

Subhead 17
Digital PABX & Internet System

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
17.1	<u>DIGITAL PABX SYSTEM</u>					
17.1.1	<u>6+8 LINE</u>					
	<p>Supply, installation, testing & commissioning of 6+8 line (extension capacity 24 line) digital PABX system.</p> <p>Basic unit : 6+8 line PABX system</p> <p>Hardware: (CPU card, T&T/ Land Line card, power supply unit, & casing)</p> <p>Software : System operating software & billing software.</p> <p>Features: Direct inward station access including necessary, AUTO / DISA (voice), CID (caller ID), card co-line card, etc.. built in billing system automatic fax / phone switching key telephone interface day / night service, total call report by extension, individual call report by extension, total call report by CO, individual call.</p> <p>Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified.</p> <p>Model & sample to be approved by the Engineer in charge.</p>	Each	18,038.00	18,033.00	18,017.00	18,017.00

17.1.2 **6+16 LINE**

Supply, installation, testing & commissioning of 6+16 line (extension capacity 24 line) digital PABX system.

Basic unit : 6+16 line PABX system.

Hardware : CPU card, T&T/ Land Line card, power supply unit & casing.

Software : System operating software & billing software.

[Handwritten signatures and initials in blue and black ink, including names like 'S', 'D', 'R', 'M', 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L', 'M', 'N', 'O', 'P', 'Q', 'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y', 'Z', 'AA', 'AB', 'AC', 'AD', 'AE', 'AF', 'AG', 'AH', 'AI', 'AJ', 'AK', 'AL', 'AM', 'AN', 'AO', 'AP', 'AQ', 'AR', 'AS', 'AT', 'AU', 'AV', 'AW', 'AX', 'AY', 'AZ', 'BA', 'BB', 'BC', 'BD', 'BE', 'BF', 'BG', 'BH', 'BI', 'BJ', 'BK', 'BL', 'BM', 'BN', 'BO', 'BP', 'BQ', 'BR', 'BS', 'BT', 'BU', 'BV', 'BW', 'BX', 'BY', 'BZ', 'CA', 'CB', 'CC', 'CD', 'CE', 'CF', 'CG', 'CH', 'CI', 'CJ', 'CK', 'CL', 'CM', 'CN', 'CO', 'CP', 'CQ', 'CR', 'CS', 'CT', 'CU', 'CV', 'CW', 'CX', 'CY', 'CZ', 'DA', 'DB', 'DC', 'DD', 'DE', 'DF', 'DG', 'DH', 'DI', 'DJ', 'DK', 'DL', 'DM', 'DN', 'DO', 'DP', 'DQ', 'DR', 'DS', 'DT', 'DU', 'DV', 'DW', 'DX', 'DY', 'DZ', 'EA', 'EB', 'EC', 'ED', 'EE', 'EF', 'EG', 'EH', 'EI', 'EJ', 'EK', 'EL', 'EM', 'EN', 'EO', 'EP', 'EQ', 'ER', 'ES', 'ET', 'EU', 'EV', 'EW', 'EX', 'EY', 'EZ', 'FA', 'FB', 'FC', 'FD', 'FE', 'FF', 'FG', 'FH', 'FI', 'FJ', 'FK', 'FL', 'FM', 'FN', 'FO', 'FP', 'FQ', 'FR', 'FS', 'FT', 'FU', 'FV', 'FW', 'FX', 'FY', 'FZ', 'GA', 'GB', 'GC', 'GD', 'GE', 'GF', 'GG', 'GH', 'GI', 'GJ', 'GK', 'GL', 'GM', 'GN', 'GO', 'GP', 'GQ', 'GR', 'GS', 'GT', 'GU', 'GV', 'GW', 'GX', 'GY', 'GZ', 'HA', 'HB', 'HC', 'HD', 'HE', 'HF', 'HG', 'HH', 'HI', 'HJ', 'HK', 'HL', 'HM', 'HN', 'HO', 'HP', 'HQ', 'HR', 'HS', 'HT', 'HU', 'HV', 'HW', 'HX', 'HY', 'HZ', 'IA', 'IB', 'IC', 'ID', 'IE', 'IF', 'IG', 'IH', 'II', 'IJ', 'IK', 'IL', 'IM', 'IN', 'IO', 'IP', 'IQ', 'IR', 'IS', 'IT', 'IU', 'IV', 'IW', 'IX', 'IY', 'IZ', 'JA', 'JB', 'JC', 'JD', 'JE', 'JF', 'JG', 'JH', 'JI', 'JJ', 'JK', 'JL', 'JM', 'JN', 'JO', 'JP', 'JQ', 'JR', 'JS', 'JT', 'JU', 'JV', 'JW', 'JX', 'JY', 'JZ', 'KA', 'KB', 'KC', 'KD', 'KE', 'KF', 'KG', 'KH', 'KI', 'KJ', 'KK', 'KL', 'KM', 'KN', 'KO', 'KP', 'KQ', 'KR', 'KS', 'KT', 'KU', 'KV', 'KW', 'KX', 'KY', 'KZ', 'LA', 'LB', 'LC', 'LD', 'LE', 'LF', 'LG', 'LH', 'LI', 'LJ', 'LK', 'LL', 'LM', 'LN', 'LO', 'LP', 'LQ', 'LR', 'LS', 'LT', 'LU', 'LV', 'LW', 'LX', 'LY', 'LZ', 'MA', 'MB', 'MC', 'MD', 'ME', 'MF', 'MG', 'MH', 'MI', 'MJ', 'MK', 'ML', 'MM', 'MN', 'MO', 'MP', 'MQ', 'MR', 'MS', 'MT', 'MU', 'MV', 'MW', 'MX', 'MY', 'MZ', 'NA', 'NB', 'NC', 'ND', 'NE', 'NF', 'NG', 'NH', 'NI', 'NJ', 'NK', 'NL', 'NM', 'NN', 'NO', 'NP', 'NQ', 'NR', 'NS', 'NT', 'NU', 'NV', 'NW', 'NX', 'NY', 'NZ', 'OA', 'OB', 'OC', 'OD', 'OE', 'OF', 'OG', 'OH', 'OI', 'OJ', 'OK', 'OL', 'OM', 'ON', 'OO', 'OP', 'OQ', 'OR', 'OS', 'OT', 'OU', 'OV', 'OW', 'OX', 'OY', 'OZ', 'PA', 'PB', 'PC', 'PD', 'PE', 'PF', 'PG', 'PH', 'PI', 'PJ', 'PK', 'PL', 'PM', 'PN', 'PO', 'PP', 'PQ', 'PR', 'PS', 'PT', 'PU', 'PV', 'PW', 'PX', 'PY', 'PZ', 'QA', 'QB', 'QC', 'QD', 'QE', 'QF', 'QG', 'QH', 'QI', 'QJ', 'QK', 'QL', 'QM', 'QN', 'QO', 'QP', 'QQ', 'QR', 'QS', 'QT', 'QU', 'QV', 'QW', 'QX', 'QY', 'QZ', 'RA', 'RB', 'RC', 'RD', 'RE', 'RF', 'RG', 'RH', 'RI', 'RJ', 'RK', 'RL', 'RM', 'RN', 'RO', 'RP', 'RQ', 'RR', 'RS', 'RT', 'RU', 'RV', 'RW', 'RX', 'RY', 'RZ', 'SA', 'SB', 'SC', 'SD', 'SE', 'SF', 'SG', 'SH', 'SI', 'SJ', 'SK', 'SL', 'SM', 'SN', 'SO', 'SP', 'SQ', 'SR', 'SS', 'ST', 'SU', 'SV', 'SW', 'SX', 'SY', 'SZ', 'TA', 'TB', 'TC', 'TD', 'TE', 'TF', 'TG', 'TH', 'TI', 'TJ', 'TK', 'TL', 'TM', 'TN', 'TO', 'TP', 'TQ', 'TR', 'TS', 'TT', 'TU', 'TV', 'TW', 'TX', 'TY', 'TZ', 'UA', 'UB', 'UC', 'UD', 'UE', 'UF', 'UG', 'UH', 'UI', 'UJ', 'UK', 'UL', 'UM', 'UN', 'UO', 'UP', 'UQ', 'UR', 'US', 'UT', 'UU', 'UV', 'UW', 'UX', 'UY', 'UZ', 'VA', 'VB', 'VC', 'VD', 'VE', 'VF', 'VG', 'VH', 'VI', 'VJ', 'VK', 'VL', 'VM', 'VN', 'VO', 'VP', 'VQ', 'VR', 'VS', 'VT', 'VU', 'VV', 'VW', 'VX', 'VY', 'VZ', 'WA', 'WB', 'WC', 'WD', 'WE', 'WF', 'WG', 'WH', 'WI', 'WJ', 'WK', 'WL', 'WM', 'WN', 'WO', 'WP', 'WQ', 'WR', 'WS', 'WT', 'WU', 'WV', 'WW', 'WX', 'WY', 'WZ', 'XA', 'XB', 'XC', 'XD', 'XE', 'XF', 'XG', 'XH', 'XI', 'XJ', 'XK', 'XL', 'XM', 'XN', 'XO', 'XP', 'XQ', 'XR', 'XS', 'XT', 'XU', 'XV', 'XW', 'XX', 'XY', 'XZ', 'YA', 'YB', 'YC', 'YD', 'YE', 'YF', 'YG', 'YH', 'YI', 'YJ', 'YK', 'YL', 'YM', 'YN', 'YO', 'YP', 'YQ', 'YR', 'YS', 'YT', 'YU', 'YV', 'YW', 'YX', 'YZ', 'ZA', 'ZB', 'ZC', 'ZD', 'ZE', 'ZF', 'ZG', 'ZH', 'ZI', 'ZJ', 'ZK', 'ZL', 'ZM', 'ZN', 'ZO', 'ZP', 'ZQ', 'ZR', 'ZS', 'ZT', 'ZU', 'ZV', 'ZW', 'ZX', 'ZY', 'ZZ']

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Features : Direct inward station access including necessary, AUTO / DISA (voice), co-line card, CID (caller ID) etc. built in billing system automatic fax / phone switching key telephone interface day / night service, total call report by extension, individual call report by extension, total call report by CO, individual call.

Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified.

Model & sample to be approved by the Engineer in charge

Each	27,240.00	27,236.00	27,220.00	27,220.00
------	-----------	-----------	-----------	-----------

17.1.3 6+32 LINE

Supply, installation, testing & commissioning of 6 +32 line (extension capacity 48 line) digital PABX system.

Basic unit : 6+32 line PABX system.

Hardware : CPU card, T&T/ Land Line card, power supply unit & casing.

Software : System operating software & billing software.

Features: Direct inward station access. including necessary, AUTO / DISA (voice), co-line card, CID (caller ID) etc.. built in billing system automatic fax / phone switching key telephone interface day / night service, total call report by extension, individual call report by extension, total call report by CO, individual call.

Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified.

Model & sample to be approved by the competent authority.

Each	38,284.00	38,279.00	38,263.00	38,263.00
------	-----------	-----------	-----------	-----------

17.1.4 8+48 LINE

Supply, installation, testing & commissioning of 8+48 line (extension capacity 16+120 line) digital PABX system.

Handwritten signatures and initials are present at the bottom of the page, including a large signature on the left and several smaller ones on the right.

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Basic unit : 8+48 line PABX system.

Hardware : CPU card, T&T/ Land Line card, power supply unit & casing.

Software : System operating software & billing software.

Features: Direct inward station access. including necessary, AUTO / DISA (voice), co-line card, CID (caller ID) etc.. built in billing system automatic fax / phone switching key telephone interface day / night service, total call report by extension, individual call report by extension, total call report by CO, individual call.

Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified.

Model & sample to be approved by the competent authority.

Each	121,478.00	121,473.00	121,457.00	121,457.00
------	------------	------------	------------	------------

17.1.5 16+120 LINE

Supply, installation, testing & commissioning of 16+120 line (extension capacity 240 line) digital PABX system.

Basic unit : 16 + 120 line PABX system.

Hardware : CPU card, T&T/ Land Line card, power supply unit & casing.

Software : System operating software & billing software.

Features : Direct inward station access including necessary, DISA (voice), co-line card, CID etc.. built in billing system automatic fax / phone switching key telephone interface day / night service, total call report by extension, individual call report by extension, total call report by CO, individual call.

Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified. Model & sample to be approved by the Engineer in charge.

Each	419,896.00	419,891.00	419,875.00	419,875.00
------	------------	------------	------------	------------

17.1.6 16+208 LINE

[Handwritten signatures and initials are present below the section header, including a large signature on the left and several smaller ones across the bottom.]

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Supply, installation, testing & commissioning of 16+208 line (extension capacity 32+960 line) Digital hybrid Real IP PABX system.

Basic unit : 16 + 208 line PABX system.

Hardware : CPU card, T&T/ Land Line card, power supply unit & casing.

Software : System operating software & billing software.

Features : Direct inward station access including necessary, DISA (voice), co-line card, CID etc.. built in billing system automatic fax / phone switching key telephone interface day / night service, total call report by extension, individual call report by extension, total call report by CO, individual call, DID, ISDN connectivity, E&M, UCD, TVP, IP Switching, TDM switching, VoIP, XDP, CPC signal detection etc.

Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified. Model & sample to be approved by the Engineer in charge.

Each 567,142.00 567,137.00 567,121.00 567,121.00

17.2 **STANDARD MASTER TELEPHONE SET**

17.2.1 **8+16 button DSS control**

Supply & installation of standard master telephone set including display, date, time & 8+16 button DSS control.

Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified.

Model & sample to be approved by the competent authority.

For use in 3+8 line to 6+24 line.

Each 6,221.00 6,221.00 6,219.00 6,219.00

17.2.2 **16+24 button DSS control**

[Handwritten signatures and initials in blue and black ink are present below the section header, including a large signature on the left and several initials and marks across the bottom of the page.]

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
	Supply & installation of standard master telephone set including display, date, time & 16+24 button DSS control. Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified. Model & sample to be approved by the competent authority.					
17.2.2.1	For use in 8+32 line system	Each	9,289.00	9,289.00	9,286.00	9,286.00
17.2.2.2	For use in 16+120 line system	Each	11,743.00	11,743.00	11,740.00	11,740.00
17.2.3	<u>IP PABX Master Set</u> Supply & installation of standard IP master telephone set including display, date, time & DSS control. Standalone IP Centrex/PBX Functionality Integrated Voicemail System Auto Peer Discovery Automated Device Provisioning Class 4 Service IVR Support Customizable Distinctive Ring Tones Advanced SIP Support Support for Multiple Call Routes Route Failover Support Unified Messaging and Call Forwarding. Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified. Model & sample to be approved by the Engineer in charge.					
		Each	49,229.00	49,229.00	49,227.00	49,227.00
17.2.4	Supply & installation of IP master telephone set for the following specification & features as per direction of the Engineer in charge.					

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
	<p>Specifications ▪ Display - Primary (larger) : 5.0" color, 800 x 480 pixel - Secondary : 2.3" Color, 160 x 240 pixel ▪ 10 physical buttons on main screen, 6 physical buttons on secondary screen (dual LEDs - red, green) ▪ 4 softkeys ▪ 2 USB ports (1 USB A, 1 USB C) ▪ Wi-Fi & Bluetooth ▪ Hard buttons for phone, end call, messages, contacts, history, home, navigation cluster, headset, speaker, volume, mute ▪ LEDs for speaker, mute, headset, message, history ▪ All 96 buttons are accessible, without a physical expansion module (on main screen, or secondary screen) ▪ J100 Expansion Modules Support - Secondary screen is the first effective Expansion Module - 2 hardware J100 Expansion Modules ▪ Wideband audio in handset and headset ▪ SuperWideBand RJ9 Headset ▪ Full duplex speakerphone .</p>	Each	66,203.00	66,203.00	66,200.00	66,200.00

17.3 SINGLE LINE TELEPHONE SET

17.3.1 NORMAL USE

Supply, installation, testing & commissioning of single line telephone set for normal use with provision volume up+down, redial, flash etc.. complete.

Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified. Model & sample to be approved by the Engineer in charge.

Each 1,558.00 1,558.00 1,556.00 1,556.00

17.3.2 EXCLUSIVE USE

17.3.2.1 Supply, installation, testing & commissioning of single line telephone set for executive use with provision volume up+ down, redial, flash etc.. including display with CID system (Min 30 Stations) complete.

Handwritten signatures and initials in blue and black ink are present at the bottom of the page, including a large signature on the left and several smaller ones on the right.

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
	Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified. Model & sample to be approved by the Engineer in charge.	Each	2,663.00	2,663.00	2,660.00	2,660.00
17.3.2.2	Supply, installation, testing & commissioning of single line telephone set for executive use with provision volume up+ down, redial (Min 20 stations), flash, one touch dial (Min 10 stations), phonebook (Min 50 numbers) etc. including display with CID system (Min 50 stations) complete. Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified. Model & sample to be approved by the Engineer in charge.	Each	4,012.00	4,012.00	4,010.00	4,010.00
17.3.3	Supply, installation, testing & commissioning of IP Proprietary telephone set for executive use with provision volume up+ down, redial, flash, full duplex speaker, 2 Ethernet port, co button etc.. including display with CID system complete. Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified. Model & sample to be approved by the Engineer in charge.	Each	9,289.00	9,289.00	9,286.00	9,286.00
17.3.4	Supply, installation, testing & commissioning of IP PABX telephone set for executive use with following features					

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Form Factor ▪ All Glass, no visible buttons, volume buttons on the side; Small footprint— excellent use of desktop space ▪ Optional handset (corded or cordless Bluetooth handset with a magnetic switch hook) ▪ Hinged stand for smooth multi-angle positioning; Desk stand or a wall-mount stand Display, Display size & Orientation 8"; Portrait ,Display resolution: 1280 x 800 pixel, Capacitive Touch with 24-bits color depth Touch Screen , Audio codecs: Wideband audio available on all transducers, handset, headset, and handsfree. Supported codecs: G.722, G.711, G.729, G.726, Opus Microphones 4 Wideband audio Buttons & Status Indicators ▪ No mechanical dial-pad ▪ Message Waiting Indicator Connectors / Ports Headphone connector ports ▪ 3.5 mm headset connector ▪ RJ9 headset connector for a high-quality wired headset Supported headsets ▪ Wideband Bluetooth headsets ▪ 3.5 mm headsets ▪ RJ9 headsets ▪ USB headsets HDMI Micro HDMI 2.0 port to extend display Video codecs Support the H.264 codec with the following encoding profiles:

▪ High Profile AVC ▪ Baseline Profile AVC Handset ▪ 1x Handset cradle connector USB 3.0 Type-C
 General purpose port: USB flash drive for data transfer to and from the device. Support is limited to USB flash drives with up to 32 GB of storage. Multi-port USB hub, USB headset, Mouse, Keyboard, USB Camera, Android devices (Support is only limited to charging the Android device. Data transfer is not supported). ▪ Up to 900 mA if using Class 4 (802.3at) PoE switch ▪ Up to 100 mA if using Class 3 PoE switch Memory ▪ 32 GB flash memory ▪ 2 GB of RAM

Each 91,355.00 91,354.00 91,350.00 91,350.00

17.3.6 Supply, installation, testing & commissioning of IP Phone and Corded Handset kit for executive use with following features

[Handwritten signatures and initials in blue and black ink are present below the text, including names like 'Rafiq', 'Munir', and 'Rafiq' with various scribbles.]

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Specifications: Form Factor ▪ Combination