

Hamdard Institute of Medical Sciences & Research and Associated HAH Centenary Hospital

Hamdard Nagar, New Delhi – 110062

Annexure-1

8MP Dome fixed lens Camera	
IMAGE SENSOR	
Resolution	8 MP (3840 x 2160)
Sensor Type and Size	1/2.8" SONY - CMOS 8MP Active Pixel Progressive Scan, Back Illuminated Image sensor(STARVIS Series)
LENS	
Minimum Illumination	Color - 0.01 Lux @ F1.2 (AGC ON) Monochrome - 0 Lux
Focal Length	2.8mm
Focus Range	0.3m to infinity
Field of View (FOV)	HFOV – 106.9° VFOV – 56.9° DFOV – 127.9°
Lens Mount	M12
Focus	Fixed focus
Aperture (F#)	F 1.6
Iris Type	Fixed
IR Range	Up to 50m
IR Led Wavelength	850nm
IR Switching	Auto/ Manual
HARDWARE SPECIFICATIONS	
SD Card	Up to 512GB
Camera Adjustment Angle	Pan - 0° to 330° Tilt - 0° to 75° Rotate - 0° to 180°
IMAGE AND VIDEO	
No of Stream Profiles	4
Stream Profiles	Profile 1: 4K @30fps (H.265/H.264) Profile 2: D1 @30fps (H.265/H.264) Profile 3: 3MP @10fps (H.265/H.264/MJPEG) Profile 4: 2MP @15fps (H.265/H.264/MJPEG)
Available Resolutions	3840*2160,2688*1944,2688*1520, 1920*1080, 720p, D1, VGA
Max Resolution	3840 x 2160 (4K)
Bitrate	128 kbps-16Mbps
Bitrate Type	CBR, VBR
Video Compression	H.265, H.264, MJPEG
Frame Rate	1-30fps
Shutter Speed	1/15s -1/100000s
Adaptive Streaming	Yes

ONVIF Profiles	S, G and T
Edge Recording	Yes
Alarm Recording	Pre and Post
Motion Recording	Yes
Video Parameters	Snapshot, Region of Interest (ROI), BLC, Day/Night Settings, DynamicFPS
Privacy Masks	8
WDR	True WDR (120dB)
SNR	>70dB
Image Enhancement	Saturation/ Contrast/ Sharpness/Brightness/ Auto Exposure/ HVS-Forensics/ Smart IR
DNR	2D &3D
Video Analytics	Motion Detection, Tamper Detection, Trip/No TripDetection, Object Intrusion/Zone Intrusion
ALERTS	
IP Conflict	Yes
Network Disconnect	Yes
Storage Full	Yes
Time Triggered	Yes
EVENTS AND ACTIONS	
Upload Image	SD, NAS, FTP
Upload Clip	SD, NAS, FTP
Notifications	E-mail, SMS, TCP
PROTOCOLS SUPPORTED	
Supported protocols	TCP/IP, HTTP, ARP, DSCP, QoS, DHCP, DNS, DDNS, RTP, RTCP, RTSP,PPPOE, SMTP, NTP, HTTPS, TLS/SSL, FTP, ICMP, IGMP, UDP, 802.1x, SNMP, UPnP, Bonjour
Web Viewer	Supported in IE 8.0-11.0, Firefox 15.0-47.0, Chrome 20.0-54.0
Browser	IE, Chrome, Mozilla
OPERATING PARAMETERS	
Power Supply	12V (DC); 802.3af (PoE)
Power Consumption	Maximum 9W
Operating Humidity	Less than 90% RH (non-condensing)
Operating Temperature	-30°C to 60°C
Storage Temperature	-30°C to 60°C
PHYSICAL PARAMETERS	
Communication interface	10Base-T/100BaseTX Ethernet (RJ-45)
Weight	1.41kg
Color	Infinity White
Dimensions	Φ158mm x 134mm
Storage	NAS, SD Card
Certifications	BIS, CE, IP67, FCC Part-15 Subpart - B, ONVIF S G & T, IK10, UL, NEMA 4X

8MP Bullet fixed lens Camera

IMAGE SENSOR

Resolution	8 MP (3840 x 2160)
Sensor Type and Size	1/2.8" SONY - CMOS 8MP Active Pixel Progressive Scan, Back Illuminated Image sensor (STARVIS Series)
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Lens Mount	M12
Focus	Fixed focus
Aperture (F#)	F 1.6
Iris Type	Fixed
IR Range	Up to 50m
IR Led Wavelength	850nm
IR Switching	Auto/ Manual

HARDWARE SPECIFICATIONS

SD Card	Up to 512GB
Camera Adjustment Angle	Pan: 0° to 360° Tilt: 0° to 90° Rotate: 0° to 360°

IMAGE AND VIDEO

No of Stream Profiles	4
Stream Profiles	Profile 1: 4K @30fps (H.265/ H.264) Profile 2: D1 @30fps (H.265/H.264) Profile 3: 3MP @10fps (H.265/H.264/MJPEG) Profile 4: 2MP @15fps (H.265/H.264/MJPEG)
Available Resolutions	3840 x 2160, 3200 x 1800, 2592 x 1944, 2592 x 1520, 2048 x 1536, 1920 x 1080, 720p, D1, VGA, 2CIF, CIF
Max Resolution	3840 x 2160 (4K)
Bitrate	128 kbps-16Mbps
Bitrate Type	CBR, VBR
Video Compression	H.265, H.264, MJPEG
Frame Rate	1-30fps
Shutter Speed	1/15s -1/100000s
Adaptive Streaming	Yes
ONVIF Profiles	S, G and T
Edge Recording	Yes
Alarm Recording	Pre and Post
Motion Recording	Yes
Video Parameters	Snapshot, Region of Interest (ROI), BLC, Day/Night Settings, DynamicFPS
Privacy Masks	8
WDR	True WDR (120dB)

SNR	>70dB
Image Enhancement	Saturation/ Contrast/ Sharpness/ Brightness/ Auto Exposure/ HVS-Forensics/ Smart IR
DNR	2D &3D
Video Analytics	Motion/No Motion Detection, Tamper Detection, Trip/No TripDetection, Object Intrusion/Zone Intrusion
ALERTS	
IP Conflict	Yes
Network Disconnect	Yes
Storage Full	Yes
Time Triggered	Yes
EVENTS AND ACTIONS	
Upload Image	SD, NAS, FTP
Upload Clip	SD, NAS, FTP
Notifications	E-mail, SMS, TCP
PROTOCOLS SUPPORTED	
Supported protocols	TCP/IP, HTTP, ARP, DSCP, QoS, DHCP, DNS, DDNS, RTP, RTCP, RTSP, PPPOE, SMTP, NTP, HTTPS, TLS/SSL, FTP, ICMP, IGMP, UDP, 802.1x, SNMP, UPnP, Bonjour
Web Viewer	Supported in IE 8.0-11.0, Firefox 15.0-47.0, Chrome 20.0-54.0
Browser	IE, Chrome, Mozilla
OPERATING PARAMETERS	
Power Supply	12V (DC); 802.3af (PoE)
Power Consumption	Maximum 9W
Operating Humidity	Less than 90% RH (non-condensing)
Operating Temperature	-30°C to 60°C
Storage Temperature	-30°C to 60°C
PHYSICAL PARAMETERS	
Communication interface	10Base-T/100BaseTX Ethernet (RJ-45)
Weight	840gms
Color	Infinity White
Dimensions	302mm x 93mm x 85mm (Length x Width x Height)
Storage	NAS, SD Card
Certifications	BIS, CE, IP66, FCC Part-15 Subpart – B, ONVIF S G&T, IK10, UL, NEMA 4X

32 Channel NVR with 2 SATA slots

SYSTEM	
Control Mode	Desktop Client, Mobile Client, and local client (Through HDMI)
OS	Embedded Linux
Processor	ARM cortex- Quad Core
VIDEO AND AUDIO	
Video-Input	32 IP channels
Video Output	HDMI (2.0) – 1 Port (Main)
Video Compression	H.265/H.264/ Motion JPEG
Audio input	1 Channel, RCA Port
Audio Output	1 Channel, RCA Port
Audio Compression	G.711
Two-way Audio	Required
DISPLAY	
Recording Resolution	12MP, 8MP, 5MP, 4MP, 3MP, 2MP, 720p, D1, CIF
Decoding Resolution (on local display)	Up to 4K
Split (Through LAN/HDMI)	1x1, 2x2, 3x3, 4x4, 1+5, 1+7, 3+4, 2+8, 1+12, 1⊕+12, 1+9, 4+9,2+12, 5x5, 6x6, 8x8 and Sequential
Digital Zoom	Required in both live view and playback
OSD	Channel Number, Name, Bitrate, video loss
Snapshot Format	JPEG
Recording type	Continuous, Scheduled, Manual, Alarm
Bandwidth Optimization	Yes
PLAYBACK AND BACKUP	
Synchronous Playback	4 channels @ 1080P (via Desktop client), 16 channels @ 1080P (via HDMI)
Search Mode	Date & Time, Camera, Recording Type, Recording Drive
Playback Modes	Fast Forward, Slow Forward, Slow Reverse, Fast Reverse at Different Speed Control, Next-Previous Frame
Backup	Manual Backup & Scheduled backup
Configuration Backup	Required
Remote Operations	Monitor, PTZ Control, Playback, System Setting, File Download, Log Information, Upgrade
VIDEO DETECTION AND ALARMS	
Camera events	Motion Detection, Recording Start, Recording Fail, Camera offline, Camera online
System events	Manual Trigger, On Boot Alarm, Storage Alert, Disk Volume Full, Disk Fault, Scheduled Backup Fail
Actions	Recording on Selected Channel, Upload Images on FTP/Email server, Email Notification with Snapshot, TCP Notification, Recall PTZ Preset Position, Turn On/Off Alarm Outputs, Buzzer Notification, SMS Notification
DEVICE STATUS	
Camera status, Manual recording, Scheduled recording, Alarm recording, Adaptive recording	Required
FPS and GOP count	Required
Motion detection, View tampering, Tripwire, Object intrusion, Missing Object, Suspicious Object, Loitering	Required

Detection, Audio Exception, Object Counting	
CPU usage display	Required
CPU temperature display	Required
Thermal shutdown	Required
STORAGE	
SATA Interface	2 SATA III (10TB per port)
NAS	2 NAS (CIFS, NFS)
RAID	RAID-0, RAID-1
Recording Retention	Camera-wise, HDD usage % wise, Day wise
NETWORK	
Incoming Bandwidth	256 Mbps
Outgoing Bandwidth	256 Mbps
Maximum User	120 Programmable
Simultaneous login	9
Network Protocols	TCP/IP, DHCP, PPPOE, DNS, DynDNS, FTP, SMTP, NTP, RTP/RTSP, CIFS/NFS
INTERFACES	
Audio Input	1 Channel, RCA Port (1V RMS)
Audio Output	1 Channel, RCA Port (0.5V RMS)
Alarm Input	2 Ports (Max. load resistance: 4.7 K Ω)
Alarm Output	1 Port (Max load power: <50VA, Max load current: <1A)
Network Interface	2 Ports x Ethernet (RJ-45) 10/100/1000Mbps
USB	3 ports (2 x USB 2.0, 1x USB 3.0)
Number of SATA Interface	2 Ports (SATA III)
HDD size	10 TB HDD support (with 6Gb/s speed)
HDMI	HDMI (2.0) – 1 Port (Main)
Reset Switch (Network, User account, and General settings)	Required
Buzzer	Required
CERTIFICATION	
Regulatory Approvals/ Certifications	FCC (FCC Part 15 Subpart B Class A), ROHS, BIS, CE,EN/IEC
ELECTRICAL AND MECHANICAL	
Operating temperature	0°C to +50°C (32°F to 122°F)
Humidity range	5% to 95% RH Non-Condensing
Power input	12VDC, 5A
Chassis	19" rack mount
Power consumption (without Hard disk)	≤40W

SATA Surveillance internal Hard Drive – 8 TB (Seagate)	
Sky Hawk – Health Management Included	Yes
Drive Bays Supported	8+
Cameras Supported	Up-to 64
Max Sustained Transfer Rate	210 MB/s
Cache (MB)	256
Warranty	3 Years
Ideal Average	8W
Load/Unload Cycle	300000

