



बेलबारी नगरपालिका

BELBARI MUNICIPALITY

नगर कार्यपालिकाको कार्यालय

OFFICE OF THE MUNICIPAL EXECUTIVE

बेलबारी, मोरङ

BELBARI, MORANG

कोशी प्रदेश, नेपाल

(KOSHI PROVINCE, NEPAL)



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श्री सरोकारवाला सबै,



मिति: २०८३/०३/०६

विषय: प्रति इकाइ रदरेट सम्बन्धमा ।

प्रस्तुत विषयमा यस कार्यालयलाई सडक क्षेत्रमा सिसि क्यामरा जडान गर्नका लागि देहाय बमोजिमको सामग्री आवश्यक रहेको हुँदा संलग्न स्पेसिफिकेसन बमोजिमको सामग्रीहरूको प्रचलित बजार भाउ के कती रहेको छ, लागत अनुमान बनाउने प्रयोजनका लागि प्रति इकाइ रकम खुलाई सूचना प्रकाशन भएको मितिले ७ दिन भित्रमा यसै साथ संलग्न अनुसूची-१ भरी उपलब्ध गराई दिनुहुन अनुरोध छ ।

देहाय

क्र.स.	सामग्रीको नाम	परिमाण	इकाइ	कैफियत
1.	CCTV Camera	1	थान	
2.	Network Video Recorder	1	थान	
3.	PoE 4 Port	1	थान	
4.	Hard Disk Drive 10TB	1	थान	
5.	Monitor	1	थान	
6.	Metal Box	1	थान	
7.	MCB	1	थान	
8.	Multiplug	1	थान	
9.	Router	1	थान	
10.	10 MM Cable	1	थान	
11.	Memory Card 128GB	1	थान	
12.	Router	1	थान	
13.	Installation	1	स्थान	



1. CCTV Camera specifications

Parameter	Specification
Camera Type	IP-based Motorized Color Maker Bullet Network Camera
Image Sensor	1/2.8" Progressive Scan CMOS or better
Maximum Resolution	Minimum 8MP (3840 × 2160)
Maximum Frame Rate	Minimum 20 fps at 8MP
Minimum Illumination	Color: ≤0.002 Lux @ F1.6, AGC ON; B/W: 0 Lux with IR or better
Day/Night	Auto ICR (IR-Cut Filter)
WDR	Minimum 120 dB
Shutter Speed	1 sec to 1/100,000 sec or better
Lens Type	Motorized Varifocal Lens
Focal Length	2.7–12 mm or better
Aperture	F1.2 or better
Horizontal Field of View	Approximately 108° to 31° or better
IR LED	Minimum 4 IR LEDs
IR Illumination Distance	Minimum 80 meters
White Light LED	Minimum 4 White Light LEDs
White Light Distance	Minimum 15 meters
Video Compression	S+265/H.265/H.264 and Motion JPEG
Video Bit Rate	Minimum 32 Kbps to 16 Mbps or better
Main Stream	3840 × 2160 @ 20 fps; higher frame rates at lower resolutions
Sub Stream	Support for resolutions including 704×576/480 and 640×360
Third Stream	Third stream support
Image Enhancement	BLC, HLC, AGC, 3D DNR and Auto/Manual White Balance
ROI	Minimum 8 rectangular static ROI areas
Corridor Mode	Supported
Privacy Mask	Minimum 4 privacy mask areas
Defog	Supported
Video Analytics	Human/Vehicle Classification, Tripwire and Perimeter Detection
Behavior Analysis	Minimum 8 rules/scenes or better
Motion Detection	Supported
Network Disconnection Alarm	Supported
ANR	Automatic Network Replenishment (ANR) supported
Network Protocols	TCP/IP, UDP, HTTP, HTTPS, RTSP, RTMP, DHCP, DNS, DDNS, NTP, SMTP, SNMP v1/v2/v3, IPv4/IPv6, FTP/SFTP, SSH or better
ONVIF	ONVIF Profile S/T/G/M or better
Network Interface	Minimum 1 × RJ-45, 10/100 Base-T
PoE	IEEE 802.3af PoE support
Audio	Built-in Microphone with Audio Input/Output support
Alarm Interface	Minimum 1 Alarm Input and 1 Alarm Output
Local Storage	MicroSD/microSDHC/microSDXC support, up to at least 512 GB
Remote Access	Remote monitoring through Web Browser and Mobile Client
Power Supply	DC 12V ±25% and IEEE 802.3af PoE
Maximum Power Consumption	Maximum 8W via DC and 9W via PoE
Operating Temperature	At least -35°C to +65°C
Operating Humidity	≤95% RH
Protection	Minimum IP67
Surge Protection	Minimum 4000V
ESD Protection	Minimum 6000V
Housing	Outdoor-rated, weatherproof industrial/metal housing

Parameter	Specification
Camera Adjustment	Pan: 0–360°, Tilt: 0–90°, Rotation: 0–360° or better
Certification/Compliance	Compliance with applicable international/national standards
Compatibility	Fully compatible with the proposed NVR/VMS and support ONVIF-based integration
Warranty	Minimum 2 Year Warranty
Note: The CCTV camera shall support the installation of a memory card with adequate storage capacity. In the event of a network failure or interruption, the camera shall automatically store the recorded video footage locally on the installed memory card. Once the network connection is restored, the footage recorded during the network downtime shall be automatically synchronized/transferred to the Network Video Recorder (NVR). The transferred footage shall be accessible, searchable, and manageable through the NVR.	

2. Network Video Recorder

Parameter	Specification
Device Type	Network Video Recorder (NVR)
Video Input Capacity	Minimum 64 IP Camera Channels
Supported Camera Resolution	Up to 12MP or higher
Video Compression	H.265+, H.265, H.264+, H.264
Incoming Bandwidth	Minimum 320 Mbps
Outgoing Bandwidth	Minimum 320 Mbps
Live View	Up to 64 channels simultaneously
Playback	Minimum 16-channel synchronous playback
Decoding Capability	Support up to 16MP decoding or equivalent multi-channel decoding
HDMI Output	Minimum 2 HDMI outputs with up to 4K (3840 × 2160) resolution
VGA Output	Minimum 2 VGA outputs, independent display support
HDD Bays	Minimum 8 SATA HDD Slots
HDD Capacity	Support at least 10 TB per HDD (18TB or 24TB preferred)
RAID Support	RAID 0, RAID 1, RAID 5, RAID 6, RAID 10 and JBOD
Hot Swap HDD	Supported
Network Interface	Dual Gigabit RJ45 (10/100/1000 Mbps) Ethernet Ports
Third-Party Camera Support	ONVIF Profile S/T compatible
Audio Input	Minimum 1 Channel
Audio Output	Minimum 1 Channel
Alarm Input	Minimum 16 Channels
Alarm Output	Minimum 4 Channels
USB Ports	At least 2 × USB 2.0 and 1 × USB 3.0
eSATA Port	Supported
RS-232/RS-485	Supported
Smart Functions	Motion Detection, Smart Search, Event Playback, Intelligent Video Analytics Support
Remote Access	Web Browser, Windows Client, Android & iOS Mobile App
Network Protocols	TCP/IP, HTTP, HTTPS, DHCP, DNS, DDNS, NTP, RTSP, FTP, SMTP, SNMP, UPnP
Cloud/P2P	Supported
Firmware Upgrade	Local and Cloud Upgrade Support
Multi-user Access	Supported
Operating Power	AC 100–240V, 50/60Hz
Mounting	Rack Mountable (2U or equivalent)
Certifications	CE, FCC, RoHS or Equivalent
AI by Camera	Tripwire; Double Tripwire; Perimeter; Object Abandon; Object Missing; Running; Parking; Heatmap; Loitering; Video Abnormal; Audio Abnormal; On Duty Detection; Crowd Detection; Safety Helmet Detection; Electric Bicycle Detection; People Counting; Link to Tracking; Smoke and Fire Detection; Environmental

Parameter	Specification
	Temperature Measurement; Face Detection; Human Body Temperature Measurement; Smart Alarm; Face Recognition; Human/Vehicle Classification
AI by NVR	Face Detection; Face Recognition; Video Structuralization(excludes vehicle detection); Tripwire; Double Tripwire; Perimeter; Object Abandon; Object Missing; Running; Parking; Heatmap; Sleeping on Duty Detection; On Duty Detection; Smart Motion Detection; Loitering; People Counting
Note:	The NVR system shall support cameras with local storage capability, allowing the CCTV cameras to continuously record and store video footage on their installed memory cards during network failure or interruption. Once the network connection is restored, the NVR shall support automatic synchronization and retrieval of the locally stored footage from the cameras for centralized storage and playback.
Warranty	Minimum 2 Year Warranty

3. PoE Switch

Parameter	Specification
Switch Type	Unmanaged PoE Fast Ethernet Switch
PoE Ports	Minimum 4 × 10/100 Mbps RJ45 PoE Ports
Uplink Ports	Minimum 2 × 10/100 Mbps RJ45 Uplink Ports
PoE Standard	IEEE 802.3af / IEEE 802.3at compliant
PoE Output Power	Up to 30W per port
Total PoE Budget	Minimum 55W
Network Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3x
Switching Capacity	Minimum 1.2 Gbps
Packet Forwarding Rate	Minimum 0.89 Mpps
MAC Address Table	Minimum 1K Entries
Transmission Mode	Store-and-Forward
Auto Negotiation	10/100 Mbps Auto-Negotiation
Auto MDI/MDIX	Supported
Flow Control	IEEE 802.3x Full Duplex / Back Pressure Half Duplex
PoE Priority	Supported
VLAN Isolation Mode	Supported
Long Distance (Extend) Mode	Support up to 250 meters at 10 Mbps (or equivalent)
PoE Watchdog / AI Recovery	Supported
LED Indicators	Power, Link/Activity, PoE Status
Lightning Protection	Minimum 4KV Surge Protection
ESD Protection	Air 8KV, Contact 6KV or Better
Power Input	AC 100–240V, 50/60Hz
Operating Temperature	-10°C to +50°C or Better
Storage Temperature	-40°C to +70°C
Operating Humidity	10%–90% Non-condensing
Housing	Metal Enclosure
Installation	Desktop or Wall Mount
Warranty	Minimum 1 Year Warranty

4. Hard Disk Drive

Parameter	Specification
Drive Type	Internal Surveillance Hard Disk Drive
Form Factor	3.5-inch
Formatted Capacity	10TB/10000GB
Performance	Interface speed 6.0 gbit/s, Rotation Speed 7200 RPM, Buffer size 256 MiB, Maximum Data Transfer Rate (Sustained) 237 MiB/s
Warranty	Minimum 1 Year Warranty

5. Monitor

Parameter	Specification
Display Size	Minimum 43 inches
Display Type	LED Backlit
Resolution	Minimum 3840 × 2160 pixels (4K UHD)
Aspect Ratio	16:09
Brightness	Minimum 300 cd/m ²
Contrast Ratio	Minimum 1000:1
Response Time	Maximum 14 ms
Display Colors	Minimum 1.07 Billion colors
Viewing Angle	Minimum 178° Horizontal / 178° Vertical
Video Inputs	Minimum 2 × HDMI and 2 × DisplayPort
Audio Output	3.5 mm headphone/audio output
Built-in Speaker	Minimum 2 × 5 W
VESA Mounting	200 × 200 mm or better
Power Supply	AC 100–240 V, 50/60 Hz
Power Consumption	Maximum 90 W (typical)
Standby Power	Maximum 0.5 W
Operating Temperature	0°C to 40°C or better
Operating Humidity	20%–85% RH, non-condensing or better
Application	CCTV surveillance, NVR monitoring, security control room, command centre and IT monitoring
Installation	Desk/stand mounting and wall mounting support
Accessories	Power cable, HDMI cable, remote control and user/installation guide
Warranty	Minimum 1-year warranty from the date of installation/acceptance
Warranty Service	Warranty shall cover display panel, backlight, power supply, internal electronic components, ports/interfaces, speakers and other integral components
Warranty Replacement	Defective components shall be repaired or replaced free of cost during the warranty period. If the monitor cannot be repaired, it shall be replaced with a new unit of equal or higher specification at no additional cost
Technical Support	Supplier shall provide technical support/service during the warranty period
Product Condition	The offered monitor shall be brand-new, unused, genuine and from the original manufacturer

6. Metal Box

Parameter	Specification
Type	Weatherproof Metal Enclosure Box
Dimensions (H × W × D)	15" × 10" × 8" (Approx. 380 × 255 × 205 mm)
Protection Rating	IP65 (Dust-tight and protected against water jets)
Material	Cold Rolled Steel (CRCA) / Electro-Galvanized Steel
Steel Thickness	1.2 mm – 1.5 mm
Surface Finish	Polyester Epoxy Powder Coating, RAL 7035 Light Grey
Door Type	Front Hinged Door with Lock
Locking System	Key Lock with Metal Keys
Sealing	Continuous Polyurethane Rubber Gasket for Waterproof & Dustproof Sealing
Mounting Plate	2.0 mm Galvanized Steel Back Plate Included
Installation	Wall Mounting with External Mounting Brackets
Cable Entry	Bottom Removable Gland Plate or Cable Entry Plate
Grounding	Earthing Studs on Door and Body

Parameter	Specification
Operating Temperature	-20°C to +60°C
Applications	CCTV Systems, Network Equipment, Electrical Control Panels, Automation Systems, Outdoor Communication Devices
Compliance	IEC 60529 / CE Standard




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7. Miniature Circuit Breaker: 6 AM

8. Multiplug:

Parameter	Specification
Outlets	Four universal standard outlets
Type	Surge protection
Protection	Overload protection
Material	Flame retardant material
Conductivity	Integral copper bar
Power Output	MAX2500W-MAX10A, 250V

9. Router

Parameter	Specification
Device Type	GPON Optical Network Terminal (ONT)
GPON Interface	1 × GPON Optical Port (SC/APC Connector)
Ethernet Ports	1 × Gigabit Ethernet (10/100/1000 Mbps) + 3 × Fast Ethernet (10/100 Mbps)
Voice Interface	1 × RJ11 POTS Port (VoIP)
Wireless Standard	IEEE 802.11 b/g/n
Wi-Fi Frequency	2.4 GHz
Wireless Speed	Up to 300 Mbps (2×2 MIMO)
Antenna	External High-Gain Antennas (2×2 MIMO)
Optical Standard	ITU-T G.984 GPON Class B+
Downstream Wavelength	1490 nm
Upstream Wavelength	1310 nm
IPv4/IPv6 Support	Dual Stack IPv4/IPv6
Network Features	NAT, DHCP Server, PPPoE, Port Forwarding, VLAN, QoS
Multicast	IGMP v2/v3 Snooping & Proxy
Security Features	WPA/WPA2 Encryption, SPI Firewall, MAC/IP Filtering
Management	Web GUI, OMCI, TR-069 Remote Management
Power Supply	DC 12V Adapter
Maximum Power Consumption	≤ 7.15 W
Operating Temperature	0°C to +40°C
Operating Humidity	5%–95% RH (Non-condensing)

10. Concentric Cable: 10MM

11. Memory Card:

Parameter	Specification
Card Type	microSDXC
Storage Capacity	128 GB
Bus Type	UHS-I
Speed Class	10
UHS Speed Class	U3
Video Speed Class	V30
Application Performance Class	A2
Data Transfer	Read Speed: 160 MB/s Maximum (Burst) Write Speed: 90 MB/s Maximum (Burst) Write Speed: 30 MB/s Minimum
Durability	Shockproof, Temperature Extremes, Waterproof, X-Ray Proof
Operating Temperature	-13 to 185°F/ -25 to 85°C
Storage Temperature	-40 to 185°F/ -40 to 85°C

12. Router:

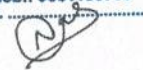
Parameter	Specification
CPU AL32400	1.7 GHz
CPU architecture ARM	64bit

Parameter	Specification
CPU core count	4
Size of RAM	4 GB
RAM type	DDR4
Storage	128 MB, NAND
Number of 1G Ethernet ports	16
Number of 10G SFP+ ports	2
USB port	1 (3.0 type A)
Operating system	RouterOS (License level 6)
Switch chip model	88E6191X, 88E619X
Dimensions	443 x 210 x 44 mm (17.44" x 8.26" x 1.73" in)
Operating temperature	-20°C to +60°C
Powering	
Number of AC inputs	2
AC input range	100-240 V
Max power consumption (without attachments)	35 W
Max power consumption	48 W
Certification	CE, FCC, IC

13. Installation

- Install, test, and commission CCTV cameras at designated locations.
- Install cameras with suitable mounting brackets and weatherproof fittings where required
- Install all necessary accessories, including junction boxes, Supply and installation cable binder, Twisted Pair Cable and RJ-45.
- Configure IP addresses, recording parameters, motion detection, and image setting
- Integrate cameras with the Network Video Recorder (NVR) and ensure live view and playback functionality
- Test camera angles, focus, night vision (IR), and video quality to ensure optimum coverage

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नगर कार्यपालिकाको कार्यालय
बेलहारी, मोरङ

मिति: २०८३/०५/.....

विषय: प्रति इकाइ दररेट सम्बन्धमा ।

प्रस्तुत विषयमा बेलहारी नगरपालिकाबाट मिति २०८३/०५/०८ गते प्रकाशित सूचना बमोजिम सूचनामा उल्लेख भएको सामग्रीको स्पेसिफिकेसन बमोजिमको सामग्रीहरूको प्रति इकाइ दररेट देहाय बमोजिम पेस गरेको छु ।

देहाय

क्र.स.	सामग्रीको नाम	परिमाण	इकाइ	प्रति इकाइ दर (मु.अ. कर बाहेक)	कैफियत
1.	CCTV Camera	1	थान		
2.	Network Video Recorder	1	थान		
3.	PoE 4 Port	1	थान		
4.	Hard Disk Drive 10TB	1	थान		
5.	Monitor	1	थान		
6.	Metal Box	1	थान		
7.	MCB	1	थान		
8.	Multiplug	1	थान		
9.	Router	1	थान		
10.	10 MM Cable	1	थान		
11.	Memory Card 128GB	1	थान		
12.	Router	1	थान		
13.	Installation	1	स्थान		

पेस गर्ने फर्म / व्यवसायको

नाम:

ठेगाना:

सम्पर्क नं.

हस्ताक्षर:

छाप: