

Technical Specification				Compliant
S. N.	Description	Requirement	Bidders Proposed	"Fully" / "Partially" / "Non"
NVR 64 channel				
1	Item	64 Channel Network Video Recorder		
2	Brand	Any [Bidder Must Specify Brand]		
3	Model	Any [Bidder Must Specify Model]		
4	Origin	Any [Bidder Must Specify]		
5	Video Input	Minimum 64 channels		
6	Video Output	At least 2 HDMI , 1 VGA		
7	Max Recording Resolution	Up to 12MP or better		
8	Video Compression	H.265+ /Advanced compression format equivalent		
9	Incoming Bandwidth	Minimum 320 Mbps		
10	Outgoing Bandwidth	Minimum 160 Mbps		
11	Playback	16 channels synchronous		
12	Audio	1 RCA input / 1 RCA output, Two-way audio supported		
13	Decoding Capability	Multiple resolutions & frame rates as per codec		
14	Hard Disk Bays	Minimum 8 × SATA, each supporting up to Min. 10 TB		
15	Total Storage	Minimum 80 TB		
16	Network Interfaces	2 × RJ-45 Gigabit Ethernet ports		
17	Redundancy	Supports N+1 Hot Spare or RAID (0,1,5,6,10)		
18	ANR	Automatic Network Replenishment supported		
19	Cloud Upgrade	Supported		
20	Certifications	CE, FCC, UL, RoHS, WEEE or equivalent international standards		
21	Dimensions	Any Standard		
22	Power Supply	100 – 240V AC		
23	Power Consumption	≤ 50W(without HDD)		
24	Certifications	CE, FCC, UL, RoHS or equivalent standards		
25	Warranty	2 Years of Warranty [Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
26	Mandatory Document	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter: [Bidder must submit a letter on their letterhead		
2 MP Indoor CCTV camera				
1	Item	2 MP Indoor Network Dome Camera		
2	Brand	Any [Bidder Must Specify Brand]		
3	Model	Any [Bidder Must Specify Model]		
4	Origin	Any [Bidder Must Specify]		
5	Max Resolution	Minimum 2 MP (1920 × 1080)		
6	Image Sensor	Minimum 1/2.7" or 1/2.8" or 1/2.9" Progressive Scan CMOS		
7	Minimum Illumination	Color ≤ 0.01 Lux (F2.0, AGC ON); 0 Lux with IR		
8	Day/Night	IR-cut filter with auto switch (ICR)		
9	Shutter Speed	Auto/Manual/ 1 – 1/100,000 s		

10	Adjustment Angle	Pan 0-355°, Tilt 0-65°, Rotate 0-355°		
11	S/N Ratio	≥ 52 dB		
12	Wide Dynamic Range	Digital WDR (DWDR)/TruWDR or better		
13	Focal Length Options	2.8 mm /3.6mm/ 4.0 mm fixed lens		
14	Aperture	F1.6/F2.0 or better		
15	Field of View	Horizontal ≥ 90° (for 2.8mm)		
16	DORI Distance	Detect ≥37m; Observe ≥ 14m; Recognize ≥ 7m; Identify ≥ 3m		
17	Supplemental Light	Infrared (IR)		
18	IR Distance	≥ 30 m		
19	Video Compression	H.265 / H.264 / H.265+ or equivalent		
20	Frame Rate	1080p @ 25/30 fps minimum		
21	Bit Rate	32 Kbps - 8 Mbps (or similar)		
22	Streams	Dual stream support		
23	ROI	Supported (1 fixed region or more)		
24	Privacy Mask	≥ 4 areas		
25	Image Settings	White Balance (Auto/Outdoor/Manual); 3D DNR; BLC / HLC		
26	Defog	Digital Defog		
27	Basic Detection	Motion detection, Video Tampering		
28	Audio Compression	G.711A / G.711U / PCM (If audio supported)		
29	Edge Storage	MicroSD support up to 256 GB		
30	Protocols	IPv4, TCP/IP, UDP, RTSP, HTTP, NTP, DHCP		
31	Integration	ONVIF (Profile S/G/T), API		
32	User Access	≥ 20 users		
33	Power Supply	DC 12V ±25% and PoE (IEEE 802.3af)		
34	Power Consumption	≤ 9 W		
35	Ingress Protection	IP67 (IEC 60529) or better		
36	Vandal Protection	IK10 or better		
37	Operating Temperature	-30°C to +60°C		
38	Surge Protection	≥ 2 kV or higher		
39	Compliance	CE, FCC, RoHS or equivalent		
40	Housing Material	Metal/Composite/Industrial-grade plastic		
41	Weight	Any Standard (Approx. 0.3kg - 0.6kg)		
42	Dimensions	Standard Dome form factor		
43	Warranty	2 Years of Warranty [Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
44	Mandatory Document	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter: [Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
2 MP bullet Camera				
1	Item	2 MP Outdoor Network Bullet Camera (Dual Light)		
2	Brand	Any [Bidder Must Specify Brand]		
3	Model	Any [Bidder Must Specify Model]		

4	Origin	Any [Bidder Must Specify]		
5	Max Resolution	Minimum 2 MP (1920 × 1080)		
6	Image Sensor	1/2.7", 1/2.8", or 1/2.9" Progressive Scan CMOS		
7	Minimum Illumination	Color ≤ 0.005 Lux (F1.6, AGC ON); 0 Lux with Light ON		
8	Day/Night	IR-cut filter with auto switch (ICR)		
9	Shutter Speed	Auto/Manual, 1 – 1/100,000 s		
10	Adjustment Angle	Pan: 0° to 360°, Tilt: 0° to 90°, Rotate: 0° to 360° (Adjustable Bracket)		
11	S/N Ratio	≥ 52 dB		
12	Wide Dynamic Range	Digital WDR (DWDR)/True WDR or better		
13	Focal Length Options	2.8 mm or 4.0 mm fixed lens		
14	Aperture	F1.6/F2.0 or better		
15	Field of View	Horizontal ≥ 100° (for 2.8mm model)		
16	Detect Distance	Detect ≥ 44 m; Observe ≥ 17 m; Recognize ≥ 8.5 m; Identify ≥ 4 m		
17	Supplemental Light	Dual Light Support (Infrared + Warm/White Light)		
18	IR/Light Distance	≥ 30 m		
19	Video Compression	H.265 / H.265+ / H.264 or equivalent		
20	Frame Rate	1080p @ 25/30 fps minimum		
21	Bit Rate	128 Kbps – 6 Mbps (or similar)		
22	Streams	Dual stream support		
23	ROI	Supported (1 fixed region or more)		
24	Privacy Mask	≥ 4 areas		
25	Image Settings	White Balance; 3D DNR; BLC / HLC; Defog; Image Flip		
26	Smart Features	Motion Detection, Human Body Detection (or similar classification)		
27	Image Flip	Vertical / Horizontal / 180°		
28	Audio Compression	G.711A / G.711U (if audio supported)		
29	Built-in Microphone	Supported (Built-in)		
30	Edge Storage	MicroSD support up to 256 GB (Standardized from 512GB to allow more bids)		
31	Protocols	IPv4, TCP/IP, UDP, RTSP, HTTP, NTP, DHCP		
32	Integration	ONVIF (Profile S/G/T), API		
33	User Access	≥ 20 users		
34	Power Supply	DC 12V ± 25% and PoE (IEEE 802.3af)		
35	Power Consumption	≤ 9.0 W		
36	Ingress Protection	IP67 (Dust and Water Resistant) or better		
37	Housing Material	Metal or Industrial-grade Metal+Plastic Composite		
38	Operating Temperature	-30°C to +60°C or higher		
39	Surge Protection	≥ 2 kV (Maintained high spec for indoor safety)		
40	Compliance	CE, FCC, RoHS or equivalent		
41	Weight	Approx. 0.2 kg - 0.5 kg		
42	Dimensions	Standard Bullet form factor		
43	Warranty	2 Years of Warranty [Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
44	Mandatory Document	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter: [Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
4 MP CCTV Camera				
1	Item Name	4 MP Bullet Network Camera		
2	Brand	Any [Bidder Must Specify Brand]		
3	Model	Any [Bidder Must Specify Model]		
4	Origin	Any [Bidder Must Specify]		
5	Resolution	Minimum 4 MP (2560 × 1440)		
6	Image Sensor	1/2.7" or 1/2.8" or 1/2.9" Progressive Scan CMOS		
7	Min. Illumination	Color ≤ 0.01 Lux (F2.0 or better, AGC ON); 0 Lux with IR		
8	Day/Night	IR-cut filter with auto switch (ICR)		
9	Shutter Speed	Auto/Manual, 1/3 – 1/100,000 s		
10	Adjustment	Pan: 0°–360°, Tilt: 0°–90°, Rotate: 0°–360°		
11	S/N Ratio	≥ 52 dB		
12	WDR	Digital WDR (DWDR) or 120dB True WDR		
13	Lens	2.8 mm or 4.0 mm fixed lens		
14	FOV	Horizontal ≥ 90° (for 2.8mm)		
15	Detect Dist.	≥ 58 m (for 2.8 mm)		
16	Observe Dist.	≥ 23 m (2.8 mm)		
17	Recog. Dist.	≥ 11 m (2.8 mm)		
18	Identify Dist.	≥ 5 m (2.8 mm)		

19	IR Range	≥ 30 m		
20	Compression	H.265 / H.264 / H.265+ or equivalent		
21	Frame Rate	4 MP @ 20 fps (or better)		
22	Bit Rate	32 Kbps – 8 Mbps (or similar)		
23	Streams	Dual stream support		
24	Audio	Built-in Microphone Supported		
25	Audio Codec	G.711A / G.711U / PCM / AAC		
26	Edge Storage	MicroSD support up to 256 GB (or higher)		
27	Protocols	TCP/IP, HTTP, DHCP, RTSP, NTP, ONVIF (S/T)		
28	User Access	≥ 20 users		
29	Power	DC 12V ±25% and PoE (IEEE 802.3af)		
30	Consumption	≤ 9.0 W		
31	Protection	IP67 (Water/Dust Proof)		
32	Material	Metal and Plastic (or Metal)		
33	Weight	Any Standard (Approx. 0.3kg - 0.5kg)		
34	Dimensions	Standard Bullet form factor		
35	Warranty	2 Years of Warranty[Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
36	Mandatory Document	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter:[Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
Monitor 55"(Smart TV)				
1	Brand	Any [Bidder Must Specify Brand]		
2	Model	Any [Bidder Must Specify Model]		
3	Origin	Any [Bidder Must Specify]		
4	Product Type	Professional Grade 4K LED Monitor		
5	Panel Size	Minimum 55-inch		
6	Resolution	3840 × 2160 (4K UHD)		
7	Refresh Rate	60Hz or better		
8	Response Time	Maximum 8ms		
9	Color Support	Minimum 1.07 billion colors		
10	Brightness	Minimum 300 cd/m ²		
11	Contrast Ratio	Minimum 1200:1		
12	Backlight	LED or better		
13	Pixel Pitch	Approx. 0.315 × 0.315 mm		
14	Viewing Angle	178° (H) / 178° (V)		
15	Connectivity	Minimum 2 × HDMI, 1 × DP ports(optional)		
16	Audio	Min Built-in 2 × 10W speakers		
17	Mounting	VESA standard (200/300mm × 200/300mm)		
18	Continuous Operation	24/7 operational capability		
19	Additional Features	Automatic color & image enhancement, ultra-narrow bezel, slim profile, stable structure		
20	Weight	Net weight Max approx. 19 kg; Gross weight Max. approx. 25 kg		
21	Warranty	2 Years of Warranty[Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
22	Mandatory Document	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter:[Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
UTP indoor CAT 6 cable				
1	Brand	Any [Bidder Must Specify Brand]		
2	Model	Any [Bidder Must Specify Model]		
3	Origin	Any [Bidder Must Specify]		
4	Category	UTP Category 6(Cat 6)		
5	Test Standard	Fluke Permanent Link Test (90 m) Pass		
6	Packing Length	305m ± 1m per box (Pull-box or Reel-in-box)		
7	Rip-Cord	Yes		
8	Separator	Yes		
9	Temperature Range	-20°C to 70°C (or better)		

10	Conductor Material	100% Solid Bare Copper (BC).		
11	Conductor Size	23 AWG		
12	Bandwidth	Minimum 250 Mhz		
13	Nominal O.D.	0.56 ± 0.01 mm		
14	Insulation	HDPE, Diameter: 1.00 ± 0.05 mm		
15	Sheath Material	PVC(Indoor use)		
16	Sheath External O.D.	6.0 ± 0.4 mm		
17	Sheath Thickness	0.5 ± 0.15 mm		
18	Sheath Color	White (or as requested)		
19	Surface Printing	Printed with Brand, Cat6, Cable Specs, and Meter Marking .		
20	Certifications	UL / CE / RoHS / ISO/IEC 11801		
21	Warranty	2 Years of Warranty[Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
22	Mandatory Document	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter:[Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
UTP Outdoor CAT 6 cable				
1	Brand	Any [Bidder Must Specify Brand]		
2	Model	Any [Bidder Must Specify Model]		
3	Origin	Any [Bidder Must Specify]		
4	Product Name	Outdoor UTP Category 6 (Cat 6) Cable		
5	Reference Standard	ISO/IEC11801, TIA-568-C.2		
6	Conductor Material	100% Solid Oxygen-Free Copper (OFC)		
7	Conductor AWG	23 AWG		
8	Test Standard	Fluke Permanent Link Test (90 m) Pass		
9	Sheath / Jacket	PE (Polyethylene) or HDPE		
10	Sheath Color	Black (UV / Sunlight Resistant)		
11	Waterproofing	Water Blocking Tape or Gel Filled		
12	Rip-Cord	Yes		
13	Ambient Temperature	-30°C to 75°C (or better)		
14	DC Resistance	≤ 9.5 Ω / 100m		
15	Insulation Material	HDPE (High-Density Polyethylene)		
16	Insulation Diameter	0.98 ± 0.09 mm		
17	Nominal O.D.	0.56 ± 0.05 mm		
18	Insulation Thickness	0.2 ± 0.02 mm		
19	Sheath Thickness	0.6 ± 0.05 mm		
20	Sheath External O.D.	6.5 ± 0.6 mm		
21	Sheath Tensile Strength	≥ 13.5 MPa (Sheath)		
22	Separator (Cross)	Yes (Polyethylene Cross-Filler)		
23	Packing Length	305m ± 1m per box (Pull-box or Reel-in-box)		
24	Certifications	CE, RoHS, ISO 9001		
25	Warranty	2 Years of Warranty[Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
26	Mandatory Document	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter:[Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
Storage				
1	Brand	Any [Bidder Must Specify Brand]		
2	Model	Any [Bidder Must Specify Model]		
3	Origin	Any [Bidder Must Specify]		
4	Product Type	Surveillance-Grade AI Hard Disk Drive		
5	Capacity	Minimum 8 TB		
6	Interface	SATA 6 Gb/s or better		
7	Form Factor	3.5-inch		
8	Spindle Speed	7200 RPM or above		
9	Cache	Minimum 256MB		
10	Recording Technology	CMR (Conventional Magnetic Recording)		
11	Workload Rate Limit	Minimum 300TB/year(or better)		
12	MTBF	Minimum 1.5 million hours		
13	Supported Workload	24/7 Surveillance, up to 64 HD cameras and 32 AI streams		
14	Reliability Features	Rotational Vibration (RV) Sensors		
15	Certifications	CE, FCC, RoHS, UL, RCM or equivalent		

16	Warranty	2 Years of Warranty[Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
17	Mandatory Document	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter:[Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
24 port Managed PoE switch				
1	Brand	Any [Bidder Must Specify]		
2	Model	Any [Bidder Must Specify]		
3	Origin	Any [Bidder Must Specify]		
4	Product Category	Enterprise-Class Layer 2+ Managed Switch		
5	Intended Use	Enterprise / Government LAN, CCTV, Wi-Fi, IP devices		
6	RJ45 Ports	24 × 10/100/1000 Mbps Ethernet ports		
7	SFP Ports	Minimum 4 × 10G SFP+ ports (Backward compatible with 1G)		
8	Combo Ports	Not required		
9	PoE Standard	IEEE 802.3af / 802.3at (PoE / PoE+)		
10	PoE Enabled Ports	24 PoE-enabled RJ45 ports		
11	Total PoE Budget	≥ 370 Watts		
12	PoE Watchdog	Supported		
13	Switching Capacity	≥ 128 Gbps		
14	Forwarding Rate	≥ 95 Mpps		
15	Jumbo Frame (MTU)	≥ 9,000 bytes, configurable		
16	VLAN	IEEE 802.1Q VLAN support, Voice VLAN, Surveillance VLAN, Static Routing		
17	Port Isolation	Supported		
18	Broadcast Storm Control	Supported		
19	PoE Management	Per-port PoE control and monitoring		
20	Management Protection	Password-protected access, Cloud Management, Web GUI, CLI		
21	MTBF	≥ 400,000 hours		
22	Operating Temperature	0°C to +50°C or better operating capacity		
23	Operating Altitude	Upto 5,000 m		
24	Surge Protection	≥ ±6 kV on service and power ports		
25	Power Input	AC power input with standard power cord		
26	Mounting	19-inch rack mountable		
27	Accessories	Rack brackets, screws, power cord included		
28	Package Weight	≤ 7 kg		
29	User Manual	Quick Start Guide included		
30	Warranty	Minimum 2 Years of Warranty[Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
31	Mandatory Document	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter:[Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
Wireless Access Point(AP)				
1	Brand	To be specified by bidder		
2	Model	To be specified by bidder		
3	Origin	To be specified by bidder		
4	Standard	Must support IEEE 802.11ax (WiFi 6) and be backward compatible with 802.11a/b/g/n/ac		
5	Radio Design	Dual-radio, dual-band (2.4 GHz and 5 GHz) supporting 4 spatial streams		
6	MIMO & OFDMA	2x2 MU-MIMO on both bands; Must support OFDMA for improved efficiency		
7	Throughput	Combined wireless data rate of at least 1774 Mbps		
8	Channel Width	2.4 GHz: Auto/20/40 MHz; 5 GHz: Auto/20/40/80 MHz		
9	Network Ports	Minimum 2 x 10/100/1000 Base-T (Gigabit Ethernet) ports		
10	Antenna	Integrated Omni-directional antennas with minimum 3dBi gain on both bands		
11	Power Supply	Must support IEEE 802.3af/at (PoE/PoE+) and DC 12V/1.5A local power		
12	Client Capacity	Support for Maximum 256 concurrent clients(Recommended 100 clients or more)		
13	Roaming	Must support 802.11k/v/r and Layer 2/Layer 3 Seamless Roaming		
14	Security	Support for WPA3-SAE, WPA2-PSK, and OWE (Enhanced Open)		

15	Management	Free Cloud Management (No license fee) with Mobile App support; Must support Mesh networking		
16	Certifications	CE, CB, RoHS, EMC (EN 55032/35), and EN 62368-1 (Safety) or equivalent		
17	Protection	IP41 Rating; Ethernet port surge protection of at least ± 2 kV		
18	Warranty	2 Years of Warranty[Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
19	Documents	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter:[Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
6U Rack				
1	Brand	Any [Bidder Must Specify Brand]		
2	Model	Any [Bidder Must Specify Model]		
3	Origin	Any [Bidder Must Specify]		
4	Item Name	6U Wall-Mount Network Cabinet		
5	Standards	ANSI/EIA RS-310-D, IEC297-2, DIN41494 (Part 1/7) or equivalent		
6	Mounting Standard	Standard 19-inch rack mounting compatible		
7	Application	LAN switches, Patch Panels, Router, and ISP Equipment		
8	Material	High-quality Cold-rolled steel (SPCC) or equivalent		
9	Surface Finish	Degreasing, phosphating, and powder-coated finish		
10	Color	Black or equivalent		
11	Ingress Protection	IP20 or better (designed for indoor use)		
12	Rack Height	6U (Standard Unit)		
13	Rack Width	600 mm (Standard)		
14	Rack Depth	450 mm (Standard for Wall Mount)		
15	Mounting Type	Wall-mount type		
16	Front Door	Toughened Glass Door with integrated security lock		
17	Side Panels	Removable side panels with lock provision for maintenance		
18	Static Load Capacity	Minimum ≥ 40 kg (Standard for 6U)		
19	Cooling	Minimum 1 x 120mm AC Cooling Fan factory-installed		
20	Ventilation	Slots provided on top and side panels for heat dissipation		
21	Cable Entry	Knock-out holes at top and bottom for cable entry		
22	Hardware Included	M6 cage nuts and screws included		
23	PDU	Minimum 1 x 6-Port PDU (Universal Sockets) with Switch		
24	Warranty	2 Years of Warranty[Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
25	Mandatory Docs	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter:[Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
27U Network Rack				
1	Brand	Any [Bidder Must Specify Brand]		
2	Model	Any [Bidder Must Specify Model]		
3	Origin	Any [Bidder Must Specify]		
4	Item Name	27U Floor Standing Network Cabinet (Rack)		
5	Standard	ANSI/EIA RS-310-D, IEC297-2, DIN41494; Part 1, DIN41494; Part 7		
6	Mounting Standard	19-inch rack mounting compatible		
7	Application	LAN, CCTV, server, router, switch, and telecom equipment		
8	Frame & Panel Material	Cold-rolled steel or equivalent		
9	Surface Finish	Powder-coated after degreasing and phosphating		
10	Color	Black (RAL 9004) or equivalent		
11	Ingress Protection	IP20 or equivalent (indoor use)		
12	Rack Width	≥ 600 mm		
13	Rack Depth	≥ 1000 mm		
14	Mounting Type	Floor Standing on Castors		
15	Front Door	Toughened Glass Door		
16	Door Opening Angle	≥ 180 degrees		
17	Side Panels	Removable side panels with lock provision		
18	Rear Access	Perforated (Mesh) Steel Door		

19	Static Load Capacity	≥ 600 kg		
20	Frame Structure	Rigid welded steel frame		
21	Passive Ventilation	Ventilation slots or perforations provided		
22	Fan Provision	Provision for installing cooling fans		
23	Cable Entry	Top and bottom cable entry with knock-out ports		
24	Cable Routing	Provision for vertical and horizontal cable management		
25	Mounting Hardware	M6 cage nuts and screws included		
26	Shelves	Included: 2 x Fixed Trays		
27	Feet / Castors	Heavy Duty Castors (Wheels) and Adjustable Feet Included		
28	Locking System	Keyed locks for doors and panels		
29	Operating Temperature	0°C to +50°C		
30	Operating Humidity	10% to 90% RH, non-condensing		
31	PDU	1 x 8-Port PDU (Universal Socket) with Switch included		
32	Warranty	2 Years of Warranty[Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
33	Mandatory Document	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter:[Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
Core Router				
1	Brand	Any [Bidder Must Specify Brand]		
2	Model	Any [Bidder Must Specify Model]		
3	Origin	Any [Bidder Must Specify]		
4	Device Type	High-Performance Cloud Managed Security Router		
5	Management	Free Public Cloud management + Web GUI + CLI or more		
6	Form Factor	1U 19-inch rack-mountable		
7	Throughput	Minimum 2.5 Gbps NAT Throughput		
8	Concurrent Users	>1200 concurrent users		
9	WAN Port	Minimum 1 × 10/100/1000 Mbps Ethernet		
10	LAN Port	Minimum 1 × 10/100/1000 Mbps Ethernet		
11	LAN/WAN Switchable Ports	Minimum 6 × 10/100/1000 Mbps ports		
12	Optical Ports	i) Minimum 1 × 1G SFP ports ii) Minimum 1 x 10G SFP+ Port (Mandatory for Uplink)		
13	Processor	Minimum Quad-Core Processor , 1.2 GHz or better		
14	Memory	≥ 2 GB RAM		
15	Flash Memory	≥ 8 GB EMMC + 8 MB SPIFLASH		
16	Hard Disk Drive	Min . 1 x SATA [Support internal Hard Disk (up to 1TB) for Log Storage]		
17	Internet Access	PPPoE, DHCP Client, Static IP		
18	IPv6	Supported		
19	VLAN	IEEE 802.1Q supported		
20	NAT	Source and Destination NAT supported		
21	SNMP	Supported		
22	Static Routing	Supported		
23	Dynamic Routing	RIP / RIPv2 / OSPFv2 supported		
24	Policy-Based Routing	Supported		
25	ECMP	Supported		
26	Firewall	Stateful firewall with ACL support		
27	Flow Control / DPI	Layer 7 Deep Packet Inspection (DPI) with Application-based Flow Control (block/limit Apps like YouTube/TikTok)		
28	Access Controller (AC)	Built-in Wireless Controller		
29	Web Filtering	Whitelist / Blacklist supported		
30	DoS Protection	SYN / UDP / ICMP flood protection or equivalent		
31	VPN Support	IPsec, L2TP, PPTP, OpenVPN (Up to 1,000 Tunnels)		
32	Encrypted VPN Throughput	≥ 600 Mbps		
33	User Authentication	Portal, Password, Voucher, SMS authentication		
34	Traffic Monitoring	User/application-level traffic monitoring		
35	Load Balancing	Multi-WAN Load Balancing and Link Backup		
36	Operating Temperature	0°C to +45°C or better		
37	Operating Humidity	10% to 90% RH (non-condensing)		
38	Power Input	100-240 V AC, 50/60 Hz		

39	Compliance	CE, FCC, IEC/EN 62368-1 or equivalent		
40	Included Items	Power cord, rack kit, console cable, manuals		
41	Warranty	2 Years of Warranty[Warranty to be covered by the Supplier/Bidder. Replacement/Repair must be handled by the Supplier.]		
42	Mandatory Document	i. Manufacturer Authorization Letter [Required from the OEM, explicitly confirming 2 Years of Warranty support for the quoted models.] ii. Warranty Commitment Letter:[Bidder must submit a letter on their letterhead confirming 2 years of support] iii. Datasheet Submitted [Original datasheet must be included.]		
Rigid PVC Ducts/Trunking				
1	Brand	To be specified by bidder		
2	Model	To be specified by bidder		
3	Country of Origin	To be specified by bidder		
4	Product Name	Cable Trunking / Cable Raceway		
5	Material	Rigid PVC		
6	Color	White or Suits on wall		
7	Type	Surface-mounted trunking system		
8	Standard / Compliance	IEC / EN or equivalent		
9	Fire Retardant	Self-extinguishing PVC (Flame retardant)		
10	Size	25x16mm, 38x25mm, 75x25mm, or As per requirements on field		
11	Length per Piece	Approx. 2 - 3 meter		
12	Cover	Removable snap-on cover		
13	Accessories	Corners, coupler, end cap, T-joint as required		
14	Installation	Wall/ceiling surface mounting with proper fasteners		
15	Warranty	1 Year of Warranty[Formal commitment on Bidder's letterhead]		
Installation & Training				
1	Installation and training	Includes Physical installation , Cabling , Network Configuration, Core Router Setup , Wireless AP , CCTV setup		