interface** cable to support a variety of cameras should be provided.
		(xiv)	The transmitter should offer **MPEG-2** and **MPEG- 4** video compressions or better.
		(xv)	The transmitter should operate in license free (L or S) band.
		(xvi)	The Transmitter should offer bandwidth option of 8 Mhz, 6Mhz and 1.25 Mhz .
		(xvii)	The transmitter should offer a **latency** of 1 sec or lower.
	(b)	**Receiver**	
		(i)	Receiver system should be secured in a **suitable hard and rugged** box comprising of 4 channel receivers with 15" display and two single channel receiver with display in similar separate boxes.
		(ii)	The receiver system should be a diversity receiver to eliminate fade and multi path effects.
		(iii)	The receiver system should have suitable antennas to receive and display Six Video feeds simultaneously.
		(iv)	The receiver should have provision of high gain directional antennas alongwith suitable cables to enhance the transmission ranges. High gain directional antennas should be supplied with the receiver.
		(v)	The receiver should be able to operate on internal battery pack for **6 hours** or better.
		(vi)	There should be a provision to power the Receiver through **220 V AC.**

		(vii)	The receiver should have inbuilt facility to record minimum 1 TB per channel and play the video surveillance feeds for analysis and evidence purposes.
		(viii)	The receiver should offer a video out port for further connection with essential display device e.g. TV.
		(ix)	The Receiver should comply to **IP 67.**
		(x)	The receiver with all its accessories should be such that it can be carried by a single Soldier and should be in a Polypropylene water proof hard transportation box for deployment and safety during operations.
		(xi)	The receiver should offer IP interface for IP streaming and network connections.
3	**Literature** Operating and Technical literature for each discrete components of system should be in English language		
4	**Training** Demonstration of one set of complete system with its full accessories should be arranged at buyers premises on NO cost NO commitment basis. In situ training of users for three day on operation, maintenance, fault finding and user level repairs.		

(B. C. JOSHI)
DIG, SIW, BSF

(A CHATURVEDI)
GCTSC NSG

(R. K. KUMBHARE)
SSB.

(RAJESH EKKA)
DY-DIR, BCPL

(M. S YADAV)
AC, CRPF

INSPR(E) RAJEEV DAHIYA,
CISF

SIG
Landbarder
SIW BSF

APPROVED / ~~NOT APPROVED~~

(D. K. PATHAK, IPS)
DIRECTOR GENERAL
BORDER SECURITY FORCE

TRIAL DIRECTIVE OF MINI SURVEILLANCE CONTROL CENTRE

S/ No	Qualitative Requirements			Trial Directive
1.	**Introduction**			
	(a)	The system is required for integration of multiple Analog and IP cameras for controlling surveillance of the target area.		To be checked physically by BOO
	(b)	The system should be lightweight and compact for ease of carriage and deployment.		To be checked physically by BOO
2.	**Transmitter**			
	(a)	**Transmitter**		
		(i)	The transmitter should be compact and **lightweight** such that it can be carried by a Soldier during operation. **Over all weight of transmitter, accessories and battery pack not to exceed 3 Kg.**	Check physically with the help of weighing machine (with least count of 1g). keep the transmitter, battery pack and the accessories on the weighing pod and the weight of everything included should not exceed 3kg
		(ii)	Should incorporate suitable Digital Transmission Technology to provide video transmission ranges of **500 meter or better** in Non Line of Sight environment.	Put the transmitter at a distance of 500m from the receiver. The video transmission should work fine, using this network.
		(iii)	**The power output** of the transmitter should be **1 Watt** or better.	OEM certificate to be provided.

		(iv)	**The form factor of the transmitter should be compact, with least number of wires and all components should be hermetically sealed in a single unit.**	To be checked physically by BOO
		(v)	The transmitter should have suitable **video in ports** to support analog and IP cameras.	To be checked physically by BOO
		(vi)	The transmitter should have the provision of being operated on rechargeable batteries and also on **220 V AC**.	To be checked physically by BOO
		(vii)	Rechargeable battery pack for the transmitter should offer **6 hours of endurance or better**. Spare rechargeable battery pack to be provided.	Charge the battery to full capacity and then discharge by turning ON the transmitter while the receiver is receiving the video. The battery should last for at least 6 hours. Spare battery should be physically checked by BOO
		(viii)	Suitable **Battery Charger** should be provided to charge the transmitter batteries through AC/DC.	To be checked physically by BOO
		(ix)	The transmitter should be able to operate from -10 degree Celsius to 50 degree Celsius.	Certificate to be produced by a national or international accredited lab.
		(x)	The Transmitter should comply to **IP 67** level.	Certificate to be produced by a national or international accredited lab.

		(xi)	The transmitter, battery pack, antennas and battery charger should be supplied in **suitable hard and rugged** box for ease of carriage.	To be checked physically by BOO
		(xii)	The transmitter should offer **128 bit** coding or better.	OEM certificate to be provided.
		(xiii)	Universal **interface** cable to support a variety of cameras should be provided.	To be checked physically by BOO, it should support BNC/RCA type connector for analog and RJ45 for IP cameras.
		(xiv)	The transmitter should offer **MPEG-2** and **MPEG- 4** video compressions or better.	Create an rtsp IP stream and put the URL of the stream into VLC player on a windows or a linux laptop. VLC codec info tab should be checked for video compression. It should be MPEG 2 or MPEG 4
		(xv)	The transmitter should operate in license free (L or S) band.	To be checked physically by BOO
		(xvi)	The Transmitter should offer bandwidth option of 8 Mhz, 6Mhz and 1.25 Mhz .	OEM certificate to be provided.
		(xvii)	The transmitter should offer a **latency** of 1 sec or lower.	Check OEM Certificate
	(b)	**Receiver**		
		(i)	Receiver system should be secured in a **suitable hard and rugged** box comprising of 4 channel receivers with 15" display and two single channel receiver with display in similar separate boxes.	To be checked physically by BOO

		(ii)	The receiver system should be a diversity receiver to eliminate fade and multi path effects.	To be checked physically by BOO
		(iii)	The receiver system should have suitable antennas to receive and display Six Video feeds simultaneously.	Connect six cameras to the trans-receivers Setup the receivers to receive videos from the six setup transmitters at the same time in the four channel and two single channel receivers. Connect the receiver output to a multi channel analog frame grabber, view the video from the frame grabber in VLC player. Codec info tab on VLC player should show the frame rate at which video is being captured
		(iv)	The receiver should have provision of high gain directional antennas alongwith suitable cables to enhance the transmission ranges. High gain directional antennas should be supplied with the receiver.	To be checked physically by BOO
		(v)	The receiver should be able to operate on internal battery pack for **6 hours** or better.	Charge the battery to full capacity and then discharge by turning ON the receiver while its receiving the video. The battery should last for at least 6 hours.
		(vi)	There should be a provision to power the Receiver through **220 V AC.**	To be checked in SIW, BSF lab

		(vii)	The receiver should have inbuilt facility to record minimum 1 TB per channel and play the video surveillance feeds for analysis and evidence purposes.	Empty Hard disk space to be physically checked by the BOO
		(viii)	The receiver should offer a video out port for further connection with essential display device e.g. TV.	Connect the video output port of the receiver to a display. The video being transmitted should be clearly visible on the TV/display.
		(ix)	The Receiver should comply to **IP 67.**	Certificate to be produced by a national or international accredited lab.
		(x)	The receiver with all its accessories should be such that it can be carried by a single Soldier and should be in a Polypropylene water proof hard transportation box for deployment and safety during operations.	To be checked physically by BOO
		(xi)	The receiver should offer IP interface for IP streaming and network connections.	To be checked physically by BOO
3	**Literature** Operating and Technical literature for each discrete components of system should be in English language			To be checked physically by BOO

Training Demonstration of one set of complete system with its full accessories should be arranged at buyers premises on NO cost NO commitment basis. In situ training of users for three day on operation, maintenance, fault finding and user level repairs.	Undertaking certificate to be provided to BOO

03/3/14
(B. C JOSHI)
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CISF

APPROVED / NOT APPROVED

3/14
(D. K. PATHAK) IPS
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