

No. IV-17017/13(i)/06-Prov.I
Government of India
Ministry of Home Affairs

Jaisalmer House, Man Singh Road,
New Delhi, 17.11.2006

To
The DGs: Assam Rifles/BSF/CISF/CRPF/ITBP/NSG/SSB/BPR&D

Subject:- Finalization of QRs/specifications for Electronic Security Gadgets.

The QRs of certain security related Equipments which belong to the following four categories have been finalized and accepted by the MHA:-

- (i) VIDEO SURVEILLANCE SYSTEM- List of items at Annexure 'A'
- (ii) ACCESS CONTROL SYSTEM - List of items at Annexure 'B'
- (iii) PERIMETER PROTECTION SYSTEM- List of items at Annexure 'C'
- (iv) INTRUSION DETECTION SYSTEM- List of items at Annexure 'D'

2. The QRs of all the individual's items mentioned at (Annexure A,B,C & D) are sent herewith.

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

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(Alok Mukhopadhyay)
Under Secretary(Prov-I)

Copy to:-

DD(Procurement),MHA

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1. PS to JS(PM),MHA
2. Dir(Prov), MHA

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VIDEO SURVEILLANCE SYSTEM

ANNEXURE - 'A' Page 1 To 21

TECHNICAL SPECIFICATIONS OF OUTDOOR SPEED DOME COLOUR CAMERA

1. Pick-up device -- 1/4 or 1/3 format, interline transfer, CCD image sensor
2. Horizontal resolution -- 520 TV Lines or better.
3. Sensitivity -- 1 Lx day mode or better
(Usable video) -- 0.05 Lx Night mode
4. Signal to noise ratio -- ≥ 50 dB
5. White balance -- Auto/Manual
6. Gain control -- Auto/Manual
8. Zoom -- 25 X optical with 8 X digital or more
9. Pan/Tilt -- 360° continuous pan, 0 to 90° tilt
10. Preposition Speed -- 360°/sec,
11. variable speed -- 120°/sec minimum
11. Features --
 - Sector/ titles
 - Pre-set positions – 99 or more
 - Alarm inputs / outputs
 - Auto tours – Recorded or preset
 - Pre-programmed tours
 - Password control
 - Privacy masking
12. Operating Temperature-- -10 °C to + 50 °C

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- 13. Humidity -- 0 to 80 % relative, non-condensing.
- 14. EMC -- CE, Immunity Safety CE
- 16. Mount -- Either Pole or Wall mount as required

OUT DOOR HOUSING FOR SPEED DOME CAMERA

- 1. Construction Aluminum cover, neoprene gaskets, UV-resistant polymer end caps, and all stainless steel hardware. The mount shall have mounting head adjustable 360° pan, 180° tilt.
- 2. Environmental - Shall meet IP 65 or better protection. It should have sun shield with thermostatically controlled heater blower kit.

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TECHNICAL SPECIFICATIONS OF DIGITAL VIDEO RECORDER (STAND ALONE)

Video Inputs	8 CH minimum (As specified up to 16 channels)
Video outputs	2 Monitors, one composite & one VGA
Video Format	NTSC/PAL
Display speed	480 fps or more
Display Mode	Full, Quad, combination multi-screen
Resolution	720x240 or better
Recording	240 fps or better (Real time, linear & ring recording up to 8 CH & should be able to specify record rate for each camera separately)
Playback speed	50 fps or better
Back up	HDD, DVD,
Pan/Tilt/Zoom	RS 232/485/422
Alarm	Sensor in - 8, out- 2
Audio	1 in/out
Network	RJ-45 (10/100 Ethernet)
Controller	IR-Remote Controller
Protocol	TCP/IP, etc
Power source	12- 24 VDC, 220 VAC
HDD Capacity	400 GB

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- Zoom Up to 4X
- Compression protocol MPEG 4
- Archiving DVD-R/RW
- Date/Time Stamp Should be available
- Video authentication Should have watermarking feature for detect of tampering.
- Search By time, date, event/motion, camera
- Programmable modes 4 or more- definite drift behavior like record rate, alarm handling, motion detection, should be set as per day/time
- Motion Detection yes, selectable area of scene, specification of direction of motion, speed sensitivity.
- Camera Titling 16 Character- user programmable
- Video loss Alarm
- It should have simultaneous display, recording, playback.
- Recording Recording should be event based/motion based operator triggered /scheduled
- It should be provided with remote viewer software.
- It should have USB ports.

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TECHNICAL SPECIFICATIONS OF PAN/TILT UNIT

It should be a light weight indoor Pan/Tilt unit for cameras.

- Power : 220 ± 10% VAC, 12 to 24 VDC
- Pan Speed : 6° per second or more
- Pan Travel : 345° with adjustable limit stops
- Tilt Speed : 4° per second or more
- Tilt Travel : 70° or more
- Maximum Load : For Pan – not less than 6 Kg
For Tilt - Not less than 4 kg
- Duty Cycle : Continuous for Pan & intermittent for Tilt

It should have dust proof seals

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TECHNICAL SPECIFICATIONS OF ZOOM COLOUR CAMERA

Image Pick-up Device	: 1/4" interline CCD
Effective Pixels	: 752(H) x 582(V) minimum
Resolution	: 520 Lines for Colour or better
S/N Ratio	: 50 dB or more
Illumination	: 0.5 Lux for normal mode @ F 1.6 or better 0.05 Lux for night mode @ F 1.6 or better
Gain Control	: Low, middle, high, off selectable
White Balance	: Auto & selectable
Electronic Shutter speed	: Auto/Manual selectable (- 1/50 - 1/1,00,000 sec)
OSD	: Built in
Motion Detection	: on/off selectable
Zoom	: 30X optical, 8X digital
Preset	: 8 or more positions
Flip	: Left, right, up & down
Irish control	: Auto/Manual selectable
Control Out put	: RS-485
Operating Tem.	: -5°C to 50°C
Weight	: not more than 800 gm

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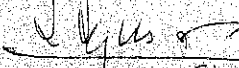
IR ILLUMINATOR WITH 30 M Range

1. Range : 30 meter (or As specified up to 50m)
2. Angle : 10°
3. Wavelength : 850 nanometer (some visible)
4. Power : 12 VDC
5. Operating Temp : 0° C to 45° C

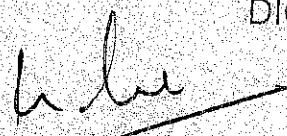
IR ILLUMINATOR WITH 18 M Range

1. Range : 18 meter (or As specified up to 50m)
2. Angle : 60°
3. Wavelength : 940 nanometer (Completely non-visible)
4. Power : 12 VDC
5. Operating Temp : 0° C to 45° C
6. It should have Day/Night IR On/Off feature.


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FIX COLOUR DAY/NIGHT CAMERA

- 1. Pick-up device -- 1/3-inch format, interline transfer, CCD image sensor
- 2. Horizontal resolution -- 520 TV Lines or better
- 3. Scene illumination
 - Color mode -- 0.6 lx at Usable picture
 - Monochrome -- 0.03 lx or better
- 4. Signal to noise ratio -- ≥ 48 dB minimum
- 5. Electronic Shutter -- Automatic On/off selectable
- 6. Aperture correction -- Horizontal & Vertical symmetrical
- 7. Backlight compensation -- Required auto with manual override
- 8. Video outputs -- Composite video - 1.0 V p-p, 75 ohm
- 9. Synchronization -- Internal/External Synchronization
- 10. Controls -- BLC: On/Off, AGC: On/Off, Auto Black: On/Off
- 11. Operating Temperature-- -10 °C to +50 °C at 90% humidity
- 12. EMC -- Relevant intentionally recognized standards of Immunity and safety
- 13. It should automatically switch to night mode in low light conditions.

