

"Industrial, Touristic and Green City, Clean, Safe and Prosperous City"



Damak Municipality
Office of the Municipal Executive
Damak, Jhapa
Koshi Province, Nepal



Technical Compliance Sheet for 8TB Surveillance HDD

<i>Feature</i>	<i>Specification</i>	<i>Compliance (Fully Compliant, Partially Compliant, Non Compliant) or Bidders Offer</i>
<i>Manufacture, Country</i>		
<i>Brand Name</i>		
<i>Model No.</i>		
Capacities	8TB / 8000GB	
Bytes per sector	4096	
Interface	SATA 6Gb/s	
FEATURES AND PERFORMANCE		
R/V (Rotational Vibration) Sensor	Yes	
Cameras Supported	Up to 64	
Max Sustained Transfer Rate OD (MB/s)	230MB/s	
Hard Disk Rotational Speed	More than 5900 RPM	
Cache (MB)	256	

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Technical Compliance Sheet for 4K NVR 16 Channel

<i>Feature</i>	<i>Specification</i>	<i>Compliance (Fully Compliant, Partially Compliant, Non Compliant) or Bidders Offer</i>
Manufacture, Country		
Brand Name		
Model No.		
Video Compression/Format	H.265+/H.265/H.264+/H.264	
Video Output (VGA)	1-ch, 1920*1080/60Hz, 1280*1024/60Hz, 1280*720/60Hz	
Video Output (HDMI)	1-ch, 4K (4096x2160) /30Hz, 4K (3840x2160) /30Hz, 2K (2560x1440/60Hz, 1920x1080/60Hz, 1600x1200/60Hz, 1280x1024/60Hz, 1280x720/60Hz	
Video Recording Res.	8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA /720p/VGA/4CIF/DCIF/ 2CIF /CIF/QCIF	
IP Video Input	16-ch	
Audio Compression	G.711ulaw/G.711alaw/G.722/G.726	
Audio Output Channel	1-ch, RCA (Linear, 1 KΩ)	
Two way Audio	1-ch, RCA (2.0 Vp-p, 1 k Ω)	
Stream Type	Video, Video & Audio	
Decoding Capability	1-ch@8 MP (30 fps)/3-ch@4 MP (30 fps)/6-ch@1080p (30 fps)	
Synchronous Playback	16-ch	
Network Protocol	TCP/IP, DHCP, IPv4, IPv6, DNS, DDNS, NTP, RTSP, SADP, SMTP, SNMP, NFS, iSCSI, ISUP, UPnP™, HTTP, HTTPS	
Number HDD Interface (SATA)	1 SATA	
Max HDD Support (GB,TB)	Up to 8TB capacity for each disk	
Network Interface (RJ45)	1, RJ-45 10/100/1000 Mbps self-adaptive Ethernet interface	
USB Port	2 × USB 2.0	
Remote Connections	32	
Video Detection	Motion Detection 2.0	
Power Supply	12 VDC, 1.5 A	
Approx. Power Consumption	≤ 10 W	



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Technical Compliance Sheet for Inverter/Battery

Feature	Specification	Compliance (Fully Compliant, Partially Compliant, Non Compliant) or Bidders Offer
<i>Manufacture, Country</i>		
<i>Brand Name</i>		
<i>Model No.</i>		
Battery Voltage (V)	12V 150AH (External 2 Batteries Required)	
Inverter Type	Pure Sine Wave UPS	
Topology:	Offline/Standby	
Capacity	1600 VA	
Warranty	24 Months	
UPS/Inverter switch	Yes	
Home or Away switch	Yes	
Extendable battery back-up	Yes	
Intelligent battery charging	Yes	
Audible Alarms	Yes	
Bypass feature	Automatic	
Protection provided against	Overload, deep discharge, short-circuit, Reverse polarity & Input mains protection through MCB.	
Display on UPS/Inverter	Low battery, Mains, Battery Charging, Voltage, Overload, Battery top up	
Power Output	1280 Watts	
Input voltage	230V AC/ 47-53 Hz	
Output Voltage (Ups Mode)	230VAC	
Full Battery Recharge Time	10 to 12 hrs	
Charging Current	15 Amps	
Charger type	Microprocessor type, 3 stage, regulated charging	

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Technical Compliance Sheet for 19" Monitor

Feature	Specification	Compliance (Fully Compliant, Partially Compliant, Non Compliant) or Bidders Offer
Manufacture, Country		
Brand Name		
Model No.		
Display	LED-backlit LCD monitor / TFT active matrix, Anti-glare	
Screen Resolution	HD, Aspect Ratio 16:9, Auto Resolution Detection	
Video Interface	VGA and HDMI	
Contrast Ratio	Contrast Ratio: 600:1 Colour Gamut: 72% NTSC (CIE 1931)	
Max Resolution & Refresh	1366 x 768 at 60 Hz	
Brightness	200 cd/m ²	
Aspect Ratio	16:9	
Warranty	1 Years	



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Technical Compliance Sheet for 2 MP Camera

Feature	Specification	Compliance (Fully Compliant, Partially Compliant, Non Compliant) or Bidders Offer
Manufacture, Country		
Brand Name		
Model No.		
Image Sensor	1/2.8" Progressive Scan CMOS	
Max. Resolution	1920 × 1080	
Min. Illumination	Color: 0.001 Lux @ (F1.0, AGC ON), 0 Lux with light	
Shutter Time	1/3 s to 1/100,000 s	
Day & Night	24/7 color imaging	
Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°	
Focal Length & FOV	2.8 mm, horizontal FOV: 106°, vertical FOV: 57°, diagonal FOV: 126°	
Lens Mount	M12	
Iris Type	Fixed	
Aperture	F1.0	
Supplement Light Type	IR	
Supplement Light Range	Up to 30 m	
Main Stream	50 Hz: 25 fps (1920 × 1080, 1280 × 720) 60 Hz: 30 fps (1920 × 1080, 1280 × 720)	
Sub-Stream	50 Hz: 25 fps (640 × 480, 640 × 360) 60 Hz: 30 fps (640 × 480, 640 × 360)	
Video Compression	Main Stream: H.265/H.264/H.264+/H.265+ Sub-Stream: H.265/H.264/MJPEG	
Protocols	TCP/IP, ICMP, DHCP, DNS, HTTP, RTP, RTSP, NTP, IGMP, IPv6, UDP, QoS, FTP, SMTP	
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance, adjustable by client software or web browser	
Day/Night Switch	Day, Night, Auto, Schedule	
Wide Dynamic Range (WDR)	DWDR	
SNR	≥ 52 dB	
Image Enhancement	BLC, HLC, 3D DNR	
Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port	
Basic Event	Motion detection (support alarm triggering by specified target types (human and vehicle)), video tampering alarm, exception	
Power	12 VDC ± 25%, 0.4 A, max. 5 W, Ø5.5 mm coaxial power plug, PoE: 802.3af, Class 3, 36 V to 57 V, 0.2 A to 0.15 A, max. 6.5 W	
EMC	FCC: 47 CFR Part 15, Subpart B, CE-EMC: EN 55032: 2015, EN 61000-3-2:2019, EN 61000-3-3: 2013+A1:2019, EN 50130-4:	

	2011 +A1: 2014,RCM: AS/NZS CISPR 32: 2015,KC: KN32: 2015, KN35: 2015	
Safety	UL: UL 62368-1,CB: IEC 62368-1: 2014+A11,CE-LVD: EN 62368-1: 2014/A11: 2017,BIS: IS 13252 (Part 1): 2010/IEC 60950-1: 2005	
Environment	CE-RoHS (2011/65/EU); WEEE (2012/19/EU); Reach (Regulation (EC) No 1907/2006)	
Protection	IP67 (IEC 60529-2013)	



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Technical Compliance Sheet for 4 MP Camera

<i>Feature</i>	<i>Specification</i>	<i>Compliance (Fully Compliant, Partially Compliant, Non Compliant) or Bidders Offer</i>
<i>Manufacture</i>		
<i>Brand</i>		
<i>Model No</i>		
Camera		
Image Sensor	1/1.8" Progressive Scan CMOS	
Max. Resolution	2688 × 1520	
Min. Illumination	Color: 0.0005 Lux @ (F1.0, AGC ON), 0 Lux with white light	
Shutter Speed	1/3 s to 1/100,000 s	
Wide Dynamic Range	130 dB	
Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°	
Lens		
Type	Fixed Focal Length, 2.8mm, 4mm	
Lens Type & FOV	2.8 mm, horizontal FOV 112°, vertical FOV 61°, diagonal FOV 134° 4 mm, horizontal FOV 95°, vertical FOV 51°, diagonal FOV 115°	
Aperture	F1.0	
DORI		
DORI	2.8 mm, D: 58 m, O: 23 m, R: 11 m, I: 6 m, 4 mm, D: 77 m, O: 30 m, R: 15 m, I: 7 m	
Illuminator		
White Light Range	40 m	
Smart Supplement Light	Yes	
Video		
Main Stream	50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)	
Sub Stream	50 Hz: 25 fps (1280 × 720, 640 × 480, 640 × 360), 60 Hz: 30 fps (1280 × 720, 640 × 480, 640 × 360)	

Video Compression	Main stream: H.265/H.264/H.265+/H.264+Sub-stream: H.265/H.264/MJPEGThird stream: H.265/H.264	
Video Bit Rate	32 Kbps to 8 Mbps	
H.264 Type	Baseline Profile/Main Profile/High Profile	
H.265 Type	Main Profile	
Bit Rate Control	CBR/VBR	
Scalable Video Coding (SVC)	H.264 and H.265 encoding	
Region of Interest (ROI)	1 fixed region for main stream and sub-stream	
Network		
Simultaneous Live View	Up to 6 channels	
API	Open Network Video Interface (Profile S, Profile G, Profile T), ISAPI, SDK	
Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SNMP, WebSocket, WebSockets	
User/Host	Up to 32 users. 3 user levels: administrator, operator and user	
Security	Password protection, complicated password, HTTPS encryption, IP address filter, Security Audit Log, basic and digest authentication for HTTP/HTTPS, TLS 1.1/1.2, WSSE and digest authentication for Open Network Video Interface	
Network Storage	MicroSD/microSDHC/microSDXC card (512 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR)	
Web Browser	Supported Yes	
Image		
Day/Night Switch	Auto, Schedule	
Image Enhancement	BLC, HLC, 3D DNR	
Image Parameters Switch	Yes	
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser	
Interface		

On-board Storage	Built-in memory card slot, support microSD/microSDHC/microSDXC/TF card, up to 256GB	
Hardware Reset	Yes	
Communication Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port	
Event		
Basic Event	Motion detection (human and vehicle targets classification), video tampering alarm, exception	
Smart Event	Line crossing detection, intrusion detection, region entrance detection, region exiting detection Scene change detection	
Linkage	Upload to NAS/memory card/FTP, notify surveillance center, trigger recording, trigger capture, send email	
Deep Learning Function		
Face Capture	Yes	
General		
Power	12 VDC \pm 25%, 0.7 A, max. 8.5 W, Ø5.5 mm coaxial power plug PoE: 802.3af, 36 V to 57 V, 0.30 A to 0.18 A, max. 12 W	
Web Client Language	English	
General Function	Anti-flicker, heartbeat, mirror, privacy mask, flash log, password reset via email	
Startup and Operating Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)	
Approval		
EMC	Yes	
Safety	Yes	
Environment	Yes	
Protection	IP67	

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Technical Compliance Sheet for CAT-6 Cable

<i>Feature</i>	<i>Specification</i>	<i>Compliance (Fully Compliant, Partially Compliant, Non Compliant) or Bidders Offer</i>
<i>Manufacture, Country</i>		
<i>Brand Name</i>		
<i>Model No.</i>		
Packing Length	305m	
Conductor Material	CCA	
Nom.O.D.	0.58mm	
Insulation	Solid HDPE	
Insulation Dia	1.05±0.05mm	
Sheath Thickness	0.50±0.05 mm	
Sheath External OD	6.0±0.30 mm	
Sheath Material	PVC (Complies RoHS)	
Surface Printing	Brand,Model no length,	

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Technical Compliance Sheet for Network Rack 6U

<i>Feature</i>	<i>Specification</i>	<i>Compliance (Fully Compliant, Partially Compliant, Non Compliant) or Bidders Offer</i>
<i>Manufacture, Country</i>		
<i>Brand Name</i>		
<i>Model No.</i>		
Main Material	SPCC cold rolled steel	
Thickness	Mounting profile 1.5mm, mounting angle 1.2mm	
Surface Finish	Degreasing, pickling, phosphoric, powder coated	
Degree of Protection	IP20	
Loading Capacity	Static loading: 60KG	

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Technical Compliance Sheet for Cloud Managed POE Switch

<i>Feature</i>	<i>Specification</i>	<i>Compliance (Fully Compliant, Partially Compliant, Non Compliant) or Bidders Offer</i>
<i>Manufacture, Country</i>		
<i>Brand Name</i>		
<i>Model No.</i>		
Ports	9 x 10/100/1000Base-T, 8 x PoE+ ports	
Switching capacity	18 Gbps	
MAC address table	4000	
MTBF	> 200,000	
PoE	120W, IEEE 802.3at / IEEE 802.3af	
Layer type	Managed	
Forwarding rate	13.39 Mpps	
Maximum VLAN	16	
Port Surge	4 kV	
Warranty	3 Years	

Bill of Quantity (BOQ)

To Damak Municipality,
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Subject: Rate Submission for CCTV in Damak Safe House Ward No. 7, FY 2081-82

SN	Item	Unit	Qty	Unit Price	Unit Price in Words	Total
1	16 Channel 4K NVR	pcs	1			
2	2MP Bullet Color Network Camera (ColorVu)	pcs	4			
3	4MP IP Bullet Camera (2.8mm)	pcs	3			
4	8TB Surveillance HDD (6Gb/s, Cache 256 MB, Max Sustainable Transfer 230MB/s)	pcs	1			
5	Cloud Managed POE Switch (8 Port)	pcs	1			
6	High Quality Double Power Socket with box (3)	pcs	3			
7	Network Rack 6U	pcs	1			
8	Monitor 19" Branded	pcs	1			
9	CAT-6 Cable CCA	drum	1			
10	Inverter (1600 VA/24V)	pcs	1			
11	Tubular Inverter Battery (150 AH/12 V, 3 Years Warranty)	pcs	2			
12	300 Mbps for 12 Months	ls	1			
13	Including Installation #7 Camera	pcs	7			
Total						
VAT 13%						
Total with VAT						

Submitted By:

Signature:

Name of Designation of:

Signatory:

Firms Name:

Seal of the Firm: