

सि.सि.टि.भी. क्यामेराको सिलबन्दी दररेट पेश गर्ने सम्बन्धि ७ दिने सूचना !!! प्रथम पटक प्रकाशित मितिः २०८०।११।२७

उपर्युक्त सम्बन्धमा यस लक्ष्मी माध्यमिक विद्यालयमा तपसिल बमोजिमको लागत अनुमान र संलग्न प्राविधिक स्पेसिफीकेसन अनुसारको सि.सि.टि.भी. क्यामेरा खरीद तथा जडान कार्य गर्नुपर्ने भएकाले के कति रकममा उपलब्ध गराउन सकिन्छ? सो को दररेट BOQ मा भरी ७ (सात) दिन भित्र विद्यालय समय भित्र सिलबन्दी गरी तपसिलको कागजात सहित पेश गर्नहुन सम्बन्धित सबैको जानकारीका लागी यो सूचना प्रकाशन गरिएको छ।म्याद भित्र पेश नभएका दरभाउपत्र उपर कुनै कारवाही हुने छैन।

# <u>तपसिल</u>

सि.सि.टि.भी. क्यामेरा खरीद तथा जडान कार्यको कुल लागत अनुमान भ्याट रु. ९८३,०९३.२२ सहित

# अनिवार्य संलग्न गर्नुपर्ने कागजात

- 9. कम्पनि रिजस्टार/ बाणिज्य/ घरेलुमा दर्ता नवीकरण प्रमाणपत्रको प्रतिलिपि
- २. भ्याट दर्ता प्रमाणपत्रको प्रतिलिपि
- ३. गत आ.व. २०७९/०८० को कर चुक्ता प्रमाणपत्रको प्रतिलिपि
- ४. BoQ फाराम
- $\chi$ . Manufacturer's Authorization Document / Letter verifying technical specification



कोहलपुर न.पा.-२, बर्दहवा (बाँके)

विद्यालय कोड : ५७०३८०००७

# स्था. २०१६

पत्र संख्या : चलानी नं. :

रा.प.बोर्ड कोड : ५७३३

प.नि.का कोड : ६७०६३

मिति .....

## Bill of Quantity (BoQ)

द्यालय

S.N.	Description	UoM	Quantity	Rate	Amount
1	4 MP Turret Network camera	Units	16		
2	4 MP Varifocal Bullet Network Camera	Units	3		
1	4 MP PTZ Network camera with power		1.2		
3	adapter	Units	1		
4	128 GB Micro SD (TF) card	Units	20		material adverses
5	16 TB Enterprise Surveillance Hard Drives	Units	2		
6	Camera License	Units	21		
7	16 port smart PoE switch	Units	2	THE PARTY SHOWS IN	
	Gigabit Fiber SFP Transceiver Module				1
8	Single Mode	Pair	2		
9	4U Network Rack	Unit	2		
10	Optical Fiber Drop Wire (75 M)	Roll	1		
11	Optical Fiber Drop Wire (100 M)	Roll	1		
12	RJ 45 Jack	Pcs	25	All the Constant of	Careeran A.
13	Cat 6 Cable indoor	Box	1		
14	Cat6 Cable outdoor	meter	90		
15	PDU	Unit	2	1.20 C C C	
16	Installation	point	22		
3		194 - A. C. C.		Total Amount	The second second
				13% Vat	
		3		Grant Total	

Firm Name: Address: Name of Representative: Signature: Date: Firm Stamp:

प्रधानाध्यापक लक्ष्मी मा.वि.कोहलपुर-२

#### 1. 4 MP Turret network camera

Minimum Technical S	pecification of 4MP Turret camera:	Bidders offer	Remarks
Make	(Should be mentioned by bidder)		
Model No.	(Should be mentioned by bidder)		
Sensor	4MP, 1/1.8" CMOS or Better		
Focal Length	2.8mm		
Resolution	$2688 \times 1520$ or better		
Aperture	F1.0		
Min. Illumination	Color: 0.0005 Lux @ (F1.0, AGC ON), 0 Lux with white light		
Smart Supplement Light	Yes		
Supplement Light Type	White Light		
Supplement Light Range	30 m or better		
Interface:	1 x RJ45 10 M/100 M self-adaptive Ethernet port	1	
On board Storage:	Shall have built in SD/micro- SD/ SDXC/ SDHC card Upto 512 GB		
Built-in Microphone	Yes		
Environment Noise Filtering	Yes		
Face Capture	Yes		
Video Analytics	Line crossing detection, intrusion detection, region entrance detection, region exiting detection, Scene change detection, Motion detection (human and vehicle targets classification), video tampering alarm,		
DOE	exception		
POE	Supported		
Built-in Microphone	Yes		
Environment Noise Filtering	Yes		
Security	host authentication, Password protection, complicated password, HTTPS encryption		
ONVIF Compliant:	Yes (Shall be system compatible/ supported/ ready)		
video	50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)		
WDR	130 dB or better wide dynamic range		
SNR	$\geq$ 52 dB		
Video Streaming	Adjustable Resolution, quality and bit rate, support minimum 3 streams		
Day/Night Switch	Auto, Schedule		
Image Setting	Rotate, mirror, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser		
Protocol	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, SFTP, ARP, SNMP, WebSocket, WebSockets, SRTP		
Video Compression	H.265/H.264/H.264+/H.265+ or more		
Startup and Operating Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non- condensing)		
Hardware & Software Reset	Yes		
Protection	Water and dust resistant (IP67)		
Warrenty	1 year		
Manufacturer's compliance	All the technical parameters should be confirmed by Original Manufacturer on their duly signed compliance sheet on their letterhead and the product datasheet should be submitted.		







•		Bidders offer	Remarks
Make	(Should be mentioned by bidder)		
Model No.	(Should be mentioned by bidder)		
Image Sensor	1/3" Progressive Scan CMOS		
Resolution	Minimum $2688 \times 1520$ or higher resolution acceptable		
Lens Size	Varifocal lens, motorized lens, 2.7 to 13.5 mm		
(minimum or			
better)			
Adjustment angle	Pan: $0^{\circ}$ to $360^{\circ}$ , tilt: $0^{\circ}$ to $90^{\circ}$ , rotate: $0^{\circ}$ to $360^{\circ}$ or better		
Min. Illumination	Color: 0.003 Lux @ (F1.4, AGC ON), B/W: 0 Lux with IR		
Video Analytics	Line crossing detection, intrusion detection, region entrance detection, region exiting detection, unattended baggage detection, object removal detection, or more.		
Day/Night	IR Cut		
Illumination	Minimum: Color: 0.005 Lux @ (F1.6, AGC ON), 0 Lux with IR or better		
WDR	$\geq$ 120 dB or better wide dynamic range		
IR Range	Minimum 60 m or better		
Aperture	2.7 to 13.5 mm: F1.4	L	1
Focus	Auto, Semi-auto, Manual		
ONVIF	Yes (Shall be system compatible/ supported/ ready)	L	1
Compliant:	i contant de system compandie/ supported/ reduy)		
Compression	H.264, H.264+, H.265, H.265+ or more		1
Main Stream	50 Hz: 25 fps ( $2688 \times 1520$ , $1920 \times 1080$ , $1280 \times 720$ )	<u> </u>	<u> </u>
Main Stream	$60$ Hz: $20$ fps ( $2608 \times 1520$ , $1920 \times 1000$ , $1200 \times 720$ )		
Video Streaming	Adjustable Resolution, quality and bit rate, support		
video Streaming	minimum 3 streams		
Image Setting	Rotate, mirror, privacy masks, saturation, brightness, contrast, sharpness,		
ininge betting	gain, white balance adjustable by client software or web browser		
e-PTZ	Support Patrol and Auto Tracking settings		
Environment	Yes		
Noise Filtering			
Simultaneous	The camera should be capable of a minimum 6 live viewing simultaneously		
View			
Maximum User	Up to 30 users or more		
Face Capture	Yes		
People Counting	Yes		
User Level	3 user levels: administrator, operator and user		
Protocol	TCP/IP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP,		
11010001	UPnP, SMTP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS, PPPoE,		
	WebSocket, WebSocket's and more		
Interface	RJ45 10M/100M or More Speed Ethernet Port		
POE	Supported		
Video Analytics	Line crossing, intrusion, region entrance, region exiting, scene change		1
, j	detection, audio exception detection, defocus detection, unattended baggage		
	detection, object removal detection, Motion detection (support alarm		
	triggering by specified target types (human and vehicle)), video tampering		
	alarm, exception		
Edge Storage	Built-in micro-SD, up to 512 GB or more		
Connectors	RJ-45 for Network/PoE connection		
Operating	≥ -30° to 60°		
Conditions			
protection Level	Water and dust resistant (IP67) and vandal-resistant (IK10)		ļ
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.		
Warrenty	1 year		
Manufacturer's	All the technical parameters should be confirmed by Original		
compliance	Manufacturer on their duly signed compliance sheet on their letterhead		
	and the product datasheet should be submitted.		



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## 3. 4 MP PTZ Network camera with power adapter & mounting arms

Minimum Technical Sp	ecification of 4 MP PTZ Network camera with power adapter	Bidders offer	Remarks
Brand:	(Should be mentioned by bidder)		
Model No.	(Should be mentioned by bidder)		
Image Sensor	[Bullet channel]: 1/3" Progressive Scan CMOS; [PTZ channel]: 1/2.8" Progressive Scan CMOS		
Min. Illumination or better	[Bullet channel]: 0.0005 Lux @ (F1.0, AGC ON), 0 Lux with light; [PTZ channel]: Color: 0.005 Lux @ (F1.6, AGC ON), B/W: 0.001 Lux @		
Shutter Speed	ON), 0 Lux with IR 1 s to 1/30,000 s		
Day & Night	ICR		
Day/Night Switch	day, night, auto, scheduled-switch		
WDR	120 dB WDR or better		
HLC/3D DNR/ Defog/ EIS/ Regional Exposure/ Regional Focus	Yes		
ONVIF Compliant:	Yes (Shall be system compatible/supported/ Ready)		
Zoom	$25 \times \text{optical}, 16 \times \text{digital} [PTZ] \text{ or better}$		
General Function	mirror, password protection, watermark, IP address filter		
Lens Focal Length	[Bullet channel]: 2.8 mm; [PTZ channel]: 4.8 to 120 mm, 25 × optical or better		
Zoom Speed	[PTZ channel]: approx. 3.6 s		
Aperture	[Bullet channel]: F1.0; [PTZ channel]: F1.6 or better		
Supplement Light Type	[PTZ channel]: IR; [Bullet channel]: White Light		
Smart Supplement Light	Yes		
Supplement Light Range	[PTZ channel]: up to 100 m; [Bullet channel]: up to 30 m or more		
Movement Range (Pan)	360°		
Movement Range (Tilt)	-15° to 90° (auto flip)		
Pan Speed	pan speed: configurable from 0.1° to 80°/s; preset speed: 80°/s		
Tilt Speed	configurable from 0.1° to 80°/s, preset speed 80°/s		
Park Action	preset, pattern scan, patrol scan, auto scan, tilt scan, random scan, frame scan, panorama scan		
3D Positioning/ PTZ Status Display/ Preset Freezing	Yes		
Exception Detection	IP address conflict, HDD full, illegal login, HDD error, network disconnected		
Max. Resolution	[Bullet channel]: $2560 \times 1440$ ; [PTZ channel]: $2560 \times 1440$ or better		
Stream Type	mainstream, sub-stream, third-stream		
Stream	[Bullet channel]: 50 Hz: 25 fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720) 60 Hz: 30 fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720) [PTZ channel]: 50 Hz: 25 fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720) 60 Hz: 30 fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720)		
Video Compression	H.265, H.264, MJPEG, H.265+ or more		
Face Capture	[PTZ channel] Yes		
Smart Event	motion detection, video tampering alarm, alarm input and output, exception, audio exception detection, line crossing detection, intrusion detection, region entrance detection, region exiting detection		
Auto Tracking	yes		
Smart Linkage	Manual tracking, auto tracking, tracking takeover, track in turn		
Smart Record	ANR, Dual-VCA		
Alarm Linkage	[Bullet channel] Upload to FTP/NAS/memory card, notify surveillance center, send email, trigger alarm output, trigger recording, audible warning, white light flashing [PTZ channel] Upload to FTP/NAS/memory card, notify surveillance center, send email, trigger alarm output, trigger recording, audible warning, white light flashing, and PTZ actions (such as preset, patrol scan, pattern scan)		
Network Storage	NAS (NFS, SMB/ CIFS), ANR		
Protocols	IPv4/IPv6, HTTP, HTTPS,802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP/IP, UDP, IGMP, ICMP, DHCP, PPPoE, Bonjour, WebSocket, WebSocket's		
Simultaneous Live View	20		

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प्रधानाध्यापक लक्ष्मी मा.वि.कोहलपुर-२,वॉको



Technical Specification of CCTV and its Accessories for	Government School of Kohalpur Municipality

TT /TT .		
User/Host	32	
Security Measures	Authenticated username and password address binding, HTTPS	
	encryption,802.1X authenticated access, IP address filter	
Communication	RJ45, self-adaptive 10M/100M Ethernet port	
Interface		
On-board Storage	Built-in memory card slot, support Micro SD/Micro SDHC/Micro SDXC, up to	
-	256 GB or more	
Audio Input	1 audio input, 2.0 to 2.4Vp-p, 1k Ohm±10%	
Audio Output	1 audio output, line level, impedance: $600 \Omega$	
Power	12VDC, PoE+	
Power Consumption	Max. 24 W, including max. 2.6 W for heater and max. 11 W for supplement light	
and Current		
Operating Conditions	-30°C to 65°C (-22°F to 149°F), humidity lower than 90% RH	
Protection	IP66 Standard, IK10 (excluding glass window), 6000 V Lightning Protection,	
	Surge Protection and Voltage Transient Protection	
Power Adapter &	Product Specified Power Adapter & Mounting Arms Should Supply With	
Mounting Arms	package	
Warrenty	1 year	
Manufacturer's	All the technical parameters should be confirmed by Original Manufacturer	
compliance	on their duly signed compliance sheet on their letterhead and the product	
_	datasheet should be submitted.	

## 4. 128 GB Micro SD (TF) card

Minimum Technical Specification of 128 GB Micro SD (TF) card		Bidders offer	Remarks
Brand:	(Should be mentioned by bidder)		
Model No.	(Should be mentioned by bidder)		
MicroSI Availabl Max. rea Max. wr File syst Compati MicroSI	bof, shockproof, X-ray proof, wide temperature range Compatible with DHC, MicroSDXC, MicroSDHC UHS-Iand MicroSDXC, UHS-I host devices e capacity: 120.0 GB ad speed: 95 MB/s ite speed: 45 MB/s em: FAT32 bility: Compatible with MicroSDHC, MicroSDXC, MicroSDHC UHS-I and DXC UHS-I host devices ty period: 1 year		

# 5. 16 TB Enterprise Surveillance Hard Drives

Minimum Technical Specification of 16 TB Enterprise Surveillance Hard Drives		Bidders offer	Remarks
Brand:	(Should be mentioned by bidder)		
Model No.	(Should be mentioned by bidder)		
Storage	16 TB SATA III (6 Gb/s) 3.5" HDD		
Features	Helium Sealed-Drive Design, Super Parity, Low Halogen, Power Choice <sup>™</sup> Idle Power Technology, PowerBalance <sup>™</sup>		
	Power/Performance Technology, Hot-Plug Support3, Organic Solderability Preservative, RSA 2048 Firmware Verification (SD&D)		
Cache, Multisegmented (MB)	256 or more		
Reliability/Data Integrity			
Mean Time Between Failures (MTBF, hours)	2,500,000		
Reliability Rating @ Full 24×7 Operation (AFR)	0.35%		
Nonrecoverable Read Errors per Bits Read	1 sector per 10E15		
Power-On Hours per Year (24×7)	8760		
512e Sector Size (Bytes per Sector)	512		
4Kn Sector Size (Bytes per Sector)	4096		







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<b>Technical Specification</b>	of CCTV and its Accessories for Government School of Koha	lpur Municip	<u>ality</u>
Performance	and the second sec		
Spindle Speed (RPM)	7200RPM		
Interface Access Speed (Gb/s)	6.0, 3.0		
Max. Sustained Transfer Rate OD (MB/s, MiB/s)	261, 249		
Random Read/Write 4K QD16 WCD (IOPS)	170/440		
Average Latency (ms)	4.16		
Interface Ports	Single		
Rotation Vibration @ 20-1500	12.5		
Hz (rad/sec <sup>2</sup> )			
Power Consumption			
Idle A (W) Average	5.00W		
Max Operating, Random Read/Write 4K/16Q (W)	10.0, 6.3		
Power Supply Requirements	+12 V and +5 V		
Environmental			
Temperature, Operating (°C)	$5^{\circ}\text{C} - 60^{\circ}\text{C}$		
Vibration, Nonoperating: 2 to	2.27		
500Hz (Grms)			
Shock, Operating 2ms	50		
(Read/Write) (Gs)			
Shock, Nonoperating 2ms (Gs)	200		
Warranty (years)	1		
Compliance	HDD Should be compactable to existing Storage Server		
	hardware "DS-A81016S"		

## 6. Camera License

• Camera license for Hik-Central Professional

#### 7. 16 ports smart PoE switch

Minimum Technical Specification of 16 port Smart PoE Switch		Bidders offer	Remarks
Brand:	(Should be mentioned by bidder)		
Model No.	(Should be mentioned by bidder)		
Ports	16 Gigabit PoE port,2 Gigabit fiber optical port		
MAC Address Table	8 K		
Packet Forwarding Rate	26.784 Mpps		
Switching Capacity	36 Gbps		
PoE Standard	IEEE 802.3af, IEEE 802.3at		
surge protection	6 KV for PoE ports		
Max. Port Power	30 W		
PoE Power Budget	225 W		
Power Supply	100-240 VAC, 50/60 Hz, Max. 4 A, 250 W		
Forwarding Mode	Store-and-forward switching		
Device Function	Support remote upgrade, default parameter restoration, logs viewing, basic network parameter configuration, import and export		
	configuration, and time synchronization, Support port rate		
	configuration, flow control, and ports enabling, PoE watchdog: Ports 1		
	to 16 auto detect and restart the cameras that do not respond. PoE		
	enabling: supported, Rate-limiting for ingress and egress ports, Port		
	Mirroring, Port Isolation, 4094 VLANs		
Working Mode	Standard mode (default), Extend mode		
Warrenty	1 year		
Manufacturer's	All the technical parameters should be confirmed by Original		
compliance	Manufacturer on their duly signed compliance sheet on their letterhead and the product datasheet should be submitted.		







# 8. Gigabit Fiber SFP Transceiver Module Single Mode

Gigabit 20KM Single mode bidirectional SFP Module		Bidders offer	Remarks
S	Minimum Technical Specification of Gigabit 20KM Single mode bidirectional SFP		
No.	Module		
	Brand:		
	Model:		
1.	Single Strand (core) (Bi-Di) Single Model gigabit FO module support wave length		
	1310 Tx /1550 Rx or 15500 Tx /1310 Rx		
2.	Support Min 20 Km and data rate 1 Gbps or better		
3.	Support Self-locking mechanism, hot-swappable and Digital diagnostics monitoring		
4.	Operating Temperature: -100°C to 45°C or better		
	Min Transmit Power: Min9dbm and Max3dbm		
	Max power budget 11db		
	Receive Sensitivity: -20dbm		
5.	FO module should be compatible to proposed switch.		
6	Warrenty: 1 year		
Produ	ict datasheet and ISO certificate should be submitted.		

#### 9. 4U Network Rack

Minimum Technical Specification of 4U Network Rack		Bidders offer	Remarks
Brand:	(Should be mentioned by bidder)		
Model No.	(Should be mentioned by bidder)		
Main Material	SPCC cold rolled steel		
Thickness	Mounting profile 1.5mm, mounting angle 1.2mm		
Degree of Protection	1P20		
Size	600x 450x 280(WxDxH)		
Loading Capacity	Static loading: 60KG		
Color	Black		
installation	Standing or wall mounting		
Knock out hole for enter front door, turning angle	ring cable on both of top cover and bottom panel, Toughened glass e is over 180 degrees.		

#### 10. Fiber Drop Wire 75/100/150/200 meter

• Single 0r multi-core messenger drop wire with connector compatible to Gigabit Fiber SFP Transceiver Module Single Mode

#### 11. Technical Specification of RJ45 Jack

Brand: ..... (Should be mentioned by bidder)

- Cat6 RJ45 8P8C modular plugs
- Gold Plated 30U
- Gold-plated contacts for error-free data transfer
- Designed for Cat 6 UTP cable (1000Mbps)

#### 12. CAT6 Cable

Minimum Technical Specification of Indoor Cat 6 Cable		Bidders offer	Remarks
Brand:	(Should be mentioned by bidder)		
Model:	(Should be mentioned by bidder)		
Cable type	U/UTP		
Conductor material	Copper		
Conductor surface	Bare		
Diameter conductor	0.56 mm		
Nominal cross-section	0.25 mm <sup>2</sup>		







conductor		
AWG size	23	
Number of cores	8	
Number of stranding	4	
elements		
Stranding element	Pairs	
Specification core insulation	Polyethylene (PE)	
Core identification	Color	
Screen over stranding	None	
element		
Specification material outer	Polyethylene (PE)	
sheath		
Armoring/reinforcement	None	
Cable geometry	Round	
Cable Length	305 M/1000 FT	

Minimum Technical Specification of Outdoor Cat 6 Cable		Bidders offer	Remarks
Brand:	(Should be mentioned by bidder)		
Model:	(Should be mentioned by bidder)		
Category	Cat 6A		
Usage Scenario	Outdoor		
Conductor Material	Solid-Bare Copper		
Conductor Diameter	0.565± 0.005 mm 23AWG		
Insulation Diameter	$1.12 \pm 0.1 \text{ mm}$		
Length	$305 \pm 1.5 \text{ m}$		
Rip Cord	Yes		
Separator	Yes		
Fire Resistance	CPR Fca		
Number of cores	8		
Number of stranding	4		
elements			
Stranding element	Pairs		

#### 13. PDU

Minimum Technical Specification of PDU		<b>Bidders offer</b>	Remarks
Brand:	(Should be mentioned by bidder)		
Model:	(Should be mentioned by bidder)		
Rated voltage	110/220 V		
Rated current	13 A		
Frequency	50/60 Hz		
Length	19" (≤ 8 ways PDU) Inch		
Depth	1.5U		
Material	Aluminum Alloy		
Power cord length	2M		
Certificates	RoHS; CE		
Connectors number	6 way/ port		
Connectors type	Universal type		
Protection	Overload and switch protection		

#### 14. Installation

- Fiber Cable Splicing, Cable Clipping, RJ45 Clamping, Cable Tie, Screw, Cable tagging
- Camera / 6U Rack / pole box / power socket installation
- Interconnection between switches through GSFP,
- Separately Custom Label on above mentioned devices
- Proposed CCTV System (camera & hard drive) most be integrated in existing CCTV Surveillance System of Kohalpur Municipality Office server located at Kohalpur Nagar Bikas Office.