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Auto iris vari-focal lens-

- 1. Image format -- 1/3-inch format
- 2. Focal length -- 3.5-8 mm
- 3. Iris range -- F1.8
- 4. Min. object distance -- 0.3m (1 ft)
- 5. Iris control -- DC.
- 6. Focus control -- Manual

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FIX INDOOR COLOUR CAMERA

- 1. Pick-up device -- 1/3-inch format, interline transfer, CCD image sensor
- 2. Active picture elements -- standard(752H x 582V)
- 3. Horizontal resolution -- 520 TV Lines or better
- 4. Scene illumination
Color mode -- 1 lx at Usable picture
- 5. Signal to noise ratio -- ≥ 48 dB minimum
- 6. Aperture correction -- Horizontal & Vertical symmetrical
- 7. Backlight compensation -- Center Zone photometry System
- 8. White Balance -- Auto tracking
- 9. Electro Iris range -- 1 to 50,000 lx (With F 1.2)
- 10. Video outputs -- Composite video - 1.0 V p-p, 75 ohm
- 11. Synchronization -- Line lock - for roll-free vertical viewing
- 12. Controls -- BLC On/Off, AGC On/Off,
- 13. Operating Temperature -- -10°C to 50°C
- 14. EMC -- All relevant immunity and safety standards

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Varifocal lens

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|-------------------------|----|-----------------|
| 1. Image format | -- | 1/3-inch format |
| 2. Focal length | -- | 3.5 - 8 mm |
| 3. Iris range | -- | F1.8 |
| 4. Min. object distance | -- | 0.3m (1 ft) |
| 5. Iris control | -- | DC. |
| 6. Focus control | -- | Manual |
| 7. 4-pin connector | -- | DC-iris |

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PIN HOLE CAMERA

Pick up device	1/3 " CCD image sensor
Resolution	380 TV Lines
Sensitivity	1 Lux

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DIGITAL VIDEO RECORDER CARD

1. No of channels 8 channels (or As specified from 4 to 16 Channels)
2. Frames per channel 25 f/s PAL per channel (Total- 200 f/s)
3. It should be able to work on Window XP, Window- 2000 etc.
4. It should have real time display, play back and recording (Triplex) simultaneously.
5. It should be provide local and remote surveillance.
6. It should have PSTN/ISDN modem/LAN connectivity.
7. It should have PTZ camera control.
8. It should have various recording modes.
9. It should have video motion detection feature.
10. The no. of frames per channel should be adjustable.
11. It should be possible to use the PC for other purposes as well and should not be dedicated only for DVR purpose.
12. It should have facility to zoom recorded images.
13. It should have date/time stamp for verification of authenticity of recorded material.

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TECHNICAL SPECIFICATIONS OF VIDEO CAMERA JAMMER

- Frequency Band : 900 MHz to 2.5 GHz
- Effective range : 30- 60 meter
- Input Power : 6-12 VDC
- Signal source : Synthesized
- Operating temp : -10 to 55 deg C
- Humidity : 80%
- Size : 20 cm x 19 cm x 55 cm Maximum

This should be capable to jam any wireless camera, wireless mic, Bluetooth

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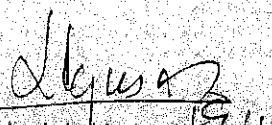
TECHNICAL SPECIFICATIONS OF DIGITAL KEYBOARD FOR DIGITAL VIDEO RECORDER &


- 1. Features
 - Control of Multiple DVRs & P/T/Z Cameras at the same time
 - Soft backlit keys with user friendly menu and easy to read display
 - Joystick for P/T/Z control of camera
 - Shall be interfaced to DVR for control of Camera selection and P/T/Z control.
 - LCD display of complete menu for selection of various functions

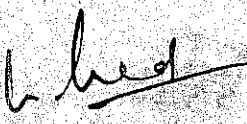
- 2. Connectors
 - Suitable for connectivity to DVR and preferably RJ11
 - Aux power, for extended distances
 - RS-232 port for remote programming

- 3. DVR and Keyboard should be compatible


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TECHNICAL SPECIFICATIONS OF LCD MONITOR

LCD Panel 40 inch TFT LCD (As specified)
 TV System PAL
 Resolution 1280 X 768 or better
 Aspect Ratio 16:9
 Brightness 500 Cd/sq m or more
 Contrast ratio 800:1
 Viewing angle 170° (H)/170° (V)
 Connector type 2 Speakers output
 1 VGA input
 1 Composite video input (BNC)
 Component Video input
 RF input
 S-Video Coaxial RF USB

Other features

Picture & Picture (PAP)
 RS-232C
 PAL
 Auto power on/off
 On screen menu
 Remote control
 Stand should be included
 CE, FCC Certified.

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TECHNICAL SPECIFICATIONS OF IP CAMERA

- Sensor : 1/3" or 1/4" CCD sensor
- Sensitivity : 0.5 Lux
- Monitoring : It should provide a real time monitoring via network (LAN/WAN) through built in webserver
- Image format : MPEG-4 & Motion JPEG, QVGA, VGA
- Frame rate : 25 fps or better (PAL)
- Image Control : Adjustment of brightness, contrast & colour, P.I.C. on/off, electronic Iris
- Resolution : 640X480 or better
- Motion Detection : Should have built in motion detection with pre & post alarm buffers.

The image should be viewed, recorded, played back and managed simultaneously through internet explorer.

It should have multi-level password protection to prevent unauthorized access.

It should support minimum 10 users to browse the camera simultaneously.

It should have scheduled & triggered event functionality, alert notification on e-mail IDs.

It should have inbuilt memory for recording half an hour in normal mode & slot for inserting higher capacity memory stick or card.

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Technical Specifications of Wireless System for Video Surveillance

The system should consist a transmitter receiver and connecting accessories so that remote camera signals could be connected to a monitor DVR.

TRANSMITTER-

It should be based on 2.4 GHz or 5.8 GHz audio/video transmission technology

It should be capable to send the camera signals to receiver at a distance of 5 km(or as specified by the tenderer).

It should have at least four independent channels.

It should have high performance antenna enabling efficient transmission.

It should be providing with brackets supporting transmitter and antenna.

RECEIVER-

It should be capable of receiving wireless signals from transmitter at a distance not less than 5 km (or as specified by the tenderer or as per requirement)

It should have at least four independent compatible channels.

It should have high performance antenna for reception.

It should be provided with brackets supporting receiver and antenna.

Other features-

It should be compatible to any type of Camera and DVR.

The transmission should not be affected by RF or any other radio transmission.

Frequency Band : Two to three bands between 5.8 GHz to 6.0 GHz
In the given frequency range.

- Operating Channels : At least 8 non- overlapping channels
- Transmit output power : Up to 100 mW
- Interfaces : RJ-45, 10/100 Base-Tx, Radio wave, Antenna N-male
- Antenna type : External High gain antenna
- Security system : Encryption
- Software support : GUI Interface, SNMP Network management interface, FTP

Optional Feature-

The system should be capable of controlling all the features of a dome camera like Pan/tilt/zoom etc. receiving end with all necessary accessories.

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Technical Specifications of Button Camera with DVR

CAMERA-

Image Sensor	1/3" or 1/4" CCD
Resolution	450 TV Lines
S/N Ratio	40 db min
Video System	NTSC/PAL
Illumination	0.3 Lux or better
Video output	1V p-p Composite at 75 Ohm
Audio output	2V p-p
Lens	4.3 mm approx.
Angle of view	70 degree min
Power	6-12 VDC

It should be a button type wired CCD Camera for covert surveillance.

The front covert lens should be interchangeable.

Complete power and cable accessories should be offered with the kit.

It should be provided with wireless kit.

PORTABLE TRANSMITTER AND RECEIVER KIT

Frequency Band	1200 MHz or 2400 MHz
Channel	At least two channels
Range	100 M
DC Power	6-12 V

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Battery life : 1.5 hrs min
 Battery charging time : 2 hrs max
 Weight : 100 gm max
 Dimension : 95X70X20 mm max.

PORTABLE DVR

Display : 2.4 TFT LCD
 Video input : NTSC/PAL
 Video recording : MPEG-4
 Resolution : 720X480 pixels @ 25 fps
 Memory : SD Memory card with 1 GB
 Recording time : 60 minutes min
 Audio recording : Yes
 Photo recording : Yes
 Audio/Video out : 3 in 1 AV Out put
 PC Interface : USD2.0
 Power : 5-9 DC
 Battery type : Li-Ion rechargeable
 Battery life : 60 Minutes min
 Weight : Not more that 100 gm

it should be provided with all essential accessories like remote control, USB & AV lead cable, Charger, Carrying case, earphone, user's guide, camera connector cable etc.

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