

SHEET-1

EPABX WORK

SR. NO	DESCRIPTION	QTY.	RATE	AMOUNT
01	SYNTEL DIGITAL NEOS 4 SLOT EPABX SYSTEM (MODEL: 96PORT) CONFIGURED FOR 4 ANALOG TRUNKS & 20 ANALOG EXTENSIONS, EXPANDABLE TO 48 EXTENSIONS, WITH 8 PORT AUTO ATTENDENT, LCR, BUILT IN EXTERNAL MUSIC SOURCE AND VOICE PROMPTS AND CALLER-ID	01		
02	KRONE MDF FOR 30 CONNECTIONS	01		
03	INSTALLATION, COMMISSIONING AND PROGRAMMING CHARGES	1 JOB		
04	TELEPHONE INSTRUMENTS			
	A) BEETEL BASIC TELEPHONE B17	12		
	B) PANASONIC SPEAKERPHONE WITH HEADSET CONNECTIVITY. KX-TS 880	1		
05	Stabilized UPS / Inverter supply to be provided by the contractor for backup in case of power failure.			

SHEET-2

CCTV WORK

A) NetworkVideoRecorder

Feature	Specification
IPCamerainput	16 Channel
Two-wayTalk	1ChannelInput,1ChannelOutput,RCA
Interface	HDMI,VGA
Resolution	3840 ×2160, 1920×1080, 1280×1024, 1280X720,1024X768
OnScreen Display	Cameratitle,Time,Cameralock,Motiondetection,Recording
Compression	SmarrH.265+/H.265/SmarrH.264+/H.264
Recording Resolution	5MPtoHD
Bandwidth	200Mbpsorhigher(20Mbpsorhigherper channel)
RecordMode	Manual,Schedule(Regular,MotionDetection,Alarm,IVS), Stop
VideoDetection	MotionDetection,MDZones:396(22×18),VideoLossandTampering
Feature	Specification
AlarmInput/ Output	16Channel/6Channel
Synchronous Playback	16 Channel
SearchMode	Time,Date,Alarm,MD,andExactSearch (accurateto second)
Playbac k Functio n	Play,Pause,Stop,Rewind,Fastplay,SlowPlay,NextFile,Previous File,NextCamera,PreviousCamera,FullScreen,BackupSelectio n, Digital Zoom
BackupMode	USBDevice/Network/eSATADevice
Networkinterface	1 RJ-45Port(10/100/1000Mbps)
Network protocols	HTTP,HTTPS,TCP/IP,IPv4/IPv6,UPnP,UDP,SMTP,NTP,DHCP, DNS, IP Filter, DDNS, FTP
Max.UserAccess	64 users
Interoperability	ONVIF2.4
InternalHDD	2 SATAIIIPorts,upto 6TBcapacityforeach HDD
Ports	2 USBPorts(USB3.0,2.0),eSATA,RS232,RS485
Installation	Rack-mounted
Certifications	CE,FCC,UL
Software	Necessarysoftwaretobe included
Preferredmake	Dahua,Hikvision,CPPLUS

SHEET-3

B) IPCamera–DomeNetworkCamera

Feature	Specification
ImageSensor	1/3" 2 MegapixelprogressiveCMOS
ScanningSystem	Progressive
S/NRatio	Morethan50dB
IRDistance	Distanceupto 20m
FocalLength	3.6 mm / 2.8 mm
Lens	3.6 mm / 2.8 mm
Compression	SmartH.265+/H.265
Resolution	Maximum4M(2688x1520)
Ethernet	RJ-45(10/100Base-T)
NoiseReduction	3DDNR
StreamingMethod	Unicast/Multicast
ManagementSoftware	Shouldbeprovided
PowerCompatibility	PoEShouldbesupported
Certifications	CE, UL, FCC
Preferredmake	Dahua,Hikvision,CPPLUS

C) IPCamera–BulletNetworkCamera

Feature	Specification
ImageSensor	1/3" 2 MegapixelprogressiveCMOS
ScanningSystem	Progressive
S/NRatio	Morethan50dB
IRDistance	Distanceupto30m
FocalLength	3.6 mm
Lens	3.6mm
Compression	SmartH.265+/H.265
Resolution	Maximum4M(2688x1520)
NoiseReduction	3DDNR
Ethernet	RJ-45(10/100Base-T)
StreamingMethod	Unicast/Multicast
ManagementSoftware	Shouldbeprovided
Powercompatibility	PoEShouldbesupported
Certifications	CE, UL, FCC
Preferredmake	Dahua,Hikvision,CPPLUS

SHEET-4

QUANTITY

SINo	Item	Qty	Unit
1	IPBased DomeCameraasper specification	11	Nos
2	IPBasedindoorBulletCameraasper specification	3	Nos
3	16ChannelNetworkVideoRecorderasper Specification	1	Nos
4	4 TB / 6TBSurveillanceharddisk	1	Nos
5	16 PortPoE10/100 unmanagedswitch	1	No
6	Supplyandfixingof19", 6U,600x550mmNetworkRackwithMounting Kit, cable manager, fan for cooling rack, Cable Manager,Cabletray,PDU- 4nos,FrontDooretc.withextralock and key. Preferred make: Netrack, Valrack, D-Link or equivalent	1	Nos
7	Accessories,connectors,etc.(ifany)	1	Lumpsu m
8	Testing,Installationcharge	1	Lumpsu m

Specifications of POE network switch.

Specification of 16 port POE network switch with 16 10/100 POE ports and 2 Gigabit copper uplink ports

- 1) It should be 16 X RJ-45 Gigabit Ethernet PoE Ports and 2 copper gigabit uplink Ports.
- 2) It should have switching capacity 56Gbps or higher or non-blocking architecture.
- 3) Switch should delivered 802.3at PoE+ and 802.3af PoE power to any of the RJ-45 ports.
- 4) The total power available for PoE switch should be 95W or higher.
- 5) Power input should be 100 to 240 VAC, 50/60 Hz, internal universal power supply.
- 6) Operating temperature should be -5 degree Celsius to +50 degree Celsius.
- 7) Certification: CE, FCC, BSMI, RoHS and cUL.
- 8) It should have broadcast, multicast, and unicast storm control to prevent overall systems performance.
- 9) It should support Traffic Segmentation to restrict traffic flow from a single or group of ports, to another group of ports.
- 10) Switch should support QoS (quality of service) IEEE 802.1P for traffic prioritization. It should support 8 queues per port.
- 11) Different type of VLAN like Port based, Auto Surveillance, Auto Voice, Asymmetric Vlan etc. should be available for configuration.

SHEET-5
AC WORK

BLUESTAR make Inverter VRF System					
1	Supply of BLUESTAR make VRF unit	QTY	UNIT	RATES	AMOUNT
a	VRF Condensing unit of following capacities				
i	14HP Side discharge	1	nos		
b	Supply of Indoor Units of following Configuration				
	4 WAY CASSATE AC				
i	1.5 TR	2	nos		
ii	2 TR	1	nos		
iii	2.5 TR	3	nos		
	HI WALL AC				
i	1 TR	1	nos		
B	ACCESSORIES				
a	SUPPLY OF CORDLESS REMOTE CONTROL	7	nos		
b	REFNETS	6	nos		
2	LOW SIDE SECTIONS (ANCILLARY WORK)				
	SECTION A1 : Low Side for BLUESTAR make VRF SYSTEM				
a	INSTALLATION OF 14 HP TOP DISCHARGE CONDENSING UNIT	1	Nos.		
i	installation of cassate ac	6	Nos.		
ia	installation of hi wall	1	Nos.		
ii	Supply & Installation of Hard Copper piping between Outdoor and Indoor Units with 16/13mm thick Nitrile rubber Insulation for Suction line and Liquid Line without insulation alongwith Support	80	MTR		
iii	Supply & Installation of PVC Drain piping with 6mm thick nitrile rubber insulation	60	MTR		
iv	Supply & Installation of power & Communication cable of between Indoor Unit and Outdoor.	70	MTR		
v	Pressure Testing, Vacuumizing, Commissioning and additional Gas Charging	1	Nos.		
vi	Supply & Installation of MS fabricated stand for Condensing unit	1	Nos.		
vii	Lifting and shifting of vrf condensing unit	1	Nos.		

NOTE: Power supply for Indoor and Outdoor will be Three Phase, 415 V, 50 Hz Power Supply to ODU .

Note:

- 1 All Civil and Masanory work in contractor scope.
- 2 The above quantities mention in boq are tentative. The Final billing will be at actual measurement
- 3 Incoming Power supply (1/3 phase) with MCB for the AC's is in contractor scope.
- 4 Any extra work will be as per instruction by an Architect on site.
- 5 Plz quote this sheet including all taxes as applicable.

SHEET 7

LIST OF APPROVED MAKES & BRNADS		
Sr.No.	Item	Make/Brand
1	Cement	Ultratek , Birla, ACC, Ambuja
2	Grouts	Laticrete
3	Tiles (Ceramic/ Glazed / Vitrified)	Orinda / kajaria/ nitco
4	Chemical (epoxy+ hardner) anchoring	As per specification (BASF.FOSROC)
5	Concrete Admixtures/Construction chemicals	MC baucheme,Fosroc, MYKSchlomborg, BASF,
6	CP brass plumbing Fittings	Jaguar/ Kolher
7	SS Hardware's	Hafele / Godrej / As per selection
8	Epoxy paints	As per specification(BASF/FOSROC)
9	Expansion fasteners	Hilti, Fischer,
10	Flushing cistern	Commander, Slimline
11	Glasses / Mirrors	Asahi Glass ,SaintGobain. Modifloat as per specification
12	Kitchen platform sink	Nirali,Frankey
13	M.S. doors	Srima, Shaktimate , Radiant,
14	Non Shrink Grout	ACC-Shrinkomp,Fosroc- Conbetra,Fairmate-Flowgrout,
15	Paints (Low VOC grade)	Asian,Nerolac, ICI, Berger,Dulex
16	Prelam boards for paneling , partitions	Novapan,Archidply,Greenply
17	PVC/ uPVC pipes/ cPVC pipes	Supreme,Prince,Finolex, Astral make
18	Reinforcement steel	TATA ,SAIL ,JINDAL,KANisk (Main producers quality steel, Rerolled steel will not be accepted .
19	Sanitary fixtures-WC,urinals, wash basins etc	Jaquar / Hindware / Parryware /
20	C.P.Jali	Camry,Chilly& Confirming to IS
21	Square-Rectangular tubes	Tata ONLY
22	Structural steel	Tata, SAIL , JINDAL
23	Water proofing compounds	BASF, MYK , PIDILITE, FOSROC,SIKA
24	Hollow block/Solid block/Paver block	Aeons/Light roof/ Local make but confirming to IS codes
25	Cment Board, E- board	Everest, Shera, Bison

26	Cork board	Amorim
27	Lacquered glass	Saint gobain
28	Acoustic baffles	Armstrong , matterwall
29	Toilet Partitions - Green Lam	Merino/Green lam
30	Modular glass partitions	ozone
31	Drywall partition system	Gyprock
32	HDF Laminated floor	Action Tesa, Armstrong
33	EPBAX	Syntel
34	Projector & projector screen	Optoma
35	LAN Wire	D Link
36	Toughened glass	Alfa glass Nashik
37	Toughened patch fitting	OZONE
38	Chair & sofa	Godraj

A. List of approved make for HVAC/ Electrical Works

S. No.	Details of Equipment / Material	Make / Manufacturer
1	HVAC	Blue star, Voltas, Hitachi, Daikin
2	PVC Conduit	Precision/AKG/ VIP / Prcsstit / polycab
3	Ceiling Junction Boxes	Home lite/ANCHOR / Prcsstit / polycab
4	Wires & cables	R.R./Havells/ Polycab
5	Modular Switches, Sockets etc	Legrand/Havells/L. & T. / Anchor
6	Lighting Fixtures	Philips/Wipro
7	M.C.B./RCCB/RCBO etc	Legrand/Havells/L&T
8	Distribution Boards	Same as Above
9	MCCB	Schneider/Legrand/Havells / L&T
10	Change Over Switches	H.P.L./A.B.B./Standard/ L. & T
11	End Termination accessories	Dowells/Usha/Brecco/Cosmos / Siemeans / L&T
12	Telephone Cables & accessories	Havells, Krone, Finolex, / Polycab
13	Fans/Exhaust fans	Crompton/Havells/USHA
14	DVR	Samsung, Honeywell, HIKVISION
15	Rg11, CAT5/CAT6 cables/Telephone wires	Legrand, Molex, D-Link, AMP
16	CCTV, Dome Camera	Honeywell, Hikvision
17	Hard Disk drive	Seagate, HIKVISION
18	Smoke/Heat/Optical Fire Detectors	Edward, Siemens, Apollo or other I.S.I. Equivalent.
19	Response Indicators, Hooters	Edward, Siemens or other ISI Approved.
20	Telephone Tag Block	Krone

B. List of approved make cabinets/ wood for Works

S. No.	Details of Equipment / Material	Make / Manufacturer
1	MDF. (Medium Density Fibre Board) – CONFIRMING TO IS : 12406 - 2003. (Density: 750 – 850 Kgs/m3) colour code follow as per Bank Norms.	CENTURY/GREENPLY/ ARCHIDPLY
2	PLYWOOD – BWP (Boiling Water Resistant, Termite Resistant & Borer Resistant) – CONFIRMING TO IS: 303.	CENTURY/GREENPLY/ ARCHIDPLY
3	FLUSH DOOR – CONFIRMING TO IS : 2202 (Part – 1) – 1991.	CENTURY/GREENPLY/ ARCHIDPLY
4	LAMINATE – CONFIRMING TO IS : 2046-1995.	CENTURY/GREENLAM/ ARCHIDPLY
5	Lipping & Moulding	First Class Teak Wood
6	Gypsum ceiling	Gypsum India, Saint - Gobain Gyproc india
7	Grid Ceiling	Armstrong, Dexune
8	GI Support system for False Ceiling	GYPSTEEL ULTRA
9	Adhesive	Fevicol SH.
10	Locks/Handles & all other hardware	Godrej/ Ozone/ Dorma
11	Glass	Modi/Asahi (Tata), Saint Gobain
12	Aluminium	Jindal/ Hindalco/ NALCO
13	Door Closer	OZONE/Dorma
14	Floor Spring	OZONE/GODREJ
15	Vertical Blinds	Vista/ Hunter Dugluse
16	SS Fitting & Fixtures (Handles/ Hinges/ all type Baskets etc)	Hettich/ Godrej/ Hafele
17	SS Sink	Nirali/ Kaff/ Hafele

Note: Any other item not mentioned but required at site will be as per the final approval of the Architect/ Bank.