

Transformer Engineering Division

Date: 29/Sep/2010

Specification No: TRE/SPEC/001

Rev No : 00

Description: **IP based Video Surveillance System**

1	Camera	02 nos.	IP based PTZ Dome, Color, Indoor (as per attached specification)	As per Specification No: TRE/ SPEC/002 Rev 00
		08 nos.	IP based Fixed, Color, Indoor	As per Specification No: TRE/ SPEC/003 Rev 00
2	Server	1 no	Latest processor with 4GB RAM,300GB HD,Keyboard,Mouse,10/100/1000 gbps NIC,19" TFT Screen or higher, High end graphics acelerator card, Preloaded licenced OS along with restore CD	
3	External Storage attached to the server	1 no	Should be capable to store minimum 15 days backup online for 10 cameras at minimum 25 frames per second.. Should be scalable. size to be specified by the vendor	
4	Software	1 no	Video management system (capturing, storage, archieval, monitoring, administration & user access control) for min 32 Cameras	

Note

1. Installation & configuration of cameras, server, monitoring software & storage will be vendor's responsibility.
2. Vendor shall demo the full functionality of the system in real environment.
3. Provision of Network connectivity & power supply shall be made by BHEL Bhopal.
4. AMC charges for 3 years to be quoted separately.

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Date: 29/Sep/2010

Specification No: TRE/SPEC/003

Rev No : 00

Description: IP based Fixed, Color, Indoor Camera

Sno	Feature	Minimum requirement	Vendor compliance	Remark
1	Qty	08		
2	Camera type	IP based Fixed, Color, Indoor	Yes/No	
3	Camera Vision	Automatic Day/Night switchover with IR cut filter	Yes/No	
4	Zooming Range	zooming range minimum upto 150 meters	Pl specify range	
5	Image Sensor	1/3" EX-view CCD sensor	Yes/No	
6	Compression	MPEG4,MJPEG,H.264	Pl specify	
7	Encoding	Dual stream encoding	Yes/No	
8	Frames/second	Up to 30/25 fps at full D1 resolution	Yes/No	
9	Protocol support	NTFS,PAL	Yes/No	
10	Video resolution	640x480 or higher	Pl specify	
11	Perfomance	VGA	Pl specify	
12	Min Illumination	1 Lux at F 1.2	Yes/No	
13	Backlight compensation	Required	Yes/No	
14	Focus	Varifocal 4mm - 9 mm	Pl specify	
15	Audio	Bi-directional audio, G.711	Yes/No	
16	Alarm ports	2 alarm inputs, 1 relay output	Yes/No	
17	Motion detection	required	Yes/No	
18	Alarm control	On alarm, image should be sent by ftp,smtp	Yes/No	
19	Access level	Guest,admin,operator	Yes/No	
20	Security	IP filtering	Yes/No	
21	Protocol support	Compatible with TCP/IP, HTTP, ICMP, PPPoE, DHCP, SMTP,SNMP protocols	Yes/No	
22	Network interface	Ethernet(10/100 Base-T) , RJ-45	Yes/No	
23	View & control	View and control camera via Web server and Network Video Management software packages	Yes/No	
24	Temperature	10-60 degree	Yes/No	
25	Humidity	95% (Non-condensing)	Yes/No	
26	Power supply		Pl specify	
27	Mounting	including all wall mounting accessories, stand	Yes/No	
28	Certification	IP66, FCC, CE	Pl specify	
29	Warranty	2 years comprehensive (onsite/parts/labor)	Yes/No	

Transformer Engineering Division

Date: 29/Sep/2010

Specification No: TRE/SPEC/002

Rev No : 00

Description: IP based PTZ Dome, Color, Indoor

Sno	Feature	BHEL's minimum requirement	Vendor compliance	Remark
1	Qty	02		
2	Camera type	IP based PTZ Dome, Color, Indoor	Yes/No	
3	Camera Vision	Automatic Day/Night switchover with IR cut filter	Yes/No	
4	Optical zoom	12X or better	PI specify range	
5	Zooming Range	zooming range minimum upto 250 meters	PI specify range	
6	Image Sensor	Interline transfer 1/4" or better format CCD sensor	Yes/No	
7	Preset Tilt speed	0.5°/SEC to 90°/SEC (0-360°)	Yes/No	
8	Preset Pan Speed	0.5°/SEC to 300°/SEC (0-360°)	Yes/No	
9	Compression	MPEG4,MJPEG,H.264	Yes/No	
10	Video transfer	TCP, UDP(Multicast,Unicast)	Yes/No	
11	Video resolution	720x576 or higher	PI specify	
12	Performance	VGA	PI specify	
13	Connection users	MJPEG/MPEG4- 10 users	PI specify	
14	Encoding	Dual stream encoding	Yes/No	
15	Frames/second	Up to 30/25 fps at full D1 resolution	Yes/No	
16	Protocol support	NTFS,PAL	Yes/No	
17	Min Illumination	.1 Lux (Color), 0.1 Lux (B/W) or better (0.1 Lux, Day. , 0.01 Lux, Night)	Yes/No	
18	Tilt Travel	0 – 85° (0 – 90°)	Yes/No	
19	Back Light compensation	Required with black masking or other suitable technology	PI specify	
20	White balance	Auto	Yes/No	
21	Electronic shutter	Auto	Yes/No	
22	Shutter speed	1/60 - 1/120,000	Yes/No	
23	IR cut	Yes	Yes/No	
24	Audio	2-way, with 50 watt speaker with volume	Yes/No	

Sno	Feature	BHEL's minimum requirement	Vendor compliance	Remark
		control		
25	Motion	Pan/Tilt	Yes/No	
26	Preset	Min 32		
27	Audio	Bi-directional audio, G.711	Yes/No	
28	Alarm ports	2 alarm inputs, 1 relay output	Yes/No	
29	Motion detection	required	Yes/No	
30	Alarm control	On alarm, image should be sent by ftp,smtp	Yes/No	
31	Access level	Guest,admin,operator	Yes/No	
32	Security	IP filtering	PI specify	
33	Protocol support	Compatible with TCP/IP, HTTP, ICMP, PPPoE, DHCP, SMTP,SNMP protocols	Yes/No	
34	Network interface	Ethernet(10/100 Base-T) , RJ-45	Yes/No	
35	View & control	View and control camera via Web server and Network Video Management software packages	Yes/No	
36	Temperature	10-60 degree	Yes/No	
37	Humidity	95% (Non-condensing)	Yes/No	
38	Power supply	As per OEM's design, however generally AC 230 V @ 50Hz/12V or 24 V AC Rectifier and SMPS if DC supply	Yes/No	
39	Mounting	including all wall/Roof mounting accessories, stand	Yes/No	
40	Certification	IP66, FCC, CE	Yes/No	
41	Warranty	2 years comprehensive (onsite/parts/labor)	Yes/No	