

*Technical Specification*

**extended Video Recorder(XVR)-4, 8, 16, 32ch**

This product shall be manufactured by a firm whose quality system is in compliance with the ISO-9001 Products quoted should be of international repute & from any of Top global OEM as per latest IHS report All systems and components must be in compliance with FCC/CE/UL/RoHS requirements. The Offered Cameras, Recorder, VMS, Analytic shall be from the same OEM to ensure seamless integration & better support. However keeping in mind the future scalability, the offered VMS & Cameras should be ONVIF S compliant.

S.N	Parameter	Specification	Compliances
1	Compatibility	Analog cameras (mandatory), AHD, CVI, TVI (minimum one out of the three other than itself)	
2	Main Processor / Operating System	Embedded	
3	System Resources	Pentaplex function: recording, playback, live view, backup, remote access over IP network	
4	Recorder Control Options	Video Front panel, Virtual Keyboard (Both RS485 and IP), IP Network, USB mouse	
5	Analog / HD Camera Input	Minimum 4/8/16 Video channel; BNC	
6	IP Camera Input	04 Ch. HD + 2 IP Ch. (Total 6 IP Channel each upto 6 MP) 08 Ch. HD + 4 IP Ch. (Total 12 IP Channel each upto 6 MP) 16 Ch. HD + 8 IP Ch. (Total 24 IP Channel each upto 6 MP) 32 Ch. HD + 16 IP Ch. (Total 48 IP Channel each upto 6 MP)	
7	Recorder Video Output	Minimum 1 VGA, 1 HDMI	
8	Recorder Audio Input	Minimum 1 audio channel, BNC or RCA	
9	Recorder Audio Output	Minimum 1 audio channel, BNC or RCA	
10	Recorder Bidirectional Talk	1 channel RCA	
11	Display Screen Mode	1,4,8,9,16,32 ALL (Window) as per recorder channels	
12	Camera Scheduling	Supported (Continuous/Motion/Event based)	
13	On Screen Display	Date, Time , Camera Title, Video loss alert, motion detection alert, recording, camera lock alert, camera tampering, camera masking.	
14	Video/Audio Compression	H.265/H.264/G.711 respectively (One Channel) or higher	

15	Image Resolution	4 MP/1080p/720p/VGA/WD1/4CIF/CIF or better with selectable fps.	
16	Encoding Stream	4 MP H.264@15 fps; 1080p H.264@25 fps (P)/30 fps (N) H.264@25 fps (P)/30 fps (N) in all channels with selectable fps	
17	Video Encoding Bit Rate	Analog video: 32~2048kb/s or higher, IP video: 32~4096kb/s or higher	
18	Image Quality	6 levels (VBR/ CBR)	
19	Recording Mode	Manual, Schedule, Regular, Motion detection, Camera blank, Video loss, Stop Recording	
20	Recording Priority	Manual; Alarm; Motion Detection & Regular	
21	Recording Interval	Pre-record: 1sec to 30 sec., Post-record: 10sec ~ 5 minutes	
22	Alarm Input	Supported Minimum 4	
23	Relay Output	Supported Maximum 1	
24	Water Marking	Supported	
25	Playback Channel	Synchronous Playback 1,2,4 (for 4ch recorder); 1,2,4,8 (for 8ch recorder); 1,2,4,16 (for 16ch recorder)	
26	Recorded Data Search Mode	Video Time & Date, Exact search (with Date, Hour, Minute / Second accuracy), Motion Detection, Alarm	
27	Video Intelligence	Deep learning-based motion detection, perimeter protection (line crossing and intrusion detection), OR facial recognition. [Face picture comparison, face picture search (1-ch face picture comparison alarm for HD analog camera)]. Face comparison/recognition should support in either 4ch/8ch/16ch recorder	
28	Playback Options	Play, Digital zoom (any size), Pause, Rewind, Slow motion, shift to Next file, shift to Previous file, one click Previous camera, one click Next camera, Full screen mode, Replay, Backup selection, Fast forward, Shuffling	
29	Operation Over Network	Monitor, Playback, File download, Log information, System setting,	
30	Hard Drive Storage Option	For 4 Channel - 2 SATA , 8 Channel - 4 SATA , 16 Channel - 8 SATA, 32 Channel - 8 SATA Should support up to 10 TB per SATA port	

31	USB Interface	Minimum 2 Ports		
32	Power Supply	12 VDC /AC 100~240 V, 50/60 Hz		
33	Working Environment	All Indoor weather conditions		
34	Duplex type	Recorder should be able to playback recorded footage without having to stop recording		
35	Certificate	UL/BIS,CE,FCC		
36	HDD quality	Surveillance Hard Disk: Sea Gate/Western Digital/Sky Hawk( 2 TB / 4 TB/6 TB/8TB)		



#### 4CH ATM recorder

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Specifications		Compliance	Yes/No
1	Operating system	Embedded RTOS / Linux / Windows	
2			
3	Analog / HD Camera Input	4 Channel recorder	
4	Video surveillance Hard disk	Surveillance Grade recorder HDD	
5	HDD Slots	2 SATA (upto 20 TB per slot )	
6	Video Input	4 Ch (Only for ATMs)	
7	Display speed	100 fps for 4 channel (Only for ATMs) (25 fps for each channel)	
8	Compression method	H.265 Pro+/H.265 Pro/H.265/H.264+/H.264	
9	Display split screen (Screen mode)	1,4 for 4 channel	
10	Encoding Resolution	4 MP lite@15 fps; 1080p lite/720p lite/VGA/WD1/4CIF@25 fps (P)/30 fps (N)	
11	Audio Input	1-ch, RCA (2.0 Vp-p, 1 KΩ)	
12	Audio Output	1-ch, RCA (Linear, 1 KΩ)	
13	Synchronous Playback	4 Ch	
14	IP Camera Input	2 Channel IP Camera in addition to HD channels; up to 6ch at the expense of HD channels	
15	Independent Recording setting Per channel	Continuous, motion detection sensor activated, flexible day /time daily Schedule.	
16	Monitoring	4 channel real time Monitoring. Single mode & 2x2 Mode Sequential switching mode Switching out monitoring	
17	Searching / Playback	1 channel searching and all channel simultaneous searching Replay up to 25 fps in each channel	
18	Video Intelligence	Should support Motion detection, Intrusion Detection	
19	Smart ATM Features	1-ch human face mode and 1-ch panel mode for analog channel Panel Mode : Human entrance, operation timeout, sticking scrip, and installing scanner Human Face Mode : Normal human face, abnormal human face, multiple human faces, wearing sunglasses,	

20	Back Up facility	In built & provision for External portable HDD/Pen drive/through USB port. Player software to play back recorded video should automatically be loaded on to the external back up media so that it can be played back on any PC directly	
21	User Interface	On screen graphic User Interface(GUI)	
22	System recovery after power failure	Auto Re booting	
23	Operation for setting and searching	User friendly	
24	Multiple functionality	Should support pentaflex functions to perform all recorder functions at the same time, i.e., record, live view/playback, network (view remotely), administrative and backup. Client software for remote view shall be provided free of charge if required	
25	Compatibility	Should support all types of cameras	
26	Certifications	UL/BIS,CE,FCC	
27	System operation	Micro processor based Password operated	

**HD Fixed Dome**

This product shall be manufactured by a firm whose quality system is in compliance with the ISO-9001

Products quoted should be of international repute & from any of Top global OEM as per latest IHS report.

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The Offered Cameras, Recorder, VMS, Analytic shall be from the same OEM to ensure seamless integration & better support. However keeping in mind the future scalability, the offered VMS & Cameras should be ONVIF S compliant.

S.No	Parameters	Specification	Compliance Yes/No
1	HD Technology	AHD, CVI, TVI, CVBS	
2	Image Sensor	2MP CMOS Sensor	
3	Signal System	PAL	
4	Effective Pixels	1920(H)x1080(V) or better	
5	Mini. Illumination	Color: 0.0005 Lux @ (F1.0, AGC ON),	
6	Video Output	1080P or higher @ 25 fps	
7	Display Resolution	1080P or higher @ 25 fps	
8	Recording Resolution	1080P or higher @ 25 fps	
9	Frame Rate	50Hz:1080p or higher @25fps	
10	SNR	≥52dB(AGC OFF)	
11	Sync System	Internal	
12	White Balance	Automatic	
13	Day & Night	24/7 Color Imaging	
14	Shutter	Automatic	
15	Slow Shutter	16X	
16	Auto Gain Control (AGC)	Automatic	
17	Noise Reduction (NR)	3DNR	
18	White Light	Up to 20 mtr	
19	Functions	Brightness, Sharpness, 3D DNR, Mirror, Smart light	
20	Lens	3.6mm, 2.8mm	
21	Field of view	2.8 mm: 119° x 101° x 54° (diagonal x horizontal x vertical) 3.6 mm: 100° x	
22	WDR	130 db WDR ( DWDR not acceptable)	
23	Input Voltage	DC12V±10%	
24	IP Rating	IP67	
25	Operation Temp	-30° to +50° C	
26	Storage Humidity	90% or less	
27	Certification	UL/BIS,CE,FCC	
28	Image Enhancement	BLC, HLC Supported	
29	Built-in Microphone	Yes	
30	Material	Metal	



## HD Fixed Dome

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S.No	Parameters	Specification	Compliance Yes/No
1	HD Technology	AHD, CVI, TVI, CVBS	
2	Image Sensor	2MP CMOS Sensor	
3	Signal System	PAL	
4	Effective Pixels	1920(H)x1080(V) or better	
5	Mini. Illumination	Color: 0.0005 Lux @ (F1.0, AGC ON), 0 Lux with white light	
6	Video Output	1080P or higher @ 25 fps	
7	Display Resolution	1080P or higher @ 25 fps	
8	Recording Resolution	1080P or higher @ 25 fps	
9	Frame Rate	50Hz:1080p or higher @25fps	
10	SNR	≥52dB(AGC OFF)	
11	Sync System	Internal	
12	White Balance	Automatic	
13	Day & Night	24/7 Color Imaging	
14	Shutter	Automatic	
15	Slow Shutter	16X	
16	Auto Gain Control (AGC)	Automatic	
17	Noise Reduction (NR)	3DNR	
18	White Light	Up to 30m	
19	Functions	Brightness, Sharpness, 3D DNR, Mirror, Smart light	
20	Lens	3.6mm, 2.8mm	
21	Field of view	2.8 mm: 119° x 101° x 54° (diagonal x horizontal x vertical) 3.6 mm: 100° x 84° x 45° (diagonal x horizontal x vertical)	
22	WDR	130 db WDR ( DWDR not acceptable)	
23	Input Voltage	DC12V±10%	
24	IP Rating	IP67	
25	Operation Temp	-30° to +50° C	
26	Storage Humidity	90% or less	
27	Certification	UL/BIS,CE,FCC	
28	Image Enhancement	BLC, HLC Supported	
29	Built-in Microphone	Yes	

## HD Varifocal Dome

This product shall be manufactured by a firm whose quality system is in compliance with the products quoted should be of international repute & from any of Top global OEM as per latest All systems and components must be in compliance with FCC/CE/UL/RoHS requirements. The Offered Cameras, Recorder, VMS, Analytic shall be from the same OEM to ensure seamless integration & better support. However keeping in mind the future scalability, the offered VMS & Cameras should be ONVIF S compliant.

S.No	Parameters	Specification	Compliance Yes/No
1	HD Technology	AHD, CVI, TVI	
2	Image Sensor	1/3" 1080P CMOS Sensor /CCD or better	
3	Signal System	PAL	
4	Effective Pixels	1920(H)x1080(V) or better	
5	Mini. Illumination	Mini. 0.01Lux@F1.2, AGC Illumination ON, 0 Lux with IR	
6	Video Output	1080P or higher @ 25 fps	
7	Display Resolution	1080P or higher @ 25 fps	
8	Recording Resolution	1080P or higher @ 25 fps	
9	Frame Rate	50Hz:720p or higher @25fps	
10	SNR	≥52dB(AGC OFF)	
12	Sync System	Internal	
13	White Balance	Automatic	
14	Day & Night	Automatic	
15	Shutter	Automatic	
16	Auto Gain Control (AGC)	Automatic	
17	Noise Reduction (NR)	3DNR	
18	IR Range	Up to 30m	
19	Lens	2.8-12mm (varifocal)	
20	WDR	120 db WDR ( DWDR not acceptable)	
21	Input Voltage	DC12V±15%	
22	IP Rating	IP67, IK10	
23	ess Protection - Vandal P	IK10 ( outer glass cover ) -	
24	Operation Temp	0° to +50° C	
25	Storage Humidity	90% or less	
26	Certification	UL/BIS,CE,FCC	



# Specifications: 2 MP IR Fixed Turret Network Camera(IP Camera)

SI No	Camera	1/2.8" Progressive Scan CMOS
1	Image Sensor	0.002 lux@F1.6 (Color, 30 IRE) 0.0002 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)
2	Min. Illumination	1/3 s to 1/100,000 s
4	Shutter Speed	Yes
5	Slow Shutter	No
6	Auto-Iris	IR Cut Filter
7	Day & Night	3D DNR
8	Digital Noise Reduction	120 dB
9	WDR	Pan: 0° to 360°, tilt: 0° to 75°, rotate: 0° to 360°
10	3-Axis Adjustment	Lens
11	Focal Length	3.6mm, 2.8mm
12	Aperture	F2.0
13	Focus	Fixed
14	FOV	2.8 mm: 119° x 101° x 54° (diagonal x horizontal x vertical) 3.6 mm: 100° x 84° x 45° (diagonal x horizontal x vertical)
15	Lens Mount	M12
IR		
16	IR, white light Range	Up to 30m
17	Wavelength	850nm
Compression Standard		
18	Video Compression	Main stream: H.265/H.264 Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264
19	H.264 Type	Baseline Profile/Main Profile/High Profile
20	H.264+	Main stream supports
	H.265 Type	Main Profile
	H.265+	Main stream supports
21	Video Bit Rate	32 kbps to 8 Mbps
	Smart Feature-set	
23	Behavior Analysis	Line crossing detection, intrusion detection
24	Region of Interest	1 fixed region for main stream
	Image	
25	Max. Resolution	1920 x 1080
26	Main Stream	50Hz: 25fps (1920 x 1080, 1280 x 960, 1280 x 720) 60Hz: 30fps (1920 x 1080, 1280 x 960, 1280 x 720)
27	Sub-Stream	50Hz: 25fps ( 640 x 480, 352 x 288, 320 x 240) 60Hz: 30fps ( 640 x 480, 352 x 240, 320 x 240)
28	Third Stream	50Hz: 1fps (352 x 240, 320 x 240) 60Hz: 1fps (352 x 240, 320 x 240)
29	Image Enhancement	BLC, 3D DNR, HLC
30	Image Settings	Rotate mode, saturation, brightness, contrast, sharpness adjustable by client software or web browser
31	Day/Night Switch	Day/Night/Auto/Schedule
	Network	

32	Network Storage	Support Micro SD/SDHC/SDXC card slot (256 G), NAS (NFS,
33	Alarm Trigger	Motion detection, video tampering, illegal login, HDD full, HDD
34	Protocols	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; NTP; Multicast; ICMP; IGMP
35	General Function	Anti-flicker, heartbeat, mirror, password protection, privacy mask, watermark, IP address filter
36	API	ONVIF (PROFILE S, PROFILE G), ISAPI
37	Simultaneous Live View	Up to 6 channels
38	User/Host	Up to 32 users, 3 levels: Administrator, Operator and User
49	Web Browser	IE10,11, Chrome 57.0+, Firefox 52.0+
Interface		
50	Audio	1 built-in mic
51	Communication Interface	1 RJ45 10M/100M self-adaptive Ethernet port
52	On-board Storage	Built-in micro SD/SDHC/SDXC slot, up to 256 GB
General		
53	Operating Conditions	-30 °C to +60 °C (-22 °F to +140 °F), humidity 95% or less (non-condensing)
54	Power Supply	12 VDC ± 25%, PoE (802.3af, class 3)
55	Power Consumption and Current	Basic: 1.9 W (12 VDC); 2.5 W (PoE) Max. (ICR + H.265 + WDR + max. illumination + intelligence on): 4.7 W (12 VDC); 5.6 W (PoE)
56	Protection Level	IP67
57	Material	Shell: plastic, camera body: metal

### HD varifocal Bullet

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Products quoted should be of international repute & from any of Top global OEM as per latest IHS report .

All systems and components must be in compliance with FCC/CE/UL/ROHS

The Offered Cameras, Recorder, VMS, Analytic shall be from the same OEM to ensure seamless integration & better support. However keeping in mind the future scalability, the offered VMS & Cameras should be ONVIF S compliant.

S.No	Parameters	Specification	Compliance Yes/No
1	HD Technology	AHD, CVI, TVI	
2	Image Sensor	1/3" 1080P CMOS Sensor /CCD or better	
3	Signal System	PAL	
4	Effective Pixels	1920(H)x1080(V) or better	
5	Mini. Illumination	Mini. 0.01Lux@F1.2, AGC Illumination ON, 0 Lux with IR	
6	Video Output	1080P or higher @ 25 fps	
7	Display Resolution	1080P or higher @ 25 fps	
8	Recording Resolution	1080P or higher @ 25 fps	
9	Frame Rate	50Hz:720p or higher @25fps	
10	SNR	≥52dB(AGC OFF)	
12	Sync System	Internal	
13	White Balance	Automatic	
14	Day & Night	Automatic	
15	Shutter	Automatic	
16	Auto Gain Control (AGC)	Automatic	
17	Noise Reduction (NR)	3DNR *	
18	IR Range	Up to 30m	
19	Lens	2.8-12mm (verifocal)	
20	WDR	120 db WDR ( DWDR not acceptable)	
21	Input Voltage	DC12V±30%	
22	IP Rating	IP67	
23	Operation Temp	0° to +50° C	
24	Storage Humidity	90% or less	



Pinhole Camera			
This product shall be manufactured by a firm whose quality system is in compliance with the ISO-9001			
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The Offered Cameras, Recorder, VMS, Analytic shall be from the same OEM to ensure seamless integration & better support. However keeping in mind the future scalability, the offered VMS & Cameras should be ONVIF S			
Sr No	Feature	specification	Compliance Yes/No
1	Image Sensor	1/3" CMOS /CCD	
2	Effective pixels	1920(H)x1080(V))	
3	Resolution	1920(H)x1080(V))	
5		Color: 0.004Lux/F2.4 Black & White: 0.0004 Lux/F2.4	
6	S/N ratio	52 dB	
7	Electronic shutter	1/3s-1/10000s	
8	Lens	3.7mm Pin Hole (2.8mm optional)	
9	WDR	120 db WDR ( DWDR not acceptable)	
10	BLC	On/Off ( Auto)	
11	Motion detection	Yes	
12	White balance	Supported	
13	AGC	Supported	
14	Day & Night	Color/B/W/Auto level adjust	
15	Communication Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port	
16	Power supply	DC12V	
17	Power consumption	5 Watts max	
18	Certification	UL/BIS,CE,FCC	
19	Perimeter Protection	Line crossing, intrusion, Support alarm triggering by specified target types (human and vehicle)	
20	Built-in	Supported	
21	Built-in Speaker	Supported	
22	HLC	Supported	
23	IR Range	Up to 10 m	

<b>VMS Software Specifications</b>	
All software and licenses for end to end IP based video surveillance system	
Proposed CCTV system shall be based on Non Proprietary open standard based integrated system with network centric functionality complied to ONVIF profile-S and management architecture, aimed at providing high-speed manual/automatic	
Failure of one camera shall not affect other cameras.	
The video management system shall be an enterprise class IP enabled fully distributed solution, designed for limitless multi-site and multiple server installations requiring 24/7 surveillance with support for devices from different location.	
The video management system shall allow a minimum 20,000 number of cameras, recording servers and clients to be connected to management server across multiple sites.	
Single server should connect upto 50 ANPR cameras	
The video management system shall include a distributed architecture, allowing clients on the host system with the user rights to view video sources belonging to multiple independent video management systems simultaneously.	
The video management system shall contain a management server that shall be the central manager of the system and control recording servers, cameras, devices and users.	
The video management system shall incorporate a fully integrated video-sharing functionality for distributed viewing of video from any camera in the system on any computer with the viewing client.	
The video management system shall support encryption of video for export purposes.	
Cameras, which shall show a minimum list of the following items. 1) Camera status (connected or disconnected)	
An individual camera is recording or not	
The name of the camera, the hardware device and the IP address of the hardware device	
The recording server, the camera is connected	
What storage the camera is using	
Live video format, for example H.264 or M-JPEG	
Recording video format, for example H.264 or M-JPEG	
Viewing Client	
The viewing client shall enable operators to connect to the management server for initial authorization. Up on authorization, the viewing client shall be able to connect to the recording server(s), for access to live and record	
The Client operator shall be able to drag and drop a camera from a tree of available cameras or a camera sequence into any video tile for live viewing.	
The viewing client shall allow the user to be able to:	
View live video from cameras;	
Playback recordings from cameras with a selection of advanced navigation controls, including an intuitive time line browser.	
Switch between a number of views, each able to display videos from 1 up to 16 cameras from multiple servers at a time. The system shall make it possible to create views based on different layouts optimized for 4:3 and 16:9 displ	
Access views of cameras on any PC with a viewing client installed.	
Use multiple screens as well as floating windows for displaying different views simultaneously.	
Quickly replace one or more views of cameras with other cameras.	
View images from several cameras in sequence in a single camera position in a designated carousel position.	
View video from selected cameras in greater magnification and/or higher quality in a designated special view position.	



Control PTZ cameras.
Use digital zoom on live as well as recorded video.
Get a quick overview of sequences with detected motion.
Quickly search for motion in selected areas of a video recording.
Maps
The viewing client shall include a built-in map function which shall provide an intuitive overview of the system and shall offer integrated access to all system components.
The map function shall be able to use standard graphical file formats.
It shall be possible to use any number of layered maps and to easily drag- and-drop and point-and-click icons representing cameras.
The viewing client shall support a map function which shall support instant camera preview when moving the mouse pointer over a specific camera.
The map function shall support real-time status monitoring indication from all system components like camera, recording server, storage etc.
The map function shall support graphical at-the-glance visualization of the system status through color coding. Graphical tool illustrating health status of various equipment on a single screen, such as graphical representation
Storage
VMS should Support edge storage and central storage.
VMS should support Central storage: Extend storage via iSCSI.
Server disk configuration for picture storage involving face detection and recognition, alarms, and object detection
Create record plan by time template: All day template, weekday template, weekend template and custom template
Back up the video by schedule from the edge storage, like EVS, NVR, DVR, etc.
Disk quota: Group the disks, and cameras can be allocated to different disk groups
Vehicle Restricted List Management
Set start time and end time for vehicle restricted list
Arm and disarm vehicle restricted list
Import and export vehicle restricted list.
Parking Management
Overview of entrance and exit information: Number of parking spaces and remaining parking spaces, traffic statistics, parking turnover, parking utilization rates
Support dual-camera capture for higher recognition rate.
Edit parking-lot, includes total and available spaces, parking name etc
Support configuration of barrier control rules, and support configuration of barrier control rules for zero-space-left cases
VMS should support support searching for vehicle records, on-site vehicles, and ANPR details
VMS should support traffic Violation & search function by time, vehicle number, and traffic violation information type.
Support querying for data of passing-by vehicles by section, time period, plate number, plate color, average speed, and type
Supports Violation Penalty
Violators can be penalized.
Supports printing traffic tickets
Violation records can be reviewed.
Violation records can be searched for, including ANPR captured violations, and road section and traffic restriction violations.
Gives Overview of traffic flow
Supports searching for the traffic flow at intersections and road sections from specific periods.
Stand Alone Viewing Client



The standalone viewing client shall make it possible to view exported video.
The standalone viewing client shall run from an .exe file, and no installation of software shall be required in order to view exported sources.
Mobile Viewing Client
It shall be possible to access and view cameras and views on a Smart phone or a tablet (a mobile device). Mobile Client should have live and Playback functionality. It must support android, windows, iOS platform

S. No.	Features	Description	Compliance (Yes/No)
1	Main Processor	Industrial Grade Processor	
2	Operating System	Embedded LINUX	
3	SATA Ports	8 SATA ports for 16 / 32 channel NVR, Each SATA port should support 16TB HDD	
4	Interface	1VGA, 1HDMI	
5	Video Output	VGA:1920 × 1080, 1280 × 1024, 1280 × 720 HDMI:3840 × 2160, 1920 × 1080, 1280 × 1024, 1280	
6	Resolution	16 MP, 12 MP, 8 MP, 6 MP, 5 MP, 4 MP, 3 MP; 1080p; 960p; 720p; D1; CIF	
7	Multi-screen Mode (Display Split Screen)	1/4/8/9/16	
8	Trigger Events	Recording, PTZ, Tour, Alarm Out, Video Push, Email, FTP, Snapshot, Buzzer and Screen Tips	
9	Video Detection	Motion Detection, MD Zones: 396 (22 X 18), Video Loss and Tampering, Scene Change Detection	
10	Alarm input	16 Ports	
11	Alarm output	4 Ports	
12	Sync Playback	1/4/9/16	
13	Search Mode	Time /Date, Alarm, MD and Exact Search (accurate to second)	
14	Playback Function	Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom	
15	Backup Mode	USB Device/Network/Internal SATA burner/e-SATA Device	
16	Internal HDD	All SATA ports should support 16TB	
17	USB	3(2 USB 2.0 port, 1 USB 3.0 ports)	
18	RS232	1 Port, for PC Communication and keyboard	
19	RS485	1 Port, for PTZ Control	
20	IP Camera Input	16	

I NVR with 8 Sata Port

21	Audio Compression	G.711a; G.711u; PCM; G.726	
22	Two-way Talk	1 Channel Input, 1 Channel Output	
23	Compression	High Efficiency Video Coding (HEVC), H.265+ or more	
24	Resolution	1080P or more at 25 FPS	
25	Frames per Second	25 FPS	
26	Record Rate	256 Mbps Incoming	
27	Record Mode	Manual, Schedule (Regular, Continuous), MD, Alarm, Stop	
28	Record Interval	1-120 min (default: 60 min), Pre-record: 1-30 sec, Post record: 10-300 sec	
29	Interface	2 RJ-45 port (10/100/1000 Mbps)	
30	Network Function	HTTP; HTTPS; TCP/IP; IPV4/IPV6; UDP; SNMP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; PPPoE; FTP; DDNS; Alarm Server; IP Search, Multicast; P2P; Auto Registration	
31	Interoperability	ONVIF (Profile T; Profile S; Profile G), CGI Conformant	
32	Certifications	UL/ FCC, CE and BIS approved	



3+1 Coaxial and power cable		
Coaxial Cable		
Conductor	Material	Bare copper
	Wire Gauge	26AWG
	Diameter	0.41±0.01mm
Insulation	Material	FPE
	Diameter	2.0±0.1mm
Tape	Material	Copper foil
Braid	Material	Copper clad aluminum magnesium
	Braiding Standard	5*16*0.12mm ±0.008mm
	Braiding Density	≥80%
Jacket	Material	PVC
Impedance		75ohms
Power Cable		
Conductor	Material	Bare copper
	Quantity	3
	Diameter	11*0.16±0.008mm
Insulation	Material	SR-PVC
	Diameter	1.2±0.1mm
Jacket	Material	PVC
Make & Type	Acceptable type	ISI Marked (IS-694, 1990) Make – Finolex, Polycab or similar quality,

19" HD LCD Monitor									
S.No	Category	Parameters	Specification	Compliance Yes/No	1	2	3	4	5
	Monitor	Backlight	LED Backlight						
		Screen Size	19.5 inch						
		Pixel Pitch	0.300mmx0.300mm						
		Max Resolution	1600x900						
		Brightness	200cd/m2						
		Contrast	1000:1						
		Response Time	5ms						
		Color	16.7M						
		Active Area	409.8mm x 230.4mm						
		Viewing Angle	Horizontal 90°, Vertical 80°						
11	Interface	VGA Input	1						
		HDMI Input	1						
12	General	VESA	75 mm x 75 mm						

# CAT 6 Cable

S. No.	Parameter	Minimum Specifications
1	Type	U/UTP 4Pairs cable-category 6- PVC Sheath
2	Size	23 AWG
3	Material	Solid Bare Copper
4	Test Standard	ISO/IEC11801, TIA-568-C.2
5	Ambient Temperature	-20°C - 75°C
6	Insulation Material	Polyethylene (HDPE)
7	Sheath material	PVC Polyvinyl chloride
8	Tensile Strength before aging	>13.5
9	Aging Period	100 Deg C x 24h x 10d
10	Colour Chart	1 White- Blue /Blue 2 White-Orange /Orange 3 White-Green /Green 4 White- Brown /Brown