

OFFICE OF THE PR. ACCOUNTANT GENERAL (A&E), W.B.
TREASURY BUILDINGS, KOLKATA – 700001

NOTICE INVITING TENDER

No. Record-I/Procurement/CCTV/2022-23/ 65

Date: 06/06/2022

The Office of the Pr. Accountant General(A&E),W.B. invites open tenders in two bid system (Technical & Financial) in sealed covers from reputed firms/suppliers for procurement and installation of CCTV cameras (as per annexure-A) to be integrated with the existing operative system (as per annexure-B) in various locations of this office. The firm/supplier should have adequate experience of at least five years as well as expertise of supplying and installation of CCTV cameras and surveillance system in the Central Govt. /State Govt. /Govt. undertakings/Autonomous Body/ reputed private offices.

All intending firms are requested to furnish their respective quotations **within 27/06/2022 (till 12pm)**. Selected firm will have to supply and install the said new system at the locations (as per annexure-C) apropos of the required technical specification of this office attached herewith and integrate with the existing operative system (as per annexure-B). The whole system (existing and new) will have to be brought in operative mode within 20 days commencing from date of issue of work order. All intending firms shall have to visit this office premises and conduct proper site inspection/survey to get themselves acquainted with the existing operative CCTV Surveillance systems consisting of both Treasury Buildings and G.I. Press Building before submission of their quotations. After bidding, no further request of site-survey from any intending firm will be entertained. The selected vendor should supply and install the new CCTV Surveillance system keeping in mind the model/brand and technical specification of existing systems so that both the existing and upcoming CCTV systems can be integrated technically. Interested bidder may obtain further information from Record-I section of this office.

1. Availability of Tender Document: - (i) Complete tender documents are available on this office website: <https://cag.gov.in/ae/west-bengal/en> . Participant bidder should download it.

(ii). Last date for seeking clarification, if any, 10 days prior to schedule date of opening of tender document. Bidders are also advised to check this office website regularly for amendments, if any.

2. Pre-qualification criteria: - All the intending firms have to fulfil the following criteria:

2.1 Earnest Money Deposit: Refundable, interest free Earnest Money Deposit (EMD) of Rs. 50,000/- (Rupees Fifty thousand) only in the form of Demand Draft drawn in favour of **PAO (Audit), 0/o the Pr. Accountant General (A&E). W.B.** is required to be submitted.

2.2 EMD will be returned to the unsuccessful bidders after completion of tender process.

2.3. Tenders received without EMD/inadequate EMD shall be summarily rejected.

2.4 The EMD shall be forfeited:

a) If the bidder, withdraws the bid during the period of bid validity specified in the Bid.

b) In case a successful bidder fails to furnish the Security Deposit.

c) If the contractor fails to commence the work within the stipulated date as mentioned in the Letter of Award.

3. Credentials of the bidder:

3.1 The bidder must have at least 1 year experience during last 5 years for supply and installation of CCTV Surveillance System of project value of at least **Rs. 15 lakh** in the Central Govt. /State Govt. /Govt. undertakings/Autonomous Body. Documents in that respect and work completion certificate must be attached.

3.2 The bidder should have valid PAN, Trade licence, GST Registration, etc. Supporting papers duly signed by the bidder should be attached.

3.3 The bidder must have a registered office/branch office situated at Kolkata and should have work experience from Kolkata at least 1 year during last 5 years for supply and installation of CCTV Surveillance System of project value of at least **Rs. 15 lakh** in the Central Govt. /State Govt. /Govt. undertakings/Autonomous Body of project . Documents in that respect and work completion certificate must be attached.

3.4. The bidder firm should not be defaulted/black listed/banned by any Government/Public Sector organization/department in India.

3.5. The bidder shall provide undertaking for Unconditional Acceptance of Terms & Conditions of the Tender Document on Company's Letter head signed by Authorized Signatory.

Note: (i). Bidder must provide necessary supporting documents as proof in respect of the eligibility criteria mentioned above.

(ii). All documents in respect of "Pre-qualification Criteria" should be submitted in a separate sealed cover having inscription "Pre-qualification Criteria".

4. Technical Bid: - Two-part bid system shall be adopted, i.e., Techno-Commercial Bid and Financial Bid.

4.1 Technical Bid will be opened for only those bidders who qualify satisfactorily based on "Pre-qualification Criteria" stated above.

4.2. Intending firm should furnish the layout of the upcoming CCTV surveillance in respect of their bidding and may also furnish additional information (with supporting accredited Certificates / documents from respective authority or organization) which they deem essential to establish their expertise and capabilities.

4.3 Intending firms should have to submit a list containing staff pattern including the technicians. The firm should have to make it clear regarding the number of allotted technicians in the zone in which this office belongs and at the same time data relating to the number of CCTV Surveillance System (office wise) supplied and installed by them, should be furnished.

4.4 Intending bidders should have to submit certificates issued from various client offices stating therein the concerned firm's performance so that this office may get a notion regarding the standard of their rendered services against the respective CCTV Surveillance System.

4.5 The OEM certificate for the offered items should have to be furnished.

4.6 The bidder(s) qualified for Technical Bid may have to appear before the committee of this office and if required, demonstration may also have to be presented. Subject to satisfactory performance before the committee along with other criteria, the bidder(s) will be qualified for the Financial Bid.

4.7 All supporting documents, certificates, papers etc. as stated above for technical bid are required to be submitted in a sealed envelope with superscription "Technical Bid for supply and installation of CCTV cameras and surveillance system".

4.8 Bid shall remain valid for 120 days after the date of bid opening. The bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.

4.9 WARRANTY: - At least one year on site comprehensive warranty for all items and accessories from the date of installation.

4.10 Visit for prevention/checking/correction of the supplied CCTV system of the office by the selected bidder as a remedial measure must be conducted at least twice a month and a certificate against each such visit regarding the current status of the system mentioning the period of CCTV footage retention will have to be produced to this office.

4.11 LATE BIDS: - Bidders are advised in their own interest to ensure that bids may be submitted before the closing date and time. Any bid received after deadline for bid submission, will be rejected and will not be considered.

4.12 Bidder shall undertake to train the staff nominated by this office for familiarisation of operation and functioning of the new CCTV system.

4.13 MODIFICATION AND WITHDRAWAL OF BIDS: - i. Bid withdrawal/modification shall not be allowed after end date and time of bid submission. ii. Withdrawal of a bid between the deadline for submission of bids and the expiration of the period of bid validity specified in the tender or as extended, may result in the forfeiture of the bid security. No bid may be modified after the deadline for submission of bids.

4.14 CLARIFICATION OF BIDS: - To assist evaluation and comparison of the bids, the Purchaser may at its discretion ask the bidder for clarification of the bid. The clarification and response from bidder shall be in writing.

4.15 This office reserves the right to accept or reject any or all the tenders without assigning any reason.

4.16 The rate of (a) one 50 inch Android TV and (b) comprehensive annual maintenance charge for the next three years after completion of the warranty period should be quoted separately in the bidding sheet. However, these rates do not have any impact for selection of L-1 vendor. L-1 vendor will be selected on the basis of quoted value for Total Cost against Sl. No. 23 of the bidding sheet.

5. Financial Bid: -

5.1 The Financial bids will be opened in case of only those bidders who will be qualified in the "Technical Bid" by this office.

5.2 Quoted rate (including GST) must have the validity period for one year w.e.f. selection of the bidder.

5.3 "Financial Bid" should be submitted in a separate sealed cover duly signed by authorized person on behalf of each firm.

6. Other Terms and Conditions: -

6.1 Security Deposit: - Successful bidder will require to deposit 5% of their quoted rate as "Security Deposit" in the form of Demand Draft in favour of **PAO (Audit) of O/o the Pr. Accountant General (A&E), W.B.** within 7 (seven) days from the date of appointing as selected firm . Earlier deposited amount of Rs. 50,000/- (Rupees ten thousand) only as EMD may be adjusted for this purpose. The total "Security Deposit" of 5% of their quoted rate will be refunded after expiry of sixty days on completion of supply and installation of all CCTV cameras, surveillance system and accessories satisfactorily by the concerned firm.

6.2 "Pre-qualification Criteria", "Technical Bid" & "Financial Bid" respectively should be submitted in another envelop with superscription "Quotation for Annual Maintenance Contract (non-comprehensive) of CCTV Surveillance System" addressing to the Sr. Accounts Officer (Record), O/o the Pr. Accountant General (A&E), W.B., Treasury Buildings, Kolkata-700 001. Quotation should be submitted to Record-I section at 1st floor of Treasury Buildings **within 12 noon on 27/06/2022.** Envelopes of "Pre-qualified Criteria" against each participant firms will be opened at 1 P.M. on that day while Technical Bid (only for qualified bidders of "Pre-qualification criteria") will be opened at 12 noon on the next working day at the chamber of Sr. Accounts Officer (Record) of this office in presence of the participant bidders, if any. The dates of appearing of the bidder(s) before the committee of this office and demonstration (only for qualified bidders of "Pre-qualification criteria") and date of opening of "Financial Bid" (only for qualified bidders of "Technical Bid") will be intimated subsequently to the bidder concerned.

- Encl: i) Bidding sheet
ii) Annexure-A
iii) Annexure-B
iv) Annexure-C
v) Technical Specifications of required accessories

Sr. Accounts Officer (Record)



BIDDING SHEET

Reference :- NIT NO. Record-I/ Procurement of CCTV/ 2022-23/65

dated 06/06/2022

Sl. No.	Description of Items	Brand	Quantity	Unit Rate(Rs.)	Amount (Rs.)
1	NVR 64 Channel 8 Sata Interfaces,Decoding Format H.265+		1		
2	NVR 32 Channel 4 Sata Interfaces,Decoding Format H.265+		1		
3	2 MP IP Dome Camera (Night Vision) H.265+		8		
4	2 MP IP Dome Audio Camera (Night Vision) H.265+		7		
5	2 MP IP Bullet Outdoor Camera (Night Vision) Weatherproof ,H.265+		33		
6	2 MP IP Bullet Audio Outdoor Camera (Night Vision) Weatherproof,H.265+		4		
7	Surveillance Hard Disk - 6 TB		12		
8	Gigabit Poe Switch 8 Port10/100/1000 Mbps Switch		11		
9	Poe Switch 4 Port 10/100 Mbps Switch		4		
10	Fiber Cable 12 Core		380mtrs (approx.)		
11	Fiber Cable 06 Core		525mtrs (approx.)		
12	CCTV CABLE Cat 6 Cable		2600mtrs (approx.)		
13	Power Cable		315mtrs (approx.)		
14	Cctv Cable Laying cable laying with use of PVC pipe/flexible pipe/socket/screw and other hardware		3820mtrs (approx.)		
15	Gigabit Switch 24 Port 10/100/1000		1		
16	Fiber Optical Media Converter RJ45 single mode 25km		20		
17	Junction Box With Power Board		15		
18	Uninterruptible Power Supply 650 VA		15		
19	Camera Angle Stand		30 (approx.)		
20	9U RACK		1		
21	Extra Accessories if any required				
22	Installation charges				
23	TOTAL COST (Both in words and numbers)				

Additional Information:-

i) One 50 inch Android TV - Sony/Samsung/LG (20 w speaker, 3 HDMI port, 1 USB, 4K resolution):
Rs.....(brand.....)

ii) Rate of comprehensive AMC per year for the next three years after completion of the warranty period: Rs. per year.



Signature of Bidder with seal

Annexure – A

Items to be procured

Sl. No.	Description of Items	Quantity
1	NVR 64 Channel 8 Sata Interfaces,Decoding Format H.265+ (HIKVISION/BOSCH/INFINOVA/AXIS)	1
2	NVR 32 Channel 4 Sata Interfaces,Decoding Format H.265+ (HIKVISION/BOSCH/INFINOVA/AXIS)	1
3	2 MP IP Dome Camera (Night Vision) H.265+ (HIKVISION/BOSCH/INFINOVA/AXIS)	8
4	2 MP IP Dome Audio Camera (Night Vision) H.265+ (HIKVISION/BOSCH/INFINOVA/AXIS)	7
5	2 MP IP Bullet Camera Outdoor (Night Vision) Weatherproof ,H.265+ (HIKVISION/BOSCH/INFINOVA/AXIS)	33
6	2 MP IP Bullet Audio Outdoor Camera (Night Vision) Weatherproof,H.265+ (HIKVISION/BOSCH/INFINOVA/AXIS)	4
7	Surveillance Hard Disk - 6 TB (SEAGATE/TOSHIBA/WD)	12
8	Gigabit Poe Switch 8 Port10/100/1000 Mbps Switch (NETGEAR/HIKVISION/CISCO)	11
9	Poe Switch 4 Port 10/100 Mbps Switch (NETGEAR/HIKVISION/CISCO)	4
10	Fiber Cable 12 Core (FINOLEX/WILLETT/DLINK)	380 mtrs.(approx.)
11	Fiber Cable 06 Core (FINOLEX/WILLETT/DLINK)	525 mtrs.(approx.)
12	CCTV CABLE Cat 6 Cable (DLINK/FINOLEX/HIKVISION)	2600 mtrs.(approx.)
13	Power Cable (FINOLEX/HAVELLS/POLYCAB)	315 mtrs.(approx.)
14	Cctv Cable Laying cable laying with use of PVC pipe/flexible pipe/socket/screw and other hardware	3820 mtrs.(approx.)
15	Gigabit Switch 24 Port 10/100/1000 (NETGEAR/HIKVISION/CISCO)	1
16	Fiber Optical Media Converter RJ45 single mode 25km (SECUREYE/DLINK/TP LINK)	20
17	Junction Box With Power Board	15
18	Uninterruptible Power Supply 650 VA (APC/LUMINOUS/MICROTEK)	15
19	Camera Angle Stand	30 (approx.)
20	9U RACK (DLINK/VALRACK/APC)	1
21	Extra Accessories if any required	



Annexure-B

Important components of existing CCTV Surveillance system of Treasury Buildings complex:

SI No	Item Names	Quantity	
1	Camera	Small sized indoor network camera. Fixed lens and adjustable focus. Multiple, individually configurable H.264 and motion JPEG streams; max HDTV 720p or 1MP resolution at 30 fps video motion detection. Connects over wired Ethernet. Micro SD/SDHC memory card for edge storage	3
		2MP WDR IP IR Bullet camera	7
		2MP WDR IP IR Vandal proof Mini dome camera	4
		2MP WDR IP IR Mini dome Camera with day/night;1/2.8.CMOS sensor, H 264/MUPEG;2.8 to 12 mm motorized zoom Lens; Vandal resistant; IR 30 mt distance, PoE/12 V DC/24 V AC	9
2	Work Station	Intel i7/8GB memory/500 GB HDD/DVD RW/2GB graphics card/Keyboard/mouse/21.5" Monitor. Storage:- 4 Bay Network storage with 3 x 6 TB HDD	1
		Intel i7/4 GB memory/8 TB HDD/1GB graphics card/DVD RW/19.5" Monitor/Windows OS	1
3	Display unit	Intel i5/4GB memory/500 GB HDD/3 PCI/DVD RW/Monitor 18.5"/Windows OS	1
		Intel i3/4GB memory/500 GB HDD/PCI Interface/1 GB graphics card/DVD RW/19.5" Monitor/Windows OS	1
4	POE Switch	24 port POE with 2 SFP ports(1 SFP loaded)	1
		8 port POE Switch	1
		16 port POE Switch	1
		6 port Rack mount LIU	2
5	Rack	6U Wall mount Rack	3
6	Video Management Software	Video Management Software with 8 channel	1
		Video Management Software with 16 channel	1
7	Converter	Multimode Gibabit Media converter	1
8	Cable	Cat 6 cable	1100 mtr (apx)
9	UPS	1 KVA online UPS with 30 minutes back up	1
10	Other accessories	Cat 6 I/O box with back box, Cat 6 patch chord, OFC Patch chord SC-SC/LC, 4 core MM unarmoured OFC, PVC pipe, PVC saddle, PVC box, Flexible pipe etc.	



Annexure-C

Types and locations of CCTV cameras

Sl. No.	No. of cameras	Location (in front of section)	Building
1.	2 Bullet cameras	RCC section	Treasury Building 1 st floor main corridor
	1 Dome Audio camera	Entrance of lift	
2.	1 Bullet camera	VLC corridor	Treasury Building 1 st floor 3 rd wing
	1 Dome Audio camera	DAG(Account)'s room	
3.	1 Dome Audio camera	Entrance of lift	Treasury Building 2 nd floor main corridor
	2 Bullet cameras	TF-I & II sections	
	1 Dome camera	Inside I.T. Support Cell Store room	
	1 Bullet camera	WM section	
4.	1 Bullet camera	Medical Accounts	Treasury Building 2 nd floor 3 rd wing
5.	1 Bullet camera	Admn. Cash section	Treasury Building 2 nd floor 2 nd wing
	1 Dome Audio camera	DAG(Pension)'s room	
6.	2 Bullet cameras	Outside Canteen Dining Hall	Treasury Building Roof
	1 Bullet camera	Outside Canteen office	
	4 Bullet cameras	vacant portions of roof in 3 wings	
	1 Dome Audio camera	Entrance of roof beside lift cage	
	1 Dome camera	Inside Canteen office room	
7.	1 Dome Audio camera	Entrance of lift	Treasury Building Ground floor main corridor
	1 Dome Audio camera	Pension Facilitation Cell	
	1 Bullet Audio camera	Pension Cell -I & II	
	1 Bullet Audio camera	Institute Library	
	1 Bullet camera	Pension Custodian Cell	
8.	1 Bullet Audio camera	EPABX room	Treasury Building Ground floor 1 st wing
	1 Bullet camera	Outside wall of PRD towards garden	
9.	1 Dome camera	Pensioners' waiting area in garden	Treasury Building Ground floor 2 nd wing
	1 Bullet camera	Towards Volleyball ground	
10.	1 Bullet camera	Outside wall of Institute Hall in front of Caretaker's office	Treasury Building Ground floor
	1 Dome camera	Inside Caretaker's office	
	1 Bullet camera	Back wall of Pump room pointing towards bike parking area	
11.	1 Bullet camera	Outside of Category-III Association room's entrance and car park area	Ground floor premises of Treasury Buildings complex
	6 Bullet cameras	In various locations like damaged godown of Record-III, temporary shed and shaded pathway from Pension Library to Manager's Bungalow	
12.	2 Dome cameras	In each floor of Training wing	Dormitory Building
13.	1 Bullet camera	Outside Manager's Bungalow Lift entrance pointing towards temple	Manager's Bungalow ground floor area
	2 Bullet cameras	Outside PAO(Cash), 1 pointing towards Company Law Board building and another pointing towards DGA central building	
14.	1 Bullet camera	Outside of CGF	G.I. Press Building ground floor area
15.	1 Bullet Audio Camera	K.S. Roy Road Gate	G.I. Press Building ground floor area
16.	2 Bullet cameras & 2 Dome Cameras	Kept in reserve; place will be fixed during time of installation	
TOTAL cameras-52 (Bullet cameras- 33, Bullet audio cameras-4, Dome cameras-8 & Dome Audio Cameras -7)			



NVR 64 CHANNEL 8 SATA INTERFACES, DECODING FORMAT H.265+

1	Video Compression	H.265+ Embedded storage network video recorder	
2	IP video input incoming bandwidth	320 Mbps, or 200 Mbps (when RAID is enabled)	
3	IP video input outgoing bandwidth	256 Mbps, or 200 Mbps (when RAID is enabled)	
4	Input Resolution	IP Camera Input at 4K/6MP/5MP/4MP/3MP/ 1080P/960P/ 720P/4CIF/ DCIF/2CIF/CIF/QCIF	
5	Playback Channel	Min. 16CH/8CH/4CH/1CH	
6	Harddisk Capacity	Min up to 8TB Each Port or Better, 8 SATA interface	
7	Capacity	Upto 6 TB capacity capacity for each HDD	
8	VGA & Video Output	HDMI up to 4K, VGA Port up to 1080P	
9	Bandwidth Throughput	80M Incoming, 80 Outgoing	
10	Network Port	RJ45 - 10/100MBPS	
11	USB	2 Port	
12	Back up Through	USB Disk/HDD, USB DVD-RW, Network download	
13	Special Function	Digital Zooming, Image Capture , Video Loss Detection, Quick playback & backup, Remaining Bandwidth Display, Flow Monitor, Capture Package	
14	Mobile Viewing	P2P Cloud, I-Phone, IPAD, Android, DDNS	
15	Certifications:	CE, FCC/UL, RoHS Complaint	
16	Approved make	HIKVISION/BOSCH/INFINOVA/AXIS	



NVR 32 CHANNEL 4 SATA INTERFACES, DECODING FORMAT H.265+

1	Video Compression	H.265+ Embedded storage network video recorder	
2	IP video input incoming bandwidth	256 Mbps	
3	IP video input outgoing bandwidth	160 Mbps	
4	Input Resolution	IP Camera Input at 4K/6MP/5MP/4MP/3MP/ 1080P/960P/ 720P/4CIF/ DCIF/2CIF/CIF/QCIF	
5	Playback Channel	Min.16CH/8CH/4CH/1CH	
6	Playback Function	Play, Pause, Stop, Rewind, Fast & Slow play, Next & Previous file, Next & Previous Camera, Full screen, Repeat, Shuffle, Backup selection, Digital Zoom	
7	Harddisk Capacity	Min up to 8TB Each Port or Better	
8	VGA & Video Output	HDMI up to 4K, VGA Port up to 1080P	
9	Bandwidth Throughput	80M Incoming, 80 Outgoing	
10	Network Port	RJ45 - 10/100MBPS	
11	USB	2 Port	
12	Back Through up	USB Disk/HDD, USB DVD-RW, Network download	
13	Network Protocol	TCP/UDP/HTTP/MULTICAST/UPnP/DHCP/PPPoE/DDNS/NFS/FTP/NTP/HTTPS/RTSP/SMTP/HTTPS/SADP/SNMP, Auto Search in Network	
14	Special Function	Digital Zooming, Image Capture, Video Loss Detection, Quick playback & backup, Remaining Bandwidth Display, Flow Monitor, Capture Package	
15	Mobile Viewing	P2P Cloud, I-Phone, IPAD, Android, DDNS	
16	Certifications:	CE, FCC/UL, RoHS Complaint	
17	Approved make	HIKVISION/BOSCH/INFINOVA/AXIS	



2 MP IP DOME CAMERA (NIGHT VISION) H.265+

1	Sensor pixels	Effective 1920 (h) x 1080 (v) P	
2	Wide Dynamic range	Super >100dB	
3	True Day/Night	Auto, Color, Black & White, smart IR	
4	Shutter speed	Auto/Manual (1/30 [1/25] to 1/50000)s	
5	Video compression	H.265+, H.264 MP(Main), HP(High), BP(Baseline) profile, M-JPEG	
6	Mainstream	25fps @1920x1080P, 1280x960P, 1280x720P	
7	Night Vision Distance	Min.25m(82ft), IR 850 nm,	
8	Night Vision Function	IR Cut Filter, Smart IR Control	
9	Unit configuration	Via web browser, PC surveillance software, NVR	
10	Protocols	TCP(IPv4)/UDP/HTTP/HTTPS/RTSP/FTP/NTP/DHCP/ DNS/SMTP/SNMP/UPnP	
11	Ethernet	10/100 Base-T, auto-sensing, half/full duplex, RJ45	
12	Power supply	12 VDC	
13	Operating temperature	-30 °C to +60 °C (-22 °F to +140 °F)	
14	Certifications:	CE, FCC/UL, RoHS Complaint	
15	Approved make	HIKVISION/BOSCH/INFINOVA/AXIS	



2 MP IP DOME AUDIO CAMERA (NIGHT VISION) H.265+

1	Sensor pixels	Effective 1920 x 1080P	
2	Wide Dynamic range	Super >100dB	
3	True Day/Night	Auto, Color, Black & White, smart IR	
4	Audio Compression	G.711/G.722.1/G.726/MP2L2/PCM	
5	Video compression	H.265+, H.264 MP(Main), HP(High), BP(Baseline) profile, M-JPEG	
6	Main Stream	25fps @1920x1080P, 1280x960P, 1280x720P	
7	Night Vision Distance	Min.25m(82ft), IR 850 nm,	
8	Night Vision Function	IR Cut Filter, Smart IR Control	
9	Lens type	Fixed focus 2.8mm	
10	Coverage Angle	>102°	
11	Unit configuration	Via web browser, PC surveillance software, NVR	
12	Protocols	TCP(IPv4)/UDP/HTTP/HTTPS/RTSP/FTP/NTP/DHCP/DNS/SMTP/SNMP/UPnP	
13	Ethernet	10/100 Base-T, auto-sensing, half/full duplex, RJ45	
14	Operating temperature	-30 °C to +60 °C (-22 °F to +140 °F)	
15	Certifications:	CE, FCC/UL, RoHS Complaint	
16	Approved make	HIKVISION/BOSCH/INFINOVA/AXIS	



2 MP IP BULLET CAMERA OUTDOOR (NIGHT VISION). WEATHERPROOF, H.265+

1	Sensor pixels	Effective 1920 x 1080P	
2	Wide Dynamic range	Super >100dB	
3	True Day/Night	Auto, Color, Black & White, smart IR	
4	Shutter speed	Auto/Manual (1/30 [1/25] to 1/10000)	
5	Video compression	H.265+, H.264 MP(Main), HP(High), BP(Baseline) profile, M-JPEG	
6	Main Stream	25fps @1920x1080P, 1280x960P, 1280x720P	
7	Night Vision Distance	Min.25m(82ft), IR 850 nm,	
8	Night Vision Function	IR Cut Filter, Smart IR Control	
9	Lens type	Fixed focus 2.8mm	
10	Coverage Angle	>102°	
11	Unit configuration	Via web browser, PC surveillance software, NVR	
12	Protocols	TCP(IPv4)/UDP/HTTP/HTTPS/RTSP/FTP/NTP/DHCP/ DNS/SNMP/SNMP/UPnP	
13	Ethernet	10/100 Base-T, auto-sensing, half/full duplex, RJ45	
14	Operating temperature	-30 °C to +60 °C (-22 °F to +140 °F)	
15	Certifications:	CE, FCC/UL, RoHS Complaint	
16	Approved make	HIKVISION/BOSCH/INFINOVA/AXIS	
17	Weatherproof Rating.	IP 66	



2 MP IP Bullet AUDIO Outdoor Camera (NIGHT VISION) WEATHERPROOF, H.265+

1	Sensor pixels	Effective 1920 x 1080P	
2	Wide Dynamic range	Super >100dB	
3	True Day/Night	Auto, Color, Black & White, smart IR	
4	Audio Compression	G.711/G.722.1/G.726/MP2L2/PCM	
5	Video compression	H.265+, H.264 MP(Main), HP(High), BP(Baseline) profile, M-JPEG	
6	Main Stream	25fps @1920x1080P, 1280x960P, 1280x720P	
7	Night Vision Distance	Min.25m(82ft), IR 850 nm,	
8	Night Vision Function	IR Cut Filter, Smart IR Control	
9	Lens type	Fixed focus 2.8mm	
10	Coverage Angle	>102°	
11	Unit configuration	Via web browser, PC surveillance software, NVR	
12	Protocols	TCP(IPv4)/UDP/HTTP/HTTPS/RTSP/FTP/NTP/DHCP/DNS/SMTP/SNMP/UPnP	
13	Ethernet	10/100 Base-T, auto-sensing, half/full duplex, RJ45	
14	Operating temperature	-30 °C to +60 °C (-22 °F to +140 °F)	
15	Certifications:	CE, FCC/UL, RoHS Compliant	
16	Approved make	HIKVISION/BOSCH/INFINOVA/AXIS	
17	Weatherproof Rating	IP 66	



SURVEILLANCE HARD DISK

1	SIZE	6 TB	
2	Drive Bays Supported	Up to 16	
3	Cameras Supported	Up to 64	
4	RV Sensors	YES	
5	Max. Sustained Transfer Rate OD (MB/s)	180MB/s	
6	Cache (MB)	256	
7	Tarnish Resistant	YES	
8	MTBF	1,000,000hr	
9	Voltage Tolerance (5V)	±5%	
10	Voltage Tolerance (12V)	±10%	

GIGABIT POE SWITCH 8 PORT10/100/1000 MBPS SWITCH

1	Port number	8 × gigabit PoE ports, 1 × gigabit RJ45 port, and 1 × gigabit SFP fiber optical port	
2	Port type	RJ45 port, full duplex, MDI/MDI-X adaptive	
3	Standard	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z	
4	Switching capacity	20 GBPS	
5	POE standard	IEEE 802.3af, IEEE 802.3at	
6	POE port	Ports 1 to 8	
7	POE power budget	110 W	
8	Max. power consumption	120 W	
9	Max. port power	30 W	
10	Power supply	48 VDC, 2.5 A	



POE SWITCH 4 PORT 10/100 MBPS SWITCH

1	Port number	4 × 100 Mbps POE ports, 1 × 100 Mbps Ethernet port	
2	Port type	RJ45 port, full duplex, MDI/MDI-X adaptive	
3	Standard	IEEE 802.3, IEEE 802.3u, IEEE 802.3x	
4	Switching capacity	1 GBPS	
5	POE standard	IEEE 802.3af, IEEE 802.3at	
6	POE port	Ports 1 to 4	
7	POE power budget	35 W	
8	Max. power consumption	38 W	
9	Max. port power	30 W	
10	Power supply	48 VDC, 0.8 A	

FIBRE CABLE

1	STANDARDS	ISO 11801
2	Operating Temperature	-20 deg C to+60 deg C
3	Storage Temperature	- 40 deg C to+60 deg C
4	Jacket Material	HDPE / LSZH
5	APPLICATION	Suitable for Indoor & Outdoor (duct), aerial, pipeline waterproofing performance.,



CCTV CABLE CAT 6

1	Conductor	23 AWG Solid bare copper (4 pair)	
2	Insulation	High Density Polyethylene	
3	Pairs	2 Insulated Conductors	
4	Sheath	FR-PVC Insulation thickness 0.2 mm nominal	
5	Printing	Each meter printed with sequential Length Counter	
6	Cable Diameter	6.1 mm nominal	
7	Operating Voltage	72 V	
8	Packing	Reels of guaranteed 305m Length	



GIGABIT SWITCH 24 PORT 10/100/1000

1	Number of Ports	24 10/100/1000 Mbps ports	
2	Standards	<ul style="list-style-type: none">• IEEE 802.3 10BASE-T• IEEE 802.3u 100BASE-TX• IEEE 802.3ab 1000BASE-T• IEEE 802.1p Quality of Service (QoS)• IEEE 802.3x Flow Control supported for full-duplex• Auto-negotiation• IEEE 802.3az Energy-Efficient Ethernet (EEE)	
3	Data Transfer Rates	<ul style="list-style-type: none">• Ethernet: 10 Mbps/20 Mbps (half-duplex/full-duplex)• Fast Ethernet: 100 Mbps/200 Mbps (half-duplex/full-duplex)• Gigabit Ethernet: 2000 Mbps (full-duplex)	
4	Network Cables	<ul style="list-style-type: none">• Ethernet: 2-pair UTP Cat.3/4/5/5e, Unshielded Twisted Pair (UTP) Cable• Fast Ethernet: 2-pair UTP Cat.5/5e, Unshielded Twisted Pair (UTP) Cable• Gigabit Ethernet: 4-pair UTP Cat.5/5e, Unshielded Twisted Pair (UTP) Cable	
5	Switching Capacity	<ul style="list-style-type: none">• 48 Gbps	
6	MTBF	<ul style="list-style-type: none">• 863,100 hours	
7	Operating Temperature	<ul style="list-style-type: none">• 0 °C to 40 °C (32 °F to 104 °F)	
8	Safety	<ul style="list-style-type: none">• CB• BSMI	



UNINTERRUPTIBLE POWER SUPPLY 650 VA

1	Input (Voltage / Frequency)	230 VAC / 50 Hz or 60 Hz
2	Output (UPS Capacity (total))	650 VA / 325 W
3	Protection(AC Input)	Fuse
4	Battery	12V, 7 AH lead acid
5	Typical Recharge Time	4-6 Hours

9U RACK

1	Rack Standard	Conforms to DIN 41494 or equivalent standard
2	Construction	Welded
3	Basic Frame	Steel
4	Equipment Mounting	DIN Standard Slots
5	Front Door	Lockable Toughened Glass Door

