सुन्दरहरैँचा नगरपालिका
नगरकार्यपालिकाको कार्यालय
विराटचोक, मोरङ

कोशी प्रदेश, नेपाल

CCTV, attendance लगायत अन्य Networking उपकरणहरुको दररेट पेश गर्ने सम्बन्धी सूचना !

प्रकाशित मितिः २०८२/०९/२१

प्रस्तुत विषयमा यस सुन्दरहरैँचा नगरपालिका नगरकार्यपालिकाको कार्यालयको लागि आवश्यक पर्ने तपसिलको CCTV, attendance लगायत अन्य Networking उपकरणहरुको दररेट बनाउने प्रयोजनका लागि सम्बन्धित विषयको काम गर्न योग्य तथा इच्छुक सप्लायर्स, फर्म, कम्पनी वा संस्थाहरूलाई सिलबन्दी खाममा फर्म,संस्था वा कम्पनी दर्ताको प्रमाणपत्र, व्यवसाय दर्ताको प्रमाणपत्र, मूल्य अभिवृद्धि कर दर्ता प्रमाणपत्र र स्थायी लेखा दर्ता नम्बर(प्यान) प्रमाणपत्र, मुल्य अभिवृद्धि करमा दर्ता हुन नपर्नेको हकमा सोको आधिकारीक कागजातको प्रमाणित, करचुक्ता प्रमाणपत्र वा आय विवरण पेश गरेको प्रमाणित कागजात वा आय विवरण पेश गर्न म्याद थप भएको निस्सा वा प्रमाण र निवेदन संलग्न गरी सात दिन भित्रमा सूचिकृत भएका वा सूचीकृत भई सेवा दिन चाहेका सप्लायर्स, फर्म, संस्था वा कम्पनीहरूलाई दररेट पेश गर्नका लागि अनुरोध छ।

नोटः BOQ https://sundarharaichamun.gov.np बाट प्राप्त गर्न सकिने छ।

श्री सुन्दरहरैंचा नगरपालिका
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विषयः सुन्दरहरैंचा नगरपालिकाको लागि CCTV,attendance लगायत अन्य Networking उपकरणहरुको दररेट उपलब्ध गराइएको सम्बन्धमा ।

S.N	Particulars	Required Specifications		Unit	Quantity	Rate
1	**Attendance Device**	Model	Zkteco MB2000 or equivalent	pcs	1	
		Authentication Type	Face, Fingerprint and card			
		Face Capacity	2000 or more			
		Fingerprint Capacity	3000 or more			
		ID Card Capacity	3000 or more			
		Record Capacity	100000 or more			
		Communiction	TCP/IP, USB-Host, Wifi			
		Standard functions	SMS, DTS, Scheduled-bell, Self-Service Query, Automatic status switch, T9 Input			
		Built in Backup battery	Yes, more than or equal to 2000 mAh			
		Verification time	less than or equal to 1 sec			
		Display screen	4 to 4.5 inch			
		Warranty	1 years			
2	**Attendance Device**	Model		**pcs**	**1**	
		Authentication Type	Face, Fingerprint and card			
		Face Capacity	500 or more			
		Fingerprint Capacity	1000 or more			
		ID Card Capacity	1000 or more			
		Record Capacity	100000 or more			
		Communiction	TCP/IP, USB-Host, Wifi			
		Standard functions	Photo capture, ADMS, DST, Record Query, multiple authentication methods			
		Built in Backup battery	Yes, more than or equal to 2000 mAh			
		Verification time	less than or equal to 2 sec(face), less than 1.2 secs(fingerprint)			
		Display screen	more than 2 inch			
		Warranty	1 years			
3	**Attendance Device**	Model		**pcs**	**1**	
		Authentication Type	Fingerprint and card			
		Fingerprint Capacity	1000 or more			
		ID Card Capacity	1000 or more			
		Record Capacity	80000 or more			
		Communiction	TCP/IP, USB-Host			
		Standard functions	WDMS, Web Server, SMS, DST			
		Built in Backup battery	Yes, more than or equal to 2000 mAh			
		Verification time	less than or equal to 0.5 secs			
		Display screen	more than 2.5 inch			
		Warranty	1 years			

S.N	Particulars	Required Specifications		unit	Qty	Rate
4	24+4 Layer 3 Managed Access Non PoE Switch	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Service Ports	24 x 10/100/1000BASE-T ports, 4 x 1GE/10GE SFP+ ports			
		Management Port	1×RJ45 console port			
		USB port	1 or more with no capacity limit			
		switching capacity	128 Gbps			
		Forwarding rate	96 Mbps			
		CPU	Dual-core CPU, each core with the clock speed of 1.0 GHz			
		Memory	1 GB, Flash memory 512 MB			
		Fan	Fanless, natural heat dissipation			
		PoE	Non-PoE			
		MAC address table	16000			
		ARP table size	4000			
		Number of IPv4 routes	unicast-6000,multicast-1000			
		Number of IPv6 routes	unicast-2000,multicast-750			
		Rack height	1U			
		Power Input	Rated input voltage: 100 V AC to 240 V AC, 50 Hz to 60 Hz;Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz; Maximum input current: 0.6 A			
		Power Output	Built-in power supply: 25 W			
		Power Consumption	Max. 25W			
		Surge Protection	Power port: common mode 6 kV, differential mode 6 kV, Communication port: 10 kV			
		VLAN	4000 or more			
		remote monitoring and maintenance	Cloud or similar platform management			
		Accessories	Required accessories			
		Warranty	2 years			
5	24+4 Layer 3 Managed Access PoE Switch	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Service Ports	24 x 10/100/1000BASE-T ports, supporting PoE/PoE+, 4 x 1GE/10GE SFP+ ports			
		Management Port	1×RJ45 console port			
		USB port	1 or more with no capacity limit			
		switching capacity	**128 Mbps**			
		Forwarding rate	**96 Mbps**			
		CPU	Dual-core CPU, each core with the clock speed of 1.0 GHz			
		Memory	1 GB, Flash memory 512 MB			
		Fan	**Fan based with proper airflow**			
		PoE port	All RJ45 ports support PoE/PoE+ (IEEE802.3af/at) power supply			
		MAC address table	**16000**			
		ARP table size	**4000**			
		Number of IPv4 routes	unicast-6000,multicast-1000			
		Number of IPv6 routes	unicast-2000,multicast-750			
		Rack height	1U			
		Power Input	AC input: Rated input voltage: 100 V AC to 240 V AC, 50 Hz to 60 Hz;Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz;Maximum input current: 6 A			

S.N	Particulars	Required Specifications		unit	Qty	Rate
		Power Output	Built-in power supply: 409 W			
		Power Consumption	35 W (non-PoE), 405 W (PoE full load)			
		Surge Protection	Power port: common mode 6 kV, differential mode 8 kV, Communication port: 10 kV			
		VLAN	4000 or more			
		remote monitoring and maintenance	Cloud or similar platform management			
		Accessories	Required accessories			
		Warranty	2 years			
6	**12+4 Layer 3 Managed Access PoE Switch**	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Service Ports	12 x 10/100/1000BASE-T ports, supporting PoE/PoE+, 4 x 1GE/10GE SFP+ ports			
		Management Port	1×RJ45 console port			
		USB port	1 or more with no capacity limit			
		switching capacity	**104 Mbps**			
		Forwarding rate	**78 Mbps**			
		CPU	Dual-core CPU, each core with the clock speed of 1.0 GHz			
		Memory	1 GB, Flash memory 512 MB			
		Fan	**Fan based with proper airflow**			
		PoE port	All RJ45 ports support PoE/PoE+ (IEEE802.3af/at) power supply			
		MAC address table	**16000**			
		ARP table size	**4000**			
		Number of IPv4 routes	unicast-6000,multicast-1000			
		Number of IPv6 routes	unicast-2000,multicast-750			
		Rack height	1U			
		Power Input	AC input: Rated input voltage: 100 V AC to 240 V AC, 50 Hz to 60 Hz;Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz;Maximum input current: 6 A			
		Power Output	Built-in power supply: 409 W			
		Power Consumption	35 W (non-PoE), 405 W (PoE full load)			
		Surge Protection	Power port: common mode 6 kV, differential mode 8 kV, Communication port: 10 kV			
		VLAN	4000 or more			
		remote monitoring and maintenance	Cloud or similar platform management			
		Accessories	Required accessories			
		Warranty	2 years			
7	**SDWAN Router**	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Ports	4×10/100/1000BASE-T,4×10/100/1000/2500BASE-T, 2×10GE SFP+ ports, 1×fixed LAN, 1×fixed WAN			
		CPU	Quad-core processor, 1.8 GHz clock frequency per core			
		Flash Memory	128 MB			
		RAM	4 GB			
		Concurrent clients	1500			
		Throughput	4000Mbps			
		Rack height	1U			
		Local Syslog Storage	2.5" SATA HDD Extension Bay			

S.N	Particulars	Required Specifications		unit	Qty	Rate
		Other fearures	easy intranet connection, terminal recognition for easy management and bandwidth, easy VPN configuration			
		Warranty	2 years			
8	**Cloud managed Router**	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Ports	5×10/100/1000BASE-T, 3×fixed LAN, 1×fixed WAN			
		CPU	Dual-core processor, 880 MHz clock frequency per core			
		Flash Memory	32 MB			
		RAM	128 MB			
		Concurrent clients	100			
		Throughput	1000 Mbps (Turbo Mode), 600Mbps(Normal mode)			
		Other fearures	Self organizing network, centralized network management, cloud portal authentication, remote monitoring and maintenance			
		Warranty	2 years			
9	**Cloud managed Firewall**	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Firewall throughput of IPv4 packets	10 Gbps			
		Firewall throughput (packets per second)	1.8 Mpps			
		Concurrent sessions (TCP)	500000			
		New sessions/second (TCP)	50000			
		Firewall policies	3000			
		SSL VPN throughput(1392-byte)	1.7 Gbps			
		Concurrent SSL VPN users (recommended maximum, tunnel mode)	500			
		Application control throughput (HTTP 64K)2	3 Gbps			
		IPsec VPN throughput (512-byte)	2.6 Gbps			
		Gateway-to-gateway IPsec VPN tunnels	1000			
		Rack height	1 U			
		Fixed service port	8 x 10/100/1000BASE-T ports			
			1 x GE SFP port			
			1 x 10GE SFP+ port			
		Fixed management port	1 x RJ45 MGMT port (reusing Ge0/0)			
			1 x RJ45 console port (RS-232)			
		USB port	2 x USB 2.0 ports			
		Connector Type	SATA			
		Memory Capacity	1 TB			
		Hard Disk Type	Hard disk drive			
		Maximum Power Consumption	14 W			

S.N	Particulars	Required Specifications		unit	Qty	Rate
		Warranty	2 years			
10	**Network switch(Layer 2)**	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Ports	**26-Port Gigabit managed switch(24×10/100/1000 Base-T PoE+ ports, 2SFP uplink)**			
		switching capacity	**52 Gbps or higher**			
		Forwarding rate	38 Mbps or higher			
		Fan	Built in fan			
		PoE	370 W or higher at IEEE 802.3at/IEEE 802.3af			
		MAC address table	**8000**			
		Surge Protection	**4kV**			
		VLAN	upto 15 or higher			
		remote monitoring and maintenance	yes, cloud manageable like VLANS, monitoring switch statistics			
		Accessories	mounting bracket, screws, power supply and other essentials			
		Warranty	2 years			
11	**Network switch(Layer 2)**	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Ports	**20-Port Gigabit Managed switch(18×10/100/1000 Base-T, 16 PoE+ ports, 2RJ45, 2SFP)**			
		switching capacity	**40 Gbps or higher**			
		Forwarding rate	29 Mbps or higher			
		Fan	Built in fan			
		MAC address table	**8000**			
		Surge Protection	**4kV**			
		PoE	250 W or higher at IEEE 802.3at/IEEE 802.3af			
		VLAN	**upto 15 or higher**			
		remote monitoring and maintenance	yes, cloud manageable like VLANS, monitoring switch statistics			
		Accessories	mounting bracket, screws, power supply and other essentials			
		Warranty	2 years			
12	**Network switch(Layer 2)**	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Ports	**10-Port Gigabit Managed switch(10×10/100/1000 Base-T, 8 PoE+ ports, 1 ×1G RJ45, 1×1G Combo)**			
		switching capacity	20 Gbps or higher			
		Forwarding rate	14 Mbps or higher			
		PoE	250 W or higher at IEEE 802.3at/IEEE 802.3af			
		MAC address table	**4000**			
		Surge Protection	**6kV**			
		VLAN	**upto 15 or higher**			
		remote monitoring and maintenance	yes, cloud manageable like VLANS, monitoring switch statistics			
		Accessories	mounting bracket, screws, power supply and other essentials			
		Warranty	2 years			
		Brand				
		Manufacturer,Country				

S.N	Particulars	Required Specifications		unit	Qty	Rate
13	PoE switch with SFP	**Model**		pcs	1	
		Ports	**4 x 10/100/1000Mbps PoE ports, and and 2 × 10/100/1000 Mbps SFP ports.**			
		Layer Type	Unmanaged			
		switching capacity	**12 Gbps or higher**			
		Forwarding rate	8 Mbps or higher			
		Forwarding mode	Store and forward switching			
		MAC address table	**2000**			
		Surge Protection	**6kV**			
		Warranty	1 year+			
14	PoE network switch	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Ports	**4 x 10/100Mbps PoE ports, and and 2 × 10/100Mbps RJ45 ports.**			
		Layer Type	Unmanaged			
		switching capacity	**1.2 Gbps or higher**			
		Forwarding rate	0.75 Mbps or higher			
		Forwarding mode	Store and forward switching			
		MAC address table	**2000**			
		Surge Protection	**4kV**			
		Warranty	1 year+			
15	PoE netwrok switch	**Brand Manufacturer,Country**		pcs	1	
		Model				
		Ports	**8x 10/100Mbps PoE ports, and and 2 × 10/100/1000Mbps RJ45 ports.**			
		Layer Type	Unmanaged			
		switching capacity	**5 Gbps or higher**			
		Forwarding rate	4 Mbps or higher			
		Forwarding mode	Store and forward switching			
		MAC address table	**3000**			
		Surge Protection	**6kV**			
		Warranty	1 year			
16	Desktop network switch	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Ports	**5 x 10/100Mbps RJ45 ports.**			
		Fan	Fanless or fan			
		Warranty	1 year			
17	Desktop network switch	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Ports	**8 x 10/100Mbps RJ45 ports.**			
		Fan	Fanless or fan			
		Warranty	1 year			
18	CPU	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		Processor	Intel core i5 6th generation or equivalent or higher			
		RAM	8GB			
		Storage	512 GB SSD			
		Clock speed	2GHz or higher			
		Integrated graphics	Yes			
		Warranty	1 year			
		Brand				

S.N	Particulars	Required Specifications		unit	Qty	Rate
19	UPS	Manufacturer,Country		pcs	1	
		Model				
		UPS capacity	1000 VA/600W			
		Input Voltage Range	140 VAC to 290 VAC; 85 VAC to 150 VAC			
		Plug Type	UK TYPE G; Type B (NEMA 5-15); Schuko			
		Output Voltage Range	210 VAC to 235 VAC; 110 VAC to 125 VAC			
		Transfer Time	<=10 ms			
		Outlet number	2 or more			
		Battery Type	12 V / 9 Ah, lead acid battery			
		Protection	Surge, Overload, Discharge, Short Circuit Protection			
		Indicatior	LED indicator			
		Alarm	Low Battery, Overload, Fault			
		Warranty	1 year			
20	Voltage Stabilizer	Brand		pcs	1	
		Manufacturer,Country				
		Model				
		Capacity	5 KVA			
		Minimum Input power	90 V			
		Maximum Input power	280 V			
		Output Power	200V-240V			
		Load	3500 watts			
		Digital display	Yes			
		Safety features	Under volt protection, Over volt protection, Overload Protection			
		Warranty	1 year			
21	Hybrid Inverter	Brand		pcs	1	
		Manufacturer,Country				
		Model				
		Type	Hybrid Inverter/Charger			
		Power Output	Minimum **1500VA** continuous output @25°C			
		Working Temperature	5 to +80 °C/35 to 85%RH (Without condensation)			
		Protection Function	Battery reverse-connection protection, Short circuit, Over-load protection, Low Battery, high battery disconnects and self-reconnect and Over temperature shut down			
		Input and Output Voltage	DC input must be 24 nominal and output voltage should be 230±2%, Frequency 50Hz			
			Provision of 230V AC source input to enhance reliability through secondary charging source			
		Surge Handling Capacity	≥125% for at least 5 minutes			
		Power factor	between 0.8 lagging to 0.8 leading			
		Inverter Efficiency	≥90%			
		Indication	LCD display with fault alarm. Optional -Data logging			
		Working Mode	Solar prioritize for charging when grid is connected			
		Minimum PV array operating voltage	100Vdc			
		Charge controller Type	Maximum power point tracker (MPPT)			
		PV Maximum Output Power	**1500W** (In compliance with the Charging Current)			
		Charger Regulation Method	Three- Stage (Bulk, absorption, float) plus manual equalization			
		MPPT Efficiency	>97%			

S.N	Particulars	Required Specifications		unit	Qty	Rate
		MPPT Power Consumption	<3W at night			
		Supported Battery Type	Flooded, GEL, AGM etc.			
		Enclosure Protection Class	Minimum Ingress Protection rate of IP 21			
		Warranty	2 years			
22	**Battery**	**Brand**		pcs	1	
		Manufacturer,Country				
		Model				
		The manufacturer shall have:	ISO 9001, ISO 14001, ISO 1800, ISO 45001 Certificates			
		Battery Type:	Lead Acid Flooded Type solar deep cycle			
		Individual Battery Capacity:	Minimum 150Ah @C10			
		Individual Battery voltage:	12V			
		Electrolyte	Sulphuric acid			
		Average Self Discharge:	≤3% per month at 25°C			
		Certification	RETS Certification or Third Party assigned by Employer			
		Warranty	2 years			

Technical Specification for 4MP ANPR Camera					
S.N	**Category**	**Specification**	**Unit**	**Qty**	**Rate**
23	**Model**		pcs	1	
	Manufacturer, Country				
	Model				
	Product Type	**4 MP ANPR Smart Monitoring Camera**			
	Image Sensor	1/1.8" progressive scan CMOS			
	Minimum Illumination	Color: 0.0005 Lux @ (F1.2, AGC ON),0 Lux with light			
	Shutter Speed	1/50 s to 1/40,000 s			
	Slow Shutter	Yes			
	Day & Night	24/7 color imaging			
	Resolution	2688 × 1520			
	Lens — Focal Length	2.8 - 12 mm			
	Field of View (FOV)	Horizontal: 113.5° to 39°, Vertical: 58.4° to 22.7°, Diagonal: 141.3° to 44.3° 8-32mm : Horizontal: 41.9° to 15.1°°, Vertical: 22.9° to 8.64°, Diagonal: 48.8° to 17.3° 10-50mm: Horizontal: 32.2° to 7.8°°, Vertical: 18.1° to 4.4°, Diagonal: 37.1° to 8.95°			
	Aperture	2.8-12mm : F1.38, 8-32mm : F1.7, 10-50mm : F1.7			
	Illuminator	Built in supplement light type:white light, light number:3, built in supplement light range: upto 50m			
	Presets	200 presets			
	Compression	H.265/H.264			
	Video Streams(main stream)	50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720, 704 × 576, 352 × 288) 60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720, 704 × 576, 352 × 288)			
	Video Streams(sub stream)	50 Hz: 25 fps (1920 × 1080, 1280 × 720, 704 × 576, 352 × 288) 60 Hz: 30 fps (1920 × 1080, 1280 × 720, 704 × 576, 352 × 288)			
	Video Compression	H.264 and H.265 encoding Main stream: H.265/H.264/MJPEG Sub-stream: H.265/H.264/MJPEG			
	Interface	1 × RJ45 10/100/1000 Mbps Ethernet			
	On-Board Storage	microSD / microSDHC / microSDXC up to 512 GB capacity			
	Network Features	local storage and CVR, NVR, ANR			
	API	ONVIF(S,G,T,M), ISAPI, SDK etc			
	Image	Wide Dynamic Ragne: 140 dB; enhancement: BLC, 3D DNR; Day/Night Switch: Auto/Scheduled/Manual			
	Special features:	Road traffic and Vehicle Detection and LPR			
	Capture speed Range	5 to 120 km/hr			
	Power Supply	DC 12 V to 24 V, 1.25 A, max. 15 W, two-core terminal block, PoE: 802.3at, Type 2, Class 4, max. 15 W			

S.N	Category	Specification	Unit	Qty	Rate
	Material	Aluminum alloy			
	Protection	IK10: IEC 62262:2002,IP67: IEC 60529-2013			
	Warranty	2 years			
		Technical Specification 4MP ANPR IR Varifocal Bullet Network Camera			
24	**Manufacturer, Country**		pcs	1	
	Brand				
	Model				
	Product Type	**4MP ANPR IR Varifocal Bullet Camera**			
	Image Sensor	1/3" Progressive Scan CMOS			
	Minimum Illumination	Color: 0.003 Lux @ (F1.4, AGC ON), B/W: 0 Lux with IR			
	Shutter Speed	1/3 s to 1/100,000 s			
	Angle Adjustment	Pan: 0° to 335°, tilt: 0° to 90°, rotate: 0° to 360°			
	Day & Night	IR cut filter			
	Resolution	2688 × 1520			
	Lens	Varifocal lens, Motorized lens, 2.7 to 13.5 mm			
	Focal length and Field of View (FOV)	2.7 to 13.5 mm, horizontal FOV 107.6° to 32.9°, vertical FOV 56° to 18.5°, diagonal FOV 130.9° to 37.8°			
	Aperture	F1.6			
	Illuminator	IR			
	Supplement Light Range	Up to 40 m			
	Smart Light	Yes			
	Compression	H.265/H.264/H.264+/H.265+			
	Video Streams	Main stream: 50HZ @ 25fps(2688×1520, 1920×1080, 1280×720), 60 Hz @30fps(2688×1520, 1920×1080,1280×720)			
	Interface	1 × RJ45 10/100 Mbps Ethernet			
	On-Board Storage	microSD / microSDHC / microSDXC up to 512 GB capacity			
	Network Features	FTP/NAS/memory card upload, motion detection (human & vehicle)			
	API	ONVIF(S,G,T), ISAPI,SDK etc			
	Deep learning function	Road traffic and vehicle detection(Support license plate recognition)			
	Image	WDR 120dB, SNR >=52dB			
	Power Supply	12 VDC ±25%, 1.08 A / PoE (IEEE 802.3at, Class 4, max. 15 W)			
	Protection	IP67: IEC 60529-2013, IK10: IEC 62262:2002			
	Event & Alarm	Motion detection, upload to FTP/NAS/memory card, notify surveillance center, email trigger, audible warning			
	Warranty	2 years			
		Fixed Lens (4MP) + PT Network Camera(4MP)			
	Manufacturer, Country				
	Brand				
	Model				
	Product Type	4MP Fixed Lens + 4MP PT Network Camera			
	Image Sensor	Bullet channel: 1/2.8″ Progressive Scan CMOS PT channel: 1/2.8″ Progressive Scan CMOS			
	Minimum Illumination	Bullet & PT channels: Color: 0.005 Lux @ (F2.0, AGC ON), B/W: 0.005 Lux @ (F2.0, AGC ON), 0 Lux with IR			
	Shutter Speed	1 s to 1/30,000 s			

S.N	Category	Specification	Unit	Qty	Rate
	Slow Shutter	Yes			
	Day & Night	ICR			
	Resolution	2560 × 1440 (Bullet & PTZ channels)			
	Lens — Focal Length	Bullet: 2.8 mm PT: 8 mm			
	Field of View (FOV)	Bullet channel: H: 94°, V: 49°, D: 114°PTZ channel: H: 44°, V: 24°, D: 51°			
	Aperture	F1.6 (Bullet & PT)			
	Illuminator	Hybrid (IR + White Light) for Bullet & PT			
	Supplement Light Range	Up to 30 m (Bullet & PT)			
	Smart Light	Yes			
	PT Movement – Pan	Panoramic: 0° to 355°PTZ: 0° to 345°			
25	**PT Movement – Tilt**	Panoramic: 7° to 17° (manual adjust)PTZ: 0° to 80°	pcs	1	
	Pan Speed	4° – 25°/s (configurable), Preset: 25°/s			
	Tilt Speed	4° – 20°/s (configurable), Preset: 20°/s			
	Presets	200 presets			
	Compression	H.265/H.264			
	Video Streams	Main stream: up to 2560 × 1440 @ 25/30 fps (Bullet & PTZ)			
	Interface	1 × RJ45 10/100 Mbps Ethernet			
	Built-In Audio	1 microphone, 1 speaker			
	On-Board Storage	microSD / microSDHC / microSDXC up to 512 GB capacity			
	Network Features	FTP/NAS upload, motion detection (human & vehicle)			
	API	ONVIF(S,G,T), ISAPI etc			
	Image	Digital WDR, BLC, HLC, DNR etc			
	Power Supply	12 VDC ±25%, 1.5 A / PoE (IEEE 802.3at, Class 4, max. 21.5 W)			
	Operating Conditions	−30 °C to 50 °C (−22 °F to 122 °F), humidity ≤ 95% non-condensing			
	Material	Poly Carbonate			
	Protection	IP66 (weather & dust resistant), surge & voltage transient protection			
	Event & Alarm	Motion detection, upload to FTP/NAS/memory card, notify center, email trigger, audible warning			
	Certifications	Standard: IP66, surge protection			
	Warranty	2 years			
		4MP ColorVu Fixed Bullet Network Camera			
	Manufacturer, Country	**Must be specified by the bidder**			
	Brand	**Must be specified by the bidder**			
	Model	**Must be specified by the bidder**			
	Product Type	4 MP Fixed Bullet Network Camera			
	Image Sensor	1/1.8" Progressive Scan CMOS			
	Minimum Illumination	Color: 0.0005 Lux @ (F1.0, AGC ON), 0 Lux with white light			
	Shutter Speed	1/3 s to 1/100,000 s			
	Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°			
	Day & Night	IR cut filter			
	Resolution	2688 × 1520			
	Lens	Fixed focal lens, 2.8, 4 and 6 mm optional			

S.N	Category	Specification	Unit	Qty	Rate
	Focal length and Field of View (FOV)	2.8 mm, horizontal FOV 112°, vertical FOV 61°, diagonal FOV 134° 4 mm, horizontal FOV 95°, vertical FOV 51°, diagonal FOV 115° 6 mm, horizontal FOV 58°, vertical FOV 31°, diagonal FOV 69°			
	Aperture	F1.0			
26	**Illuminator**	White light	pcs	1	
	Supplement Light Range	60 m			
	Smart Light	Yes			
	Compression	H.265/H.264			
	Video Streams	50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)			
	Interface	1 × RJ45 10/100 Mbps Ethernet			
	Built-In Audio	Yes			
	On-Board Storage	microSD / microSDHC / microSDXC up to 512 GB capacity			
	API	ONVIF(S,G,T), ISAPI,SDK etc			
	Image	WDR 130dB, SNR >=52dB			
	Power Supply	12 VDC ±25%, 0.7 A / PoE (IEEE 802.3af, max. 10.5 W)			
	Protection	IP67: IEC 60529-2013			
	Event & Alarm	Motion detection, upload to FTP/NAS/memory card, notify surveillance center, email trigger, audible warning			
	Warranty	1 year			
		8MP Motorized Bullet Camera			
	Category	**Specification**			
	Manufacturer, Country	**Must be specified by the bidder**			
	Brand	**Must be specified by the bidder**			
	Model	**Must be specified by the bidder**			
	Product Type	8 MP Motorized Bullet Camera			
	Image Sensor	1/2.8" Progressive Scan CMOS			
	Minimum Illumination	Color:0.002Lux@(F1.6,AGC ON),B/W:0Lux with IR			
	Shutter Speed	1 s to 1/100,000 s			
	Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°			
	Day & Night	IR cut filter			
	Lens	Motorized			
	Focal length	2.7 - 13.5 mm			
27	**Aperture**	F1.6	pcs	1	
	Illuminator	IR ; IR distance 80 m			
	Smart Light	Yes			
	Compression	H.265/H.264			
	Max Resolution	3840×2160 @30fps			
	Interface	1 × RJ45 10/100 Mbps Ethernet			
	Built-In Audio	yes			
	On-Board Storage	microSD / microSDHC / microSDXC up to 512 GB capacity			
	API	ONVIF(S,G,T) etc			
	Power Supply	12 VDC ±25%, PoE (IEEE 802.3at, max. 9.5 W)			
	Protection	IP67			
	Event & Alarm	Motion detection, notify surveillance center, email trigger, audible warning			
	Warranty	1 year			
		Technical Specification of 8 MP IP Network Straight Full Color IP Camera			
	Brand				

S.N	Category	Specification	Unit	Qty.	Rate
	Model				
	Manufacturer, Country				
	Product Type	8 MP IP Network Straight Full Color IP Camera			
	Image Sensor:	1/2.7" CMOS Sensor			
	Min. Illumination:	Color: 0.05lux @(F1.0, AGC ON), 0 lux with IR			
	Shutter Time:	1/25 s to 1/10,000 s			
	Lens:	3.6mm Fixed Lens			
	Day&Night:	IR cut filter with auto switch			
	Image Enhancement:	BLC/3D DNR/D-WDR			
	Motion Detection	Support			
	Privacy Protection	Support(4 Self-customized Areas)			
	Smart function:	Humanoid detection,Vehicle detection			
	Weather-Proof:	IP66			
	Illumination for Infrared Switching:	1~5Lux			
	Infrared Wavelength:	850nm			
	Mimimum Illumination:	0 Lux(IR ON)			
	IR Range:	8PCS LEDS//White Light :20m			
	Video Compression:	H.265/H.264			
	Video Bit Rate:	512Kbps~12288Kbps(main stream H.265)			
		64kbps~1024Kbps(sub stream H.265)			
28	**Audio Compression:**	G711U/G711A/AAC	pcs	1	
	Dual Streams:	Yes			
	Triple Streams:	No			
	Max. Image Resolution:	3840*2160(8MP)/3072*2048(6MP)/2592*1944(5MP)/2560*1440 (4MP)/1920*1080(2MP)			
	Frame Rate:	20fps(8MP).MAX main stream			
		30fps（D1）.MAX sub stream			
	Image Settings:	3D NR, D-WDR, Image Flip, Saturation, Brightness, Contrast, Sharpness			
		adjustable via client software, web browser or Smartphone App			
	Day/Night Switch:	EXT/Day/Night/Auto/Time			
	Line IN/line OUT	Support（1ch）			
	Built-in Mic	Yes			
	Built-in Speaker	Optional			
	Network Protocols:	HTTP, TCP/IP, IPv4/v6, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS,			
		DDNS,IP Search(Support P2P, NVR, NVS etc.)			
	System Compatibility:	Open Network Video Interface ForumONVIF(17.2 with profile S)			
	On-line Viewing	Max. Support 2 Users Simultaneously			
	Communication Interface:	1 RJ45 10M / 100M Ethernet Interface			
	SD card interface	Support TF card（micro TF card, up to 256G）			
	DC Power Plug:	DC Power Femate Interface			
	Power Supply:	12 V DC ± 10%/PoE			
	Power Consumption:	12 VDC ± 10%, Max Power Comsumption Less than 8W（When the infrared lamps turn on)			
	Warranty	1 year			

S.N	Category	Specification	Unit	Qty	Rate
		4MP Dome Camera			
29	**Manufacturer, Country**		pcs	1	
	Brand				
	Model				
	Product Type	4 MP Dome Network Camera			
	Image Sensor	1/2.9" Progressive Scan CMOS			
	Minimum Illumination	Color: 0.005 Lux @ (F1.6, AGC ON),0 Lux with light			
	Shutter Speed	1/3 s to 1/100,000 s			
	Angle Adjustment	Pan: 0° to 335°, tilt: 0° to 70°, rotate: 0° to 355°			
	Day & Night	IR cut filter			
	Resolution	2688 × 1520			
	Lens	Fixed focal lens, 2.8 and 4 mm optional			
	Focal length and Field of View (FOV)	2.8 mm, horizontal FOV 104°, vertical FOV 57°, diagonal FOV 122° 4 mm, horizontal FOV 84°, vertical FOV 45°, diagonal FOV 100°			
	Aperture	F1.6			
	Illuminator	IR, White light			
	Supplement Light Range	Up to 40 m			
	Smart Light	Yes			
	Compression	H.265/H.264			
	Video Streams	Main stream: 50HZ @ 25fps(2688×1520, 1920×1080, 1280×720), 60 Hz @30fps(2688×1520, 1920×1080,1280×720)			
	Interface	1 × RJ45 10/100 Mbps Ethernet			
	On-Board Storage	microSD / microSDHC / microSDXC up to 512 GB capacity			
	API	ONVIF(S,G,T), ISAPI,SDK etc			
	Image	WDR 120dB, SNR >=52dB			
	Power Supply	12 VDC ±25%, 0.6 A / PoE (IEEE 802.3at, Class 3, max. 8.5 W)			
	Protection	IP67: IEC 60529-2013, IK10: IEC 62262:2002			
	Event & Alarm	Motion detection, upload to FTP/NAS/memory card, notify surveillance center, email trigger, audible warning			
	Warranty	1 year			
		2MP Dome Camera			
30	**Manufacturer, Country**		pcs	1	
	Brand				
	Model				
	Product Type	2 MP Dome Network Camera			
	Image Sensor	1/2.7" Progressive Scan CMOS			
	Minimum Illumination	Color: 0.01 Lux @(F2.0, AGC ON), B/W: 0 Lux with IR			
	Shutter Speed	1/3 s to 1/100,000 s			
	Angle Adjustment	Pan: 0° to 335°, tilt: 0° to 70°			
	Day & Night	IR cut filter			
	Resolution	1920×1080			
	Lens	Fixed focal lens, 2.8 and 4 mm optional			
	Focal length and Field of View (FOV)	2.8 mm, horizontal FOV 112.1°, vertical FOV 60.0°, diagonal FOV 132.2° 4 mm, horizontal FOV 90.2°, vertical FOV 48.6°, diagonal FOV 107.6°			
	Aperture	F2.0			
	Illuminator	IR			

S.N	Category	Specification	Unit	Qty	Rate
	Supplement Light Range	Up to 30 m			
	Compression	H.265/H.264			
	Video Streams	Main stream: 50 Hz: 25 fps (1920 × 1080, 1280 × 720) 60 Hz: 30 fps (1920 × 1080, 1280 × 720)			
	Interface	1 × RJ45 10/100 Mbps Ethernet			
	On-Board Storage	microSD / microSDHC / microSDXC up to 512 GB capacity			
	API	ISAPI			
	Image	Digital WDR			
	Power Supply	12 VDC ±25%, 0.4 A / PoE (IEEE 802.3af, Class 3, max. 6.5 W)			
	Protection	IP67: IEC 60529-2013, IK10: IEC 62262:2002			
	Event & Alarm	Motion detection, upload to FTP, notify surveillance center, send			
	Warranty	1 year			
		2MP Acusense Dome Camera			
	Manufacturer, Country	**Must be specified by the bidder**			
	Brand	**Must be specified by the bidder**			
	Model	**Must be specified by the bidder**			
	Product Type	2 MP Acusense Built in Mic Dome Network Camera			
	Image Sensor	1/2.8" Progressive Scan CMOS			
	Minimum Illumination	Color: 0.005 Lux @ (F1.6, AGC ON), B/W: 0 Lux with IR			
	Shutter Speed	1/3 s to 1/100,000 s			
	Angle Adjustment	Pan: 0° to 335°, tilt: 0° to 70°, rotate: 0° to 355°			
	Day & Night	IR cut filter			
	Resolution	1920×1080			
	Lens	Fixed focal lens, 2.8 and 4 mm optional			
	Focal length and Field of View (FOV)	2.8 mm, horizontal FOV 107°, vertical FOV 57°, diagonal FOV 127° 4 mm, horizontal FOV 87°, vertical FOV 46°, diagonal FOV 104°			
	Aperture	F1.6			
31	**Illuminator**	IR	pcs	1	
	Supplement Light Range	Up to 30 m			
	Compression	H.265/H.264			
	Video Streams	Main stream: 50 Hz: 25 fps (1920 × 1080, 1280 × 720) 60 Hz: 30 fps (1920 × 1080, 1280 × 720)			
	Interface	1 × RJ45 10/100 Mbps Ethernet			
	Built-In Audio	1 microphone, 1 speaker(optional)			
	On-Board Storage	microSD up to 512 GB capacity			
	API	Open Network Video Interface (Profile S, Profile G), ISAPI, SDK, ISUP			
	Image	BLC, HLC, 3D DNR			
	Power Supply	12 VDC ±25%, 0.4 A / PoE (IEEE 802.3af, Class 3, max. 7.5 W)			
	Protection	IP67: IEC 60529-2013, IK10: IEC 62262:2002			
	Event & Alarm	Motion detection, upload to FTP/NAS/memory card, notify surveillance center, send			
	Warranty	1 year			
		2MP Smart Hybrid Light Fixed Bullet Network Camera			
	Manufacturer, Country	**Must be specified by the bidder**			
	Brand	**Must be specified by the bidder**			

S.N	Category	Specification	Unit	Qty	Rate
	Model	**Must be specified by the bidder**			
	Product Type	2 MP Dome Network Camera			
	Image Sensor	1/2.9" Progressive Scan CMOS			
	Minimum Illumination	Color: 0.005 Lux @ (F1.6, AGC ON), B/W: 0 Lux with IR			
	Shutter Speed	1/3 s to 1/100,000 s			
	Angle Adjustment	Pan: 0° to 335°, tilt: 0° to 70°, rotate: 0° to 360°			
	Day & Night	IR cut filter			
	Resolution	1920×1080			
	Lens	Fixed focal lens, 2.8 and 4 mm optional			
	Focal length and Field of View (FOV)	2.8 mm, horizontal FOV 103°, vertical FOV 56°, diagonal FOV 121° 4 mm, horizontal FOV 83°, vertical FOV 44°, diagonal FOV 99°			
	Aperture	F1.6			
32	**Illuminator**	IR, white light	pcs	1	
	Supplement Light Range	Up to 30 m			
	Compression	H.265/H.264			
	Video Streams	Main stream: 50 Hz: 25 fps (1920 × 1080, 1280 × 720) 60 Hz: 30 fps (1920 × 1080, 1280 × 720)			
	Interface	1 × RJ45 10/100 Mbps Ethernet			
	On-Board Storage	microSD / microSDHC / microSDXC up to 512 GB capacity			
	Audio	Built in microphone			
	API	ISAPI, SDK etc			
	Image	Digital WDR			
	Power Supply	12 VDC ±25%, 0.4 A / PoE (IEEE 802.3af, Class 3, max. 6.5 W)			
	Protection	IP67: IEC 60529-2013			
	Event & Alarm	Motion detection, upload to FTP, notify surveillance center, send			
	Warranty	1 year			
		5MP Bullet Camera			
	Manufacturer, Country	**Must be specified by the bidder**			
	Brand	**Must be specified by the bidder**			
	Model	**Must be specified by the bidder**			
	Product Type	5 MP Bullet Camera			
	Image Sensor	1/2.7" CMOS			
	Minimum Illumination	Color:0.002Lux@(F1.6,AGC ON),B/W:0Lux with IR			
	Shutter Speed	1s to 1/100,000 s			
	Angle Adjustment	0~360°(P); 0~90°(T); 0~360°®			
	Day & Night	IR-cut filter with auto switch (ICR)			
	Resolution	Max. 2880×1620@30fps			
	Lens	Fixed focal lens, 4 mm			
	Field of View (FOV)	91°(H); 46.4°(V); 107°(D)			
	Aperture	F1.6			
	Illuminator	IR, white light			
33	**LEDs**	IR-2, White LEDs-2	pcs	1	
	Distance	Whitelight-15m, IR Distance-30m			
	Video Compression	S+265/H.265/H.264B/H.264M/H.264H/Motion JPEG			
	Interface	1 × RJ45 10/100 Mbps Ethernet			

S.N	Category	Specification	Unit	Qty	Rate
	On-Board Storage	microSD / microSDHC / microSDXC up to 512 GB capacity			
	Audio	Built in microphone and speaker			
	API	ONVIF Profile S/T/G/M; CGI; Milestone; RTMP			
	White Balance	Auto/Semi-Auto/Manual/Sunshine/Nature Light/Warmlight Lamp/Daylight Lamp/Filament Lamp/Lock White Balance			
	Power Supply	12 VDC ±25%, MAX 6.5 W			
	Protection	IP67			
	Additional Features	Supports smart surveillance, face capture, human/vehicle classification			
	Warranty	1 Year			
		5MP Turret Camera			
	Manufacturer, Country	**Must be specified by the bidder**			
	Brand	**Must be specified by the bidder**			
	Model	**Must be specified by the bidder**			
	Product Type	5 MP Turret Camera			
	Image Sensor	1/2.7" CMOS			
	Minimum Illumination	Color:0.002Lux@(F1.6,AGC ON),B/W:0Lux with IR			
	Shutter Speed	1s to 1/100,000 s			
	Angle Adjustment	0~340°(P); 0~75°(T); 0~360°(R)			
	Day & Night	IR-cut filter with auto switch (ICR)			
	Resolution	Max. 2880×1620@30fps			
	Lens	Fixed focal lens, 2.8 mm			
	Field of View (FOV)	109°(H); 59°(V); 125.4°(D)			
34	**Aperture**	F1.6	pcs	1	
	Illuminator	IR, white light			
	LEDs	IR-2, White LEDs-2			
	Distance	Whitelight-15m, IR Distance-30m			
	Video Compression	S+265/H.265/H.264B/H.264M/H.264H/Motion JPEG			
	Interface	1 × RJ45 10/100 Mbps Ethernet			
	On-Board Storage	microSD / microSDHC / microSDXC up to 512 GB capacity			
	Audio	Built in microphone and speaker			
	API	ONVIF Profile S/T/G/M; CGI; Milestone; RTMP			
	Power Supply	12 VDC ±25%, MAX 6.5 W; POE 802.3af,MAX 8W			
	Protection	IP67			
	Additional Features	Supports smart surveillance, face capture, human/vehicle classification			
	Warranty	1 Year			
		64-ch NVR			
	Manufacture, country				
	Brand				
	Model No				
	Product Type	64 ch Network Video Recorder (NVR)			
	Channels	64-Channel			
	Incoming Bandwidth	400 Mbps			
	Outgoing Bandwidth	400 Mbps			
	Recording Resolution	Up to 4K			

S.N	Category	Specification	Unit	Qty	Rate
35	**Decoding Format**	H.265+/H.265/H.264+/H.264	pcs	1	
	Synchronous Playback	16 ch			
	Decoding Capacity	2-ch@32 MP (30 fps)+2-ch@8MP（30fps）/10- ch@8 MP (30 fps)/20-ch@4 MP (30 fps)/40- ch@1080p (30 fps)			
	Audio Compression	G.711ulaw/G.711alaw/G.722/G.726/AAC/MP2L2			
	Camera Access Protocal	ONVIF(Version 2.5), RTSP			
	HDMI Output	2 × HDMI (4K supported)			
	VGA Output	1 × VGA			
	Network Interface	2 × RJ-45 10/100/1000 Mbps			
	Storage	4 × SATA Interfaces, upto 16TB for each			
	USB Interface	Front panel: 2 × USB 2.0; Rear panel: 1 × USB 3.0			
	Power Supply	100–240 VAC			
	Operating Temperature	-10°C to 55°C			
	Certification	FCC, CE			
	Warranty	2 years			
		Technical Specification for 32 ch NVR			
36	**Manufacturer, Country**		pcs	1	
	Brand				
	Model				
	Device Type	Network Video Recorder (NVR)			
	IP Camera Input Channels	Up to 32 channels or more			
	Supported Camera Resolution	Up to 12 MP			
	Video Compression	H.265+, H.265, H.264+, H.264			
	Incoming Bandwidth	256 Mbps			
	Outgoing Bandwidth	160 Mbps			
	Decoding Capacity	2-ch@12MP, 3-ch@8MP, 6-ch@4MP			
	Playback	16-channel synchronous			
	Video Output	HDMI (4K) + VGA			
	Storage (HDD)	2 × SATA (up to 10TB each)			
	AI Features	Face recognition, Motion Detection 2.0, Perimeter protection			
	Protocols	ONVIF, SDK, ISAPI			
	Network Port	1 × RJ-45 10/100/1000 Mbps			
	Power	12V DC, 3.33A			
	Warranty	2 years service and parts			
		8 ch NVR			
	Manufacturer, Country				
	Brand				
	Model No				
	Device Type	Network Video Recorder (NVR)			
	IP Camera Input Channels	Up to 8 channels or more			

S.N	Category	Specification	Unit	Qty	Rate
	Supported Recording Resolution	Up to 8 MP			
	Video Compression	H.265+, H.265, H.264+, H.264			
37	**Incoming Bandwidth**	80 Mbps	pcs	1	
	Outgoing Bandwidth	80 Mbps			
	Decoding Capacity	1-ch@8MP, 3-ch@4MP, 6-ch@1080p			
	Playback	8-channel synchronous			
	Video Output	HDMI (4K) + VGA			
	Storage (HDD)	1 × SATA up to 8TB			
	Protocols	ONVIF, SDK, ISAPI			
	Network Interface	1, RJ-45 10/100 Mbps self-adaptive Ethernet interface			
	Power	12V DC, 1.5A			
	Warranty	2 years service and parts			
		32 ch NVR 2 SATA			
	Manufacturer, Country				
	Brand				
	Model No				
	Device Type	Network Video Recorder (NVR)			
	IP Camera Input Channels	Up to 32 channels or more			
	Supported Recording Resolution	Up to 8 MP			
	Video Compression	S+265; H.265; S+264; H.264			
	Incoming Bandwidth	160 Mbps			
	Outgoing Bandwidth	48 Mbps			
	Playback function	Play/Pause/Stop/Slow/Speed/Backwards 30s/Forwards 30s/Full screen/backup (video Editing)/Step/Digital Zoom			
38	**Two-Way Audio**	1-ch, 3.5mm, using the audio input	pcs	1	
	Video Output	HDMI (4K) + VGA			
	Synchronous playback	16-channel synchronous			
	Multi-channel Playback	16			
	Storage (HDD)	2× SATA up to 10TB for each HDD			
	Network Interface	1×RJ-45, 10/100/1000 Mbps self-adaptive Ethernet port			
	AI by Camera	Tripwire; Double Tripwire; Perimeter; Object Abandon; Object Missing; Loiter; Running; Parking; Heatmap; Lens Diagnose; Scene Switch Diagnose; Signal Abnormal Detection; Signal Loss Detection; On Duty Detection; Crowd Detection; Safety Helmet Detection; People Counting; Link To Tracking; Face Detection; Human body temperature measurement; Advanced Intelligence			
	Mobile Acces	Yes(android and iOS)			
	Power	DC12V 3.3A and consumption <= 10 W			
	Warranty	2 years service and parts			
		32 ch 4 SATA NVR			

S.N	Category	Specification	Unit	Qty	Rate
39	**Manufacturer, Country**		pcs	1	
	Brand				
	Model No				
	Device Type	32 Channel 4SATA NVR			
	IP Camera Input Channels	Up to 32 channels or more			
	System Memory	3G			
	EMMC	8G			
	AI by Device	Facial recognition, perimeter protection, motion detection 2.0			
	AI by Camera	Facial recognition, perimeter protection, throwing objects from building, motion detection2.0, ANPR, VCA			
	Supported Recording Resolution	Up to 12 MP			
	Video Compression	H.265/H.265+/H.264+/H.264			
	Incoming Bandwidth	256 Mbps			
	Outgoing Bandwidth	160 Mbps			
	Decoding Capacity	AI on: 2-ch@12 MP (30 fps)/3-ch@8 MP (30 fps)/6-ch@4 MP (30 fps)/12-ch@1080p (30 fps) AI off: 2-ch@12 MP (30 fps)/4-ch@8 MP (30 fps)/8-ch@4 MP (30 fps)/16-ch@1080p (30 fps)			
	Synchronous playback	16-channel synchronous			
	API	ONVIF (profile S/G); SDK; ISAPI			
	Video Output	HDMI (4K) + VGA(HD)			
	SATA	4 SATA interfaces			
	Capacity	Up to 16 TB capacity for each HDD			
	Serial Interface	2 RS-485 (half-duplex), 1 RS-232			
	USB Interface	Front panel: 2 × USB 2.0; Rear panel: 1 × USB 3.0			
	Network Interface	2 RJ-45 10/100/1000 Mbps self-adaptive Ethernet interfaces			
	Power	<20W without HDD			
	Warranty	2 years service and parts			
		10 TB HDD			
40	***Manufacture, Country***	**Must be specified by the bidder**	*pcs*	1	
	Brand Name	**Must be specified by the bidder**			
	Model No.	**Must be specified by the bidder**			
	Tor Size	512E			
	Form Factor	3.5-Inch, Surveillance grade			
	Interface	SATA 6 Gbit/s			
	Formatted Capacity	10TB / 10,000GB			
	Performance	Interface Speed 6.0 Gbit/s Rotation Speed 7,200 RPM Buffer Size			
	Warranty	1 year			
		8 TB HDD			
	Manufacture, Country				
	Brand Name				
	Model No.				
	Capacities	8 TB			
	Interface	SATA 6Gb/s			

S.N	Category	Specification	Unit	Qty	Rate
	FEATURES AND PERFORMANCE				
41	Max Sustained Transfer Rate OD (MB/s)	> 200MB/s	pcs	1	
	Hard Disk Rotational Speed	More than or equal 5400 RPM			
	Cache	128 MB or higher			
	Load/Unload Cycles	300,000			
	Warranty	Min 1 Year			
		4TB HDD			
42	***Manufacture, Country***		pcs	1	
	Brand Name				
	Model No.				
	Capacities	4 TB			
	Interface	SATA 6Gb/s			
	FEATURES AND PERFORMANCE				
	Max Sustained Transfer Rate OD (MB/s)	> 180MB/s			
	Hard Disk Rotational Speed	More than or equal 5400 RPM			
	Cache	64 MB or higher			
	Load/Unload Cycles	300,000			
	Warranty	Min 1 Year			
		2TB HDD			
43	***Manufacture, Country***		pcs	1	
	Brand Name				
	Model No.				
	Capacities	2TB			
	Interface	SATA 6Gb/s			
	FEATURES AND PERFORMANCE				
	Max Sustained Transfer Rate OD (MB/s)	180MB/s			
	Hard Disk Rotational Speed	More than or equal 5400 RPM			
	Cache	64 MB or higher			
	Load/Unload Cycles	300,000			
	Warranty	Min 1 Year			
		FHD Monitor 24"			
	Manufacture, Country				
	Brand Name				
	Model No.				
	Screen Size	23.5 inch			
	Activc Display Area	478.656 (H) mm × 260.28 (V) mm with IR			
	Resolution	**1920 × 1080**			
	Backlight	W-LED			
	Pixel Pitch	0.0831 (H) mm × 0.241 (V) mm			
	Brightness	**250 cd/m²**			
	Viewing Angle	178°(W)			

S.N	Category	Specification	Unit	Qty	Rate
44	**Color Depth**	8 bit	pcs	1	
	Contrast Ratio	**3000:1**			
	Response Time	6.5 ms			
	Refresh Rate	60 Hz			
	Haze	25%			
	Color Gamut	72% NTSC			
	Video & Audio Input	**HDMI 1.4 × 1, VGA × 1**			
	Power Supply	100 to 240 VAC, 50/60 Hz			
	Power Consumption	≤ 30 W			
	Standby Consumption	≤ 0.5 W			
	Warranty	2 years service and parts			
		43" UHD			
45	**Manufaturer, Country**		**pcs**	**1**	
	Brand				
	Model No				
	Screen Size	**42.5"**			
	Active Display Area	941.184 mm × 529.416 mm approx			
	Resolution	**3840×2160(4K UHD)**			
	Backlight Type	D-LED			
	Pixel Pitch	0.2451 mm × 0.2451 mm			
	Brightness	**400 cd/m²**			
	Viewing Angle	178° (H) / 178° (V)			
	Color Depth	1.07 Billion			
	Contrast Ratio	**4000:1**			
	Response Time	8 ms			
	HDMI Ports	**2**			
	VGA Ports	1			
	Audio-in	1			
	Audio-out	1			
	USB Ports	USB 2.0 × 1, USB 3.0 × 1			
	RS-232	1			
	Built-in Speakers	8 W × 2			
	Power Input	100–240 V AC, 50/60 Hz			
	Power Consumption	≤150 W			
	Standby Power	0.5 W			
	VESA Mount	200×200 mm / 400×400 mm and all mounting accessories			
	Certifications	**CE, RoHS**			
	Warranty	2 years service and parts			
		43" FHD			
	Manufacture, Country				
	Brand Name				
	Model No.				
	Loudspeaker	5W * 2			
	VESA	M4 200mm*200mm with IR			
	HDMI In	1			
	VGA In	1			
	Audio In	1			
	Backlight	D-LED Backlight			

S.N	Category	Specification	Unit	Qty	Rate
46	Screen Size	42.5 inch	pcs		
	Pixel Pitch	0.49(H)mm * 0.49(V) mm			
	Max Resolution	1920 * 1080			
	Refresh Rate	60Hz			
	Brightness	**350 cd/m²**			
	Contrast	**1200:1**			
	Response Time	8ms			
	Color	16.7M			
	Active Area	940.896 (H) × 529.254(V) mm			
	Viewing Angle	Horizontal 178°, Vertical 178°			
	Power Supply	100 to 240 V AC, 50/60Hz			
	Standby Power Consumption	0.5W			
	Power Consumption	≤120W			
	Warranty	2 years service and parts			
		32" inch interactive koisk			
47	***Manufacture, Country***		pcs	1	
	Brand Name				
	Model No.				
	Storage	4 GB RAM, 32 GB ROM			
	Contrast	3000:1			
	Resolution	1920×1080			
	Display Area	minimum 699mm*393mm			
	Brightness	450cd/m			
	Viewing angle	89/89/89/89(L/R/U/D)			
	Color	16.7M			
	Consumption	85W			
	Input	100-240V AC, 50/60Hz			
	Net Size	749*444*60mm			
	Installation	Floor Standing			
	CPU	ARM Coretex-A53 RK 3368, 8 core, 1:6 GHZ			
	Operating System	Android 13(upgradable)			
	Interface	1×RJ5, 2×USB2.0, 1×Power			
	Speaker	2×5W			
	Accessories	Power cord, Keys, Wifi-antena			
	Touch	Yes			
	Warranty	2 years service and parts			
		Speicification of Cloud Manageable 24 port Switch (4 10 Gbps SFP+ Port)			
48	***Manufacturer, Country***		pcs	1	
	Brand	Ruijie Reyee preferred since most office network are in Ruijie Cloud or equivalent			
	Model	to be specified by bidders			
	Type	Layer 2+ Managed Ethernet Switch			
	Management	Cloud and App and Local Web GUI			
	Ports	24 × 10/100/1000BASE-T RJ45 4 × 10Gbps SFP+ Uplinks with IR			
	PoE Support	No PoE			
	Jumbo Frame	9216 bytes			
	Switching Capacity	Min 128 Gbps			
	Forwarding Rate	Min 95 Mpps			
	MAC Address Table	16K			

S.N	Category	Specification	Unit	Qty	Rate
	VLAN Support	Up to 4094 VLANs			
	Link Aggregation	LACP Supported			
	Layer 2 Features	STP/RSTP, VLAN, Mirroring, Loop Protection, Storm Control			
	Cloud Management	Cloud Portal & Mobile App			
	Security	Port Isolation, Filtering, Storm Control			
	Surge Protection	±6kV on ports and power			
	Cooling	Adaptive Fan			
	Power Input	100–240V AC, 50/60 Hz			
	Warranty	2 Years.			
		Technical Specification Optical Fiber			
49	**Manufacturer, Country**		pcs	1	
	Brand				
	Model				
	Fiber Type	Single Mode Fiber (SMF)			
	No. of Fibers per Loose Tube	6 Core (6F)			
	Fiber Color Code	Blue, Orange, Green, Brown, Grey, White (or equivalent)			
	Fiber Attenuation @1310 nm	≤ 0.36 dB/km			
	Fiber Attenuation @1550 nm	≤ 0.22 dB/km			
	Strength Members	1 mm × 2 Steel rods embedded in HDPE sheath			
	Loose Tube Count	1			
	Loose Tube Material	PBT (Polybutylene Terephthalate)			
	Loose Tube Nominal Diameter	1.9 mm			
	Filling Compound	Thixotropic Jelly			
	Outer Jacket Material	HDPE			
	Outer Jacket Color	Black			
	Outer Jacket Thickness	2.1 mm			
	Nominal Cable Diameter	8 mm			
	Maximum Installation	7000 N			
	Application	Outdoor / Duct / Road-side installation			
		Technical Specification of 200 Meter Fiber drop cable			
50	**Length**	200 meter	pcs	1	
	Core size	Larger (typically 50 or 62.5 micrometers).			
	Light propagation	Multiple modes of light travel through the core			
	Bandwidth	Lower bandwidth compared to single-mode.			
	Distance	Suitable for shorter distances.			
	Applications	Local area networks (LANs), data centers, and short-distance connections			
		Specification of 3kVA Online UPS			
	Manufacture, Country				
	Brand Name				
	Model No.				

S.N	Category	Specification	Unit	Qty	Rate
51	**Topology**	Online Double Conversion	pcs	1	
	Output Power	3kVA / 2700W with IR			
	Output Voltage	220V			
	Input Voltage Range	160 - 300 VAC			
	Frequency	50Hz			
	Efficiency	>=90%			
	AC mode to Battery Mode	0 ms			
	Humidity	0 - 95% (non-condensing)			
	Battery Voltage	48V DC (External)			
	Communication Ports	RS232, USB, Mini Slot			
	SNMP	**YES, Supported**			
	Certifications	ISO Certified Company (QMS)/Product			
	Warranty	1 year			
	Technical Specification of Small UPS(12 V Battery with 6A MCB in Pole)				
52	**Input:**	220-240V AC, 50Hz	pcs	1	
	Output:	220-240V AC (Pure Sine Wave)			
	Battery:	12V DC (7Ah/12Ah/20Ah, AGM/LiFePO4)			
	Inverter Capacity:	300W-500W (supports 1-4 cameras)			
	MCB Protection:	6A (for overload/short-circuit safety)			
	7Ah Battery:	~4-5 hrs (1 cam @10W)			
	Auto-switch	during power cuts (<10ms)			
	Low-voltage cutoff	(10.5V) to protect battery			
	Surge & spike protection	(for pole-mounted safety)			
	Weatherproof enclosure	Inside Pole Metal Box			
	Pole-mounted	with secure clamps			
	Wiring:	6A MCB on input, fused 12V battery terminals			
	Warranty	1 Year			
	Network Monitoring System (NMS) and Alert System – Technical Requirements (The server resources shall be provided by municipality)				
53	1.1	Centralized NMS for real-time monitoring of ONTs and IP CCTV over FTTH network	pcs	1	
	1.2	24×7 continuous monitoring			
	1.3	Role-based access for Police, Municipality IT, and Maintenance Teams			
	1.4	Scalability for future expansion (Licence Free)			
	2.1	ONU online/offline status monitoring			
	2.2	Automatic alerts for ONU offline and restoration			
	2.3	ONU alert details included			
	3.1	Identification of ONU offline causes			
	3.2	Supported ONU offline reasons			
	3.3	Logging and alerting of ONU offline reasons			
	4.1	CCTV camera online/offline monitoring			
	4.2	CCTV failure and restoration alerts			
	4.3	CCTV alert details included			
	5.1	Identification of CCTV offline causes			
	5.2	Supported CCTV offline reasons			
	5.3	Logging and reporting of CCTV offline reasons			

प्रमुख प्रशासकीय अधिकृत
नगरपालिकाको कार्यालय
कोशी प्रदेश, नेपाल
२०७३

S.N	Category	Specification	Unit	Qty	Rate
	6.1	Multi-channel alerts (Email, WhatsApp, Teams, Discord)			
	6.2	Alert distribution to all stakeholders			
	6.3	Customizable alert templates			
	7.1	Configurable alert severity levels			
	7.2	Alert escalation rules			
	7.3	Configurable escalation policies			
	8.1	Historical event and alert logs			
	8.2	Report generation and SLA analysis			
	8.3	Report export in PDF and Excel			
	9.1	Role-based access control			
	9.2	Secure and auditable access			
	9.3	Secure communication protocols			

Submitted By

Signature
Name and Designation of Signatory
Firms Name
Seal of Firm