Technical specification for CCTV Equipment

for

MCHC building Ayub Teaching Hospital Abbottabad

Sr. #	Description	Specifications	Per Item Rate	Quoted Rated
1	Indoor & Outdoor Cameras.	8MP, 4K UHD, high image definition, Outputs max. 8MP (3840 × 2160, H.265 codec, high compression rate, low bit rate · Built-in IR LED, 30 m , Rotation mode, WDR, 3D DNR, HLC, BLC, digital watermarking, applicable to various monitoring scenes, Intelligent detection: Intrusion, tripwire, .Abnormality detection: Motion detection, video tampering, scene changing, audio detection , no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection , Alarm: 1 in, 1 out , Supports max. 256 G Micro SD card, built-in Mic, 12V DC/Poe power supply IP67 protection.	1	
2	8MP Full-color Active Deterrence Network Camera	8MP, 4K UHD CMOS image sensor, low illuminance, high image definition, Outputs max. 8MP (3840 × 2160) @20 fps and supports 8MP (3840 × 2160) @25/30 fps , H.265 codec, high compression rate, low bit rate, Built-in warm illuminator, and the max. illumination distance: 30 m, ROI, SMART H.264+/H.265+, flexible coding, applicable to various band width and storage environments, Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes, Intelligent detection: Tripwire, intrusion (the three functions support the classification and accurate detection of vehicle and human), Abnormality detection: Motion detection, video tampering, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection, Supports sound and light alarm linkage. When an alarm is triggered, the camera links sound alarm and light flashing Supports one-tap disarming. You can disarm the events of alarm output, sending email, audio, and light in the configured period, Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card, built-in Mic and speaker, 12V DC/Poe power supply, IP67 protection, SMD Plus, Red and blue flashlight alarm,	1	
3	Indoor Vari-focal Network Camera	5MP, CMOS image sensor, low luminance, and high image definition.

Outputs max. 5MP (2592 × 1944) @20 fps, and supports 4MP (2688 × 1520) @25/30 fps H.265 codec, high | 1 | |

		compression rate, low bit rate, Built-in IR LED, max. IR distance: 40 m , ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments , Rotation mode, WDR, 3D DNR, HLC, BLC, digital watermarking, applicable to various monitoring scenes , Intelligent detection: Intrusion, tripwire (support the classification and accurate detection of vehicle and human) , Abnormality detection: Motion detection, video tampering, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, voltage detection Supports max. 256 G Micro SD card, built-in Mic, 12V DC/POE power supply, IP67 protection, SMD Plus.		
4	Outdoor 4 MP intelligent Cameras	4Megapixel progressive scan CMOS H.265 & H.264 triple-stream encoding, WDR (140 dB), AI and Intelligent Smart Features, Support face image capture, Support 6 kinds of face attributes extraction: Age, Gender, Expression (Jolly, Surprise, Normal, Rage, Sad, Disgusted, Confused, Frightened), Glasses, Mouth Mask, Moustache & Beard, Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering, Support People Counting, Perimeter Protection, Support Line crossing/Region/Queuing people counting; Support 4 accesses independent detection, 4 areas independent detection, Object Abandoned/Missing, Heat Map, 2.7 mm–12.0 mm motorized lens, 2/1 Alarm in/out, 1/1 audio in/out Max. IR LEDs Length 50 m, Micro SD memory, IP67, IK10	1	
5	Outdoor 12 MP intelligent Cameras for high end coverage,	12MP (4000 × 3000) @25/30 fps, H.265 codec, high compression rate, ultra-low bit rate, IR distance: 50 m Rotation mode, DWDR; 3D DNR, HLC, BLC, digital watermarking, ROI, SVC, SMART H.264+/H.265+, flexible coding, Perimeter Protection , Abandoned object; missing object, Face Detection , Video Metadata , ANPR , People Counting , Queue Management, Alarm: 3 in, 2 out; audio: 1 in, 1 out; RS-485; BNC; supports max. 256 G SD card, 24V	1	

		AC/12V DC/Poe power supply, IP67, IK10 protection, Five streams for three-channel HD video		
6	Artifice Intelligence base Facial Reorganization Camera.	4MP, CMOS image sensor, low luminance, high image definition, 4MP (2688×1520) @50 fps/60 fps, H.264&H.265 coding, high compression ration, Alarm: 3 in, 2 out; audio: 1 in, 1 out; RS-485; BNC; supports max. 256 GB SD card, Five streams for three-channel HD video, IP67, IK10 protection grade, 5 streams, Face Recognition, with deep learning algorithm support People Counting, Face Capture, Perimeter Protection and Video Structuration, Professional, intelligent, Face recognition, track, priority, snapshot, face enhancement, face exposure, face attribute extract, 6 attributes and 8 expressions: Gender, age, glasses, expressions (anger, sadness, disgust, fear, surprise, calm, happiness and confusion), mask, beard, Max supports face contrast in face library with 200,000 faces, People Counting, People counting (count the entry number, exit number and pass number), display and output daily/monthly/annual statistics, No. in area, 2.7 to 12mm Motorized Lens 12V DC/24V AC/, IR Distance Minimum 50m , IP67, IK10 protection grade.	1	
7	Artifice Intelligence License plate Cameras.	2MP Full HD Artificial Intelligence ANPR Camera, white light, Embedded with Deep learning LPR Engine, Supports vehicle video detection with high detection rate; supports vehicle direction detection, License plate recognition, vehicle size, vehicle color detection and etc., Supports 11 vehicle sizes detection: large bus, heavy truck, medium truck, sedan, minivan, light truck, SUV, MPV, medium bus, pick-up and minicar, Supports 11 colors detection (daytime): white, black, blue, red, yellow, green, pinkish purple, gray, brown, orange and silver. White List (10000 records database inside the camera), H.265& H.264 dual-stream encoding, Micro SD memory, Powerful 2.7-13.5mm motorized lens and white light, ideal for monitor ANPR	1	

		distance, IP67, and superior performance for outdoor applications, Embedded with LPR algorithm inside the camera, Vehicle data structuring: license plate recognition, vehicle size, vehicle color detection and etc.		
8	Mini IR PTZ Network Camera	1/2.8" STARVIS™ CMOS, Powerful 4x optical zoom Support Triple-streams encoding, WDR, Day/Night(ICR), Ultra DNR, Max. 25/30fps@1080P IVS, Support Poe, IR distance up to 30m with Built-in Mic	1	
9	Mini PTZ Cameras for Nursery.	4MP, 25/30fps@4M, Deep-learning, Pro AI performance:, Perimeter protection, Video Structuralization, 25x optical zoom, SMD, Starlight, H.265 , PFA Technology, IR Distance up to 100m, -40°C~70°C wide temperature range, IP66, POE+, -15°~90° tilt range,	1	
10	4x2MP Multi-Sensor Panoramic Network IR Bullet Camera	4x2MP Multi-Sensor Panoramic progressive scan CMOS, H.265/H.264 triple-stream encoding, Max 25fps@4096x1800, Support 180-degree panoramic view, Day/Night(ICR), 3DNR, AWB, AGC, BLC, Smart detection, Intelligent Function, Max. IR LEDs length 30m, Micro SD memory, IP67, IK10,PoE+	1	
11	PTZ Speed Dome Cameras for Outdoor Surveillance.	4Megapixel 45x optical zoom, Max. 25/30fps@4MP, Deep-learning-based auto tracking and perimeter protection, IR distance up to 250m, IP67, IK10, Operating Temperature: -40°C~+70°C, Smart detection / Video Analytics:, Support human, motor vehicle and non-motor vehicle image capture, Support alarm triggering by target types (human And vehicle), Filtering out false alarms caused by animals, rustling leaves, bright lights, etc., Support Auto Tracking, Tripwire, Intrusion, Object missing, Object Abandoned, Face Detection etc.	1	
12	Supply of 32 Channel Artifice Intelligence Enabled NVR	32 Channel AI NVR Smart H.265+/H.265/Smart H.264+/H.264/MJPEG Up to 16 Channel perimeter protection Up to 4 Channel video stream face recognition Up to 24 face pictures /sec processing	1	

		up to 20 face databases with 100,000 face images in total		
		2 HDMI, 1 VGA Output Ports		
		Support Multiscreen Display		
		16MP, 12MP, 8MP, 6MP, 5MP, 4MP, 3MP, 1080P		
		Smart H.265+/H.265/Smart H.264+/H.264/MJPEG		
		320 Mbps Bandwidth		
		8 SATA III Ports, Up to 8 TB capacity for each HDD		
		2 RJ-45 Ports (10/100/1000Mbps)		
13	Network Video Surveillance Recorder	128-channel IP video access, Industry embedded micro-controller, Incoming bandwidth: 512Mbps Recording bandwidth: 400Mbps Outgoing bandwidth: 512Mbps Human Face Properties Supports 6 properties: Gender, age range, glasses, expression, mouth mask, and beard Face detection, face recognition, video metadata, IVS (tripwire, intrusion, missing object, and more), People counting, smoking detection, call detection Resolution16MP/12MP/8MP/6MP/5MP/4MP/3MP 1080P/960P/720P/D1/CIF/QCIF Face detection, face recognition, video metadata, IVS (tripwire, intrusion, missing object, and more), people counting, smoking detection, call detection Face detection, face recognition, video metadata, (tripwire, intrusion, missing object, and more), People counting, smoking detection, call detection, perimeter protection, faces recognition with normal Cameras, and face recognition with face detection Cameras. video metadata, face databases with 300,000 face pictures in total , Supports RAID 0/1/5/6/10, 3 HDMI/2 VGA video output, , H.265 & H.264, 8 HDD, 2 VGA&3 HDMI, 4 RJ45(1000M), 4 USB(2USB3.0), RAID0/1/5/6/10,	1	
14	Central Management Server.	Main Processor Intel i5, 64 bits 4 Core Processor, Operating System Embedded Linux with 8GB memory, Supports 3.5"chassis with up to 15 hot plug hard drives and extend the storage via ISCSI and SAS/SATA disk intermixing to use, 4 Ethernet Ports (100/1000Mbps) and 3HDMI out ports with GPU decoding, System should be capable to Face recognition cameras Per Server without license, System	1	

must be capable to add Face library management, Adding face one by one, Import faces in batches., Automatically captures faces in the camera field of view Extracts face attribute information from captured face, Real-time face comparison, Generate daily, weekly, monthly attribute report based on the gender and age, Bandwidth of Video Input/output per Server 650 Mbps., Storage Environment Temperature -20°C ~ + 70°C, Redundant Power Supply, Embedded device, 7*24 stable operation, Support local storage and IP-SAN storage, Support Google map, Raster Map, Support ONVIF standard protocol, Support platform SDK, Front panel can displays system service status, Support 1500 channels(Support 450 input devices), Support 150 online users, unlimited user management, Support 650M transfer capability, Support 650M local storage capability, Support POS function, Support People counting, Support Heat map, Support Face Recognition, Support ANPR.

15	Recording Storage Device	Recording Storage Enterprise Grade 8 TB	1	
16	Video Wall Display Unit Ultra Narrow Bezel	55" FHD Video Wall Display Unit, Industrial level IPS LCD panel, suitable for extensive 24/7 continuous works ,Ultra-narrow 1.8mm bezel-to bezel design (0.9mm even panel bezel)Brightness/Luminance 700 cd/m²/nits, Response Time 8ms, Display Color 10bit(1.07B),Video Wall structure Wall mount ,LCD Technology IPS ,Color 10Bit , 1.06 Billion Colors ,Response time 8 ms ,Contrast ratio (typical) 4000:1 ,Viewing Angle H178°, V178 ,LCD backlight lifetime 50,000hrs or more Input VGA, DVI, BNC, HDMI ,Output VGA, DVI, BNC ,Power Supply AC100V~AC240V, 50/60 H Certifications CE/FCC etc.	1	
17	Industrial Grade Display Unit for 24/7 Surveillance	55"(16: 9) UHD LED monitor, Built-in Android system, LED backlight, 3840×2160, 350cd/m2, 1200: 1 static contrast, 178/178 view angle, 8ms response time, 1.07B/10bit display	1	

		color, 2×HDMI/USB 3.0/USB 2.0/Audio inputs, headphone Jack, RJ45 output, 2×8W speakers, 1231.6×707.7×62.5mm, 13.5kg		
18	Multi-Screen Controller	Multi-screen Video Controller ,ATCA industry box, 10 service card slots, every slot supports various service card, Redundant power optional and smart temperature controlled fan, FPGA array framework, built in ultrahigh bandwidth switch matrix, high image processing capacity, flexible data exchange, PCI-E bus, high system bandwidth, Window Division Supports 1/4/9/16 window division modes and full-screen switch of the window ,Input support Up to 8 kinds of signal sources are supported, including VGA, DVI, HDMI, BNC, SDI, and IP camera input ,Power supply Redundant (1+1), Hot Swappable . Output with decoding card, Input with 4k Card complete in all aspects.	1	
19	Base for Screens.	Aluminum Good Quality Base, for Each Screen.	1	
20	Bracket for Screens.	Aluminum Good Quality Back Bracket, for Each Screen.	1	
21	PC for Cameras Monitoring and Management.	Intel® 9th Generation Core i7- Processor 12MB Cache or Better • 2GB Dedicated Nvidia Graphic Card or Better • 8GB DDR4 RAM • 1TB HDD • Intel Gigabit Ethernet, Keyboard, Mouse.	1	
22	24 Port Gigabit High-performance Ethernet Switches Layer 3 for Main Control Room.	High Performance Gigabit Control Room Switch, High Scalability, High Availability, , 24 x 100/1000Base-X optical port , (8 x Combo port), 4 x 10G BASE-X SFP+ optical port, 256 Gbit/s Switching Capacity, Packet forwarding rate 96Mpps, VLAN, Link Aggregation, IP Routing, ,Ring Supported, High End Security & Management Features, IRF2, Complete Security Control Policies, Diversified QoS Policies, Environment Friendliness and Energy Saving	1	
23	16 Port Gigabit POE Switch.	Fast/Gigabit Ethernet, 16GE Poe, Poe SFP Slots, 2GE SFP, Switching Capacity, 52Gbps	1	

		Packet Forwarding Rate, 23.81MppPacket Buffer Memory, 4Mb MAC Table Size, 8K PoE Standard, PoE (802.3af), PoE+ (802.3at), Hi-PoE, PoE Budget, 240W Long PoE Transmission , Support of VLAN, Link Aggregation , Flow Control, Spanning Tree, Management Web, Lightning Protection, Mode 2KV , Working Temperature -10°C~55°C		
24	08 Port Industrial Grade POE Network Managed Gigabit Switch with 4 SFP Ports.	8 Ports Industrial Full Gigabit Poe Managed Switch Provide 8* 10/100/1000Base-T Ethernet ports (Poe) + 4* 1000BASE-X SFP Ports, Support 4K high-definition video transmission; PoE Function: support IEEE802.3af/at standard, each port supports up to 60W PoE Output; Support Web-based network management, support VLAN, QoS, RSTP, SNMP, Support IGMP Snooping etc. network function; Support 4K VLAN, Support 802.1Q Protocol-Based VLAN, Support Port-Based VLAN; Support Fast Ring as redundant link Support relay alarm for power off, network broken, PoE off 6KV surge immunity, 8KV ESD Protection and anti-interference ability; -40°C~75°C working temperature Support redundant Power Supply Rail/Rack kit Fitting CE、FCC、ROHS Certified	1	
25	HD Network Control Keyboard for PTZ Cameras.	HD Network Control Keyboard, Screen 10" TFT LCD touch screen, Keyboard to Control, 2×RJ-45 port (10/100/1000M), Four Dimensional Joystick Control of PTZ Functions, Support 4K decoding live view, Support Video-Wall display control, Support bidirectional talk, Preset Position, Auto Scan, Auto Pan, Auto Tour & Pattern Control.	1	
26	CAT-6 Network Cable	CAT-6 Network Cable Support Poe long-distance transmission; Excellent OFC with 99.99%	Per feet	

		OFC(oxygen free copper) purity; Environmentally-friendly outer sheath; Top-notch quality guarantee for 10 year		
27	Optical fiber cable	12 core optical fiber cable in Good Quality including Splicing, Patch Cord, and Pigtail and Related installation accessories.	Per feet	
28	Power Cable	2.5 mm 2 Core Power Cable in Feet pure copper above than 99%	PRFT	
29	PVC PIPE (A+ Quality)	Unplasticized UPVC PIPE, Socket, Bend Conduit Pipe 3/4 inch with Accessories.	01	
30	PVC PIPE (A+ Quality)	Unplasticized PVC PIPE, Socket, Bend Conduit Pipe 1 inch with Accessories,	01	
31	PVC PIPE (A+ Quality)	Unplasticized PVC PIPE, Socket, Bend Conduit Pipe 1.5 inch with Accessories,	01	
32	PVC PIPE (A+ Quality)	Unplasticized PVC PIPE, Socket, Bend Conduit Pipe 2 inch with Accessories,	01	
33	PVC DUCT (A+ Quality)	Duct 16X25 with Accessories.	01	
34	PVC DUCT (A+ Quality)	Duct 16X38 with Accessories.	01	
35	PVC DUCT (A+ Quality)	Duct 25X25 with Accessories.	01	
36	OFDF	OFDF 24 Port Full Loaded with accessories of OFC related.	1	
37	OFDF	OFDF 08 Port Full Loaded with accessories of OFC related.	1	
38	SFP	Gigabit SFP Fiber Module (Good Quality)	1	
39	IT Rack 42U	Floor Standing, Perforated Dual Compartment Door, 2 Fixed Tray and 1 sliding tray, 4 Fans, Fan kit and PDU, Compatible to cater all accessories as per the CCTV design.	1	
40	Weather Proof Rack	Weather Proof Rack/ Edge DB Box to inbuilt, Poe switch, , Circuit Breaker, , PDU , ODF etc.	1	
41	Power Cable	2.5 mm 2 Core Power Cable in Feet including Civil work pure copper above than 99%	1	
42	Power Backup	ONLINE Branded 10 kVA, 0.8 PF Long Backup UPS with up to 4 Hrs. on 80% load.	1	
43	Poles	Galvanized Poles for Cameras 10 Feet with, Base, Civil Work complete in all aspects.	1	
44	Water-proof Junction Box For Camera Mount	Aesthetic design, Material: aluminum / PVC, junction box	1	

45	HDMI Cable	HDMI Cable 10 Meter 4K Supportive.	1	
46	Main Control Room Installation	Wood Paneling, 2 Ton AC, 2 Chair and Counter Table, with installation accessories,	1	
47	Digging and Road Cutting.	Lying of OFC, UTP Cable, lying of warning tape, backfilling, Installation of route indicators.	1	
48	Control Room Earthing	Earthing of Control Room Equipment.	1	
49	Visible Light Facial Recognition multi-biometric identification	Visible Light Facial Recognition multi-biometric identification terminal, Silk ID fingerprint Device. Face detection and facial recognition from 0.5m to 3m with Magnetic Lock. ✓ With new deep learning algorithms applied, the anti-spoofing technology performance has been dramatically heightened and can prevent different types of photos and video attacks. ✓ Cutting-edge 3D Neuron Fingerprint Algorithm authenticates dry, wet, or rough fingerprints efficiently and accurately. Apart from Visible Light facial recognition and Silk ID fingerprint authentication, Features:- ✓ Capacity User 10,000 ✓ Face : 10,000 ✓ Fingerprint : 10,000 ✓ Card : 10,000 ✓ Transaction: 1,000,000 ✓ Communication TCP/IP / Wi-Fi / Wiegand Input / Wiegand Output / RS485 / USB Host ✓ Access Control Interface Lock Relay Output / Exit Button / Alarm Output / Door Sensor ✓ Hardware 900MHz Dual Core CPU ✓ Memory 512MB RAM/ 8G Flash ✓ 2MP WDR Low Light Camera ✓ 7-inch Touch Screen, 1280*720 pixels ✓ Linux Operating System ✓ Adjustable Monitor Brightness		

		✓ Standard Functions		
		✓ ID Card / Work Code / ADMS / DST / Bell Schedule / Attendance Status Auto-Switch / Record Query / Photo ID		
		✓ Optional Functions		
		✓ 13.56 MHz IC / LEGIC Card		
		✓ Special Functions		
		✓ Visible Light Facial Recognition		
		✓ Alive Face Detection		
		✓ Multiple Biometric Verification Modes		
		✓ Compatibility		
		✓ Bio Time 8.0 / ZKBioSecurity (Time & Attendance)		
		✓ Additional Info		
		✓ Algorithms		
		✓ Facial Recognition Speed : ≤0.3 sec		
50	Installation / Commissioning	Relevant Installation / Commissioning of CAT-6 Network Cable per feet	1	
51	Installation / Commissioning	Relevant Installation / Commissioning of Power Cable per feet	1	
52	Installation / Commissioning	Relevant Installation / Commissioning of Optical Fiber Cable per feet.	1	
53	Installation / Commissioning	Relevant Installation / Commissioning Configuration Services for quoted equipment / store,	1	

Note:- 1) You are requested to provide turnkey solution.
2) Estimated quatity of cameras are 140, which may be increase or decrease.