

Specification of the Items for Damak Hospital.

Technical Specification of Router				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Microtik, Cisco or Equivalent		
	Model/Make	Mention model No:		
	Country of Origin			
	CPU core count	9		
	CPU nominal frequency	1.2 GHz		
	RouterOS license	6		
	Operating System	<u>RouterOS</u>		
	Size of RAM	2 GB		
	Storage size	128 MB		
	Storage type	NAND		
	MTBF	Approximately 200'000 hours at 25C		
	IPsec hardware acceleration	Yes		
	Number of AC inputs	2		
	AC input range	100-240		
	Number of DC inputs	1 (PoE-IN)		
	Cooling type	2 fans		
	10/100/1000 Ethernet ports	7		
	Ethernet Combo ports	1		
	SFP+ ports	1		
	Certification	CE, EAC, ROHS		

Technical Specification of Managed Switch: 26 Ports

SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Rujie, Cisco or Equivalent		
	Model/Make	Mention model No:		
	Country of Origin			
	10/100/1000Base-T ports	24		
	1000Base-X SFP ports	2		
	PoE ports	24		
	Max. PoE budget	370W		
	Switching capacity	52 Gbps		
	Forwarding rate	38.69 Mpps		
	MAC address table	8000		
	VLAN	16		
	Dimensions (W x D x H)	Fit in Network Rack		
	Weight (With package)	4.2 kg		
	Loop prevention	yes		
	Flow control	yes		
	Port isolation	yes		
	Broadcast storm suppression	yes		
	Cloud management	Yes, without license cost		
	Power consumption	≤ 450W		
	Power supply	100 - 240V AC, 6A		
	Fan	Built-in,		
	Port surge	4 kV		
	Operating temperature	0°C to 40°C		
	Operating humidity	10% to 90% RH		
	MTBF	> 200,000		
	Warranty	3 Years		

27U Server Rack:				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	27 U Server Rack	Width: mm Depth:mm Min Load Bearing: 700 Kg PDU: 8 Port with Surge Protection Fan: 4		

6U Wall Mount Rack:				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	6 U Server Rack	Width: mm Depth:mm PDU: min 4 Port with Surge Protection Fan:1		

64 Channel 4K NVR				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	64 Channel 4K NVR	Third-party network cameras supported • Up to 12 Megapixels resolution recording • Support 2-ch HDMI, HMDI1 at up to 4K(3840x2160) resolution • 320M incoming bandwidth • Up to 8 SATA interfaces 10TB per each HDD •		

		<p>Support HDD hot swap with RAID0,1,5,6,10 storage scheme configurable</p> <ul style="list-style-type: none">•Support various VCA detection alarm and VCA search•Support H.265/H.264/MPEG4 video formats <p>320Mbps Bit Rate Input Max(up to 64-ch IP video), 8 SATA & 1 eSATA interfaces, 2 RJ-45 10/100/1000Mbps self-adaptive Ethernet interfaces, alarm I/O: 16/4, 2U case,19"</p>		
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Technical Specification of 8 Port POE Switch				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Rujie, Cisco or Equivalent		
	Model/Make	Mention model No:		
	Country of Origin			
	10/100BaseX POE+ ports	8		
	10/100/1000 Base T ports	2		
	Switching capacity	5.6 Gbps		
	Forwarding rate	4.17 Mbps		
	MAC address table	2000		
	Port surge	6 kV		
	Warranty	3 Years		

Technical Specification of CAT6 UTP Network Cable				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Hikvision, Dlink or equivalent		
	Model/Make	Mention model No:		
	Country of Origin			
	Packing Length	305m		
	Conductor Material	CCA (Copper Content 27%)		
	Nom.O.D.	0.58mm		
	Insulation	Solid HDPE		
	Insulation Dia	1.05±0.05mm		
	Sheath Thickness	0.50±0.05 mm		
	Sheath External OD	6.0±0.30 mm		
	Sheath Material	FR-PVC		

	Surface Printing	Brand, Model no length,		
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Technical Specification of CAT6 Network Cable (Pure Copper)				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Hikvision, Dlink or equivalent		
	Model/Make	Mention model No:		
	Country of Origin			
	Reference Standard	ISO/IEC11801, ANSI/TIA-568-C.2, RoHS 2.0 etc		
	Packing Length	305m		
	Rip Cord, Seperator	Yes		
	Conductor Material	Solid-Bare Copper (99.95%)		
	Nom.O.D.	0.55 ± 0.005 mm, 23 AWG		
	Insulation	HDPE		
	Insulation Dia	0.98 ± 0.05 mm		
	Conductor Electrical Characteristics 1.0-250.0 MHz Impedance	100 ± 15 Ω @ ≤ 100 MHz 100 ± 25 Ω @100-250 MHz		
	DC Resistance	≤ 9.38 Ω/100 m		
	Sheath Thickness	0.50 ± 0.10 mm		
	Sheath External OD	6.00 ± 0.30 mm		
	Sheath Material	FR-PVC		
	Surface Printing	Brand, length, ANSI/TIA 568 standard		
	Color	Non-white, orange, red, grey etc		

Technical Specification of Server				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Dell, HP, Lenovo or Equivalent		
	Model/Make	Mention model No:		
	Country of Origin			
	Server Chassis and Board	<p>Form factor: 2U Rack support</p> <p>Internal hard drive bay and hot-plug backplane 1: Up to 8 x 2.5", HDD: SAS, SATA, SSD</p> <p>Processor socket: 2</p> <p>Memory slots: 16, upto 1 TB RDIMM</p> <p>IO Ports: USB 3.0, VGA</p> <p>IPMI 2.0 Compliant Management Port</p> <p>Embedded NIC: 4 x1GbE BASE-T Adapter, OCP NIC 3.0</p> <p>ReadyRails Sliding Rails</p> <p>PciE Riser Config 0, 1xOCP 3.0(x16)+ 1x16LP</p> <p>Heatsink for CPU less or equal 165W</p>		
	Raid Controller	<p>12Gbps SAS 6Gb/s</p> <p>SATA/SAS, 3Gbps</p> <p>SAS/SATA, Gen4 (16 GT/s)NVMe, PCIe Gen 4 Support, 8GB NV Cache, min 16 drive support and raid 0,1,5,6,10,50,60 Max drive Support : 32 with SAS Expander, Hardware Raid</p>		
	Processor-1 processor (2 socket)	<p>Core: Min 12 core</p> <p>Processor base frequency: Min. 2.10 GHz</p> <p>Max Turbo frequency: 3.00</p>		

		GHz Cache: Min. 18M Smart Cache Number of Threads: Min. 24 threads Bus Speed: 10.4 GT/s Turbo-HT (120w) DDR4- 2666		
	Memory	1*32 GB RDIMM, 3200MT/s, Dual Rank		
	Storage	2* 1.2TB Hard Drive SAS 12Gbps 10k 512n 2.5in Hot- Plug 2* 300GB Hard Drive SAS 12Gbps 10k 512n 2.5in Hot- Plug		
	Power Supply	Dual, Hot-Plug, Redundant Power Supply (1+1), 800W		
	OS	VMware vSphere ESXi™		
	Warranty	Rapid Parts Exchange 36 Months		

Technical Specification of 10TB Surveillance HDD				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Rujie, Cisco or Equivalent		
	Model/Make	Mention model No:		
	Country of Origin			
	tor Size	512E		
	Form Factor	3.5-Inch		
	Interface	SAS 12.0 Gbit/s		
	Formatted Capacity	10TB / 10,000GB		
	Performance	Interface Speed 12.0 Gbit/s 6.0 Gbit/s 3.0Gbit/s 1.5 Gbit/s Rotation Speed 7,200 RPM Buffer Size 256 MiB Maximum Data Transfer Speed (Sustained) 237 MiB/s		

Technical Specification of 2 MP Fixed Dome Network Camera				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Hikvision. Dahua etc		
	Model/Make	Mention model No:		
	Country of Origin			
	Image Sensor	1/2.7" Progressive Scan CMOS		
	Max. Resolution	1920 × 1080		
	Min. Illumination	Color: 0.01 Lux @(F2.0, AGC ON), B/W: 0 Lux with IR		
	Shutter Time	1/3 s to 1/100, 000 s		
	Day & Night	IR cut filter		
	Angle Adjustment	Pan: 0° to 355°, tilt: 0° to 75°		
	Focal Length & FOV	2.8 mm, horizontal FOV 112.1°, vertical FOV 60.0°, diagonal FOV 132.2°		
	Aperture	F2.0		
	Supplement Light Range	IR Up to 30 m		
	Main Stream	60 Hz: 30 fps (1920 × 1080, 1280 × 720)		
	Sub-Stream	60 Hz: 30 fps (640 × 480, 640 × 360)		
	Video Compression	Main Stream: H.265/H.264/H.264+/H.265+ Sub-Stream: H.265/H.264		
	Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP™, SMTP, IGMP, 802.1X, QoS, IPv6, Bonjour, IPv4, UDP,		

		SSL/TLS		
	API	Open Network Video Interface, ISAPI		
	Wide Dynamic Range (WDR)	Digital WDR		
	Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port		
	Basic Event	Motion detection etc		
	Power	12 VDC \pm 25%, 0.4 A, PoE: 802.3af, Class 3, 36 V to 57 V, 0.2 A to 0.15 A,		
	Protection	IP67, IK10		

Technical Specification of 2 MP Fixed Bullet Network Camera

SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Hikvision. Dahua etc		
	Model/Make	Mention model No:		
	Country of Origin			
	Image Sensor	1/2.7" Progressive Scan CMOS		
	Max. Resolution	1920 \times 1080		
	Min. Illumination	Color: 0.01 Lux @(F2.0, AGC ON), B/W: 0 Lux with IR		
	Shutter Time	1/3 s to 1/100, 000 s		
	Day & Night	IR cut filter		
	Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 180, rotate- 0 to 360°		
	Focal Length & FOV	4 Mm, Horizontal FOV 90.2°, Vertical FOV 48.6°, Diagonal FOV 107.6°		

Aperture	F2.0		
Supplement Light Range	IR Up to 30 m		
Main Stream	60 Hz: 30 fps (1920 × 1080, 1280 × 720)		
Sub-Stream	60 Hz: 30 fps (640 × 480, 640 × 360)		
Video Compression	Main Stream: H.265/H.264/H.264+/H.265+ Sub-Stream: H.265/H.264		
Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP™, SMTP, IGMP, 802.1X, QoS, IPv6, Bonjour, IPv4, UDP, SSL/TLS		
API	Open Network Video Interface, ISAPI		
Image	Digital WDR, SNR ≥ 52 DB, Image Enhancement BLC, 3D DNR		
Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port		
Basic Event	Motion detection etc		
Power	12 VDC ± 25%, 0.4 A, PoE: 802.3af, Class 3, 36 V to 57 V, 0.2 A to 0.15 A,		
Protection	IP67		

Technical Specification of 4 MP Fixed Bullet Network Camera

SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Hikvision. Dahua etc		
	Model/Make	Mention model No:		
	Country of Origin			
	Image Sensor	1/1.8" Progressive Scan CMOS		
	WDR	120dB		
	Max. Resolution	2560 × 1440		
	Min. Illumination	0.0014 @ F1.0 (1/30 s, AGC ON), 0.002 @ F1.2 (1/30 s, AGC ON), 0 Lux with LED on		
	Shutter Time	1/3 s to 1/100, 000 s		
	Day & Night	24/7 full color		
	Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°		
	Focal Length & FOV	4 mm, horizontal FOV: 89°, vertical FOV: 46°, diagonal FOV: 107.5°, 6 mm,		
	Aperture	F1.0		
	Supplement Light Range	Warm white LEDs (3000K), up to 30m,		
	Main Stream	60Hz: 24fps (2560 × 1440), 30fps (2304 × 1296, 1920 × 1080, 1280 × 720)		
	Sub-Stream	60Hz: 30fps (640 × 480, 640 × 360, 320 × 240)		
	Video Compression	Main stream: H.265/H.264,H.264+, H.265+ Other Stream H.265/H.264		

Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour etc		
API	Open Network Video Interface, ISAPI		
Image	3D DNR, Enhancement BLC/3D DNR/HLC/Defog		
Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port		
Basic Event	Motion detection, Line crossing detection, intrusion detection etc		
Power	12 VDC , PoE: 802.3af, Class 3,		
Protection	IP67		
Wall mount	Included		

Technical Specification of Access Point				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Rujie, Ubquity or Equivalent		
	Model/Make	Mention model No:		
	Country of Origin			
	Wireless Protocol	802.11ac Wave2, 1267Mbps		
	Antenna	Built-in Omni-directional		
	Power Supply	802.3af/at PoE, 12V/1.5A DC Adaptor		
	Network Port	2 x 10/100/1000 Base-T		
	MIMO	2x2 @2.4 GHz, 2x2 @5		

		GHz		
	Warranty	2 years		

Technical Specification of IP Telephone				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Fanvil, Grandstream etc or Equivalent		
	Model/Make	Mention model No:		
	Country of Origin			
		The phone must have minimum 2 Lines and 2 SIP accounts		
		Minimum 2" LCD display		
		Must support following audio codec - G.711a, G711u, G.729a, G722, iSAC, Internet Low Bitrate Coded (iLBC)		
		The Phone Must have RJ9 headset port to connect any standards-based headset. The Phone must also have a separate headset key		
		The phone Must Support downloadable phonebook (XML, LDAP, up to 1000 items)		
		The phone must support adjustable desk placement and wall mounting		
		The phone must support minimum 200 entries for call history i.e. missed, received, placed etc.		
		The phone must support the following features at a minimum: a. Call forward b. Call pickup c. Call waiting e. Call park		

		f. Conference g. Auto answer h. Hot desking		
		The phone must have Dual switched 10/ 100 Mbps ports with integrated PoE, one for LAN connection and other for connecting to PC/Laptop		
		The phone must support minimum 3-way audio Conference		
		The Phone Must Support server redundancy and fail-over		
		The phone should support auto provisioning		
	Licence	Perpetual (Free)		

Technical Specification of One Way SIP Intercom Speaker				
SN	Category	Description	Bidder's Offer (FC,PC, NC)	Remarks
	Manufacturer	Fanvil, Grandstream etc or Equivalent		
	Model/Make	Mention model No:		
	Country of Origin			
	Protocols/Standards	SIP RFC3261, TCP/IP/UDP, RTP/RTCP, RTCP-XR,HTTP/HTTPS, ARP, ICMP, DNS (A record, SRV, NAPTR), DHCP, PPPoE, SSH, TFTP, NTP, STUN, LLDP-MED, SIMPLE, LDAP,TR-069, 802.1x, TLS, SRTP, IPv6, OpenVPN etc		
	Network Interfaces	One 10/100 Mbps port with integrated PoE/PoE+		

Auxiliary Port	One 2-pin switch-in input port, one Alarm-in input port, vol+/- Key, reset, one network port		
Voice Codecs and Capabilities	G.711μ/a, G.722 (wide-band), G.726-32, iLBC, Opus, G.723, G.729A/B, in-band and out-ofband DTMF (In audio, RFC2833, SIP INFO), VAD, CNG, PLC, AJB, AGC, ANS		
Telephony Features	SIP Paging, Multicast Paging, Group Paging, PTT, call-waiting with priority override		
HD Audio	Yes, HD speaker with support for full-band audio		
Speaker	30W high-fidelity HD speaker, Frequency: 110Hz-20000 Hz Sensitivity: Up to 95 dBA at 1W power at 1 meter		
QoS	Layer 2 QoS (802.1Q, 802.1p) and Layer 3 (ToS, DiffServ, MPLS) QoS		
Security	User and administrator level passwords, MD5 and MD5-sess based authentication, 256-bit AES encrypted configuration file, TLS, SRTP, HTTPS, 802.1x media access control, secure boot		
Language	English		
Upgrade/Provisioning	Firmware upgrade via TFTP / HTTP / HTTPS or local HTTP upload etc		

Power & Green Energy Efficiency	Integrated PoE* 802.3af Class 3, PoE+ 802.3at Class 4		
License	Free Perpetual		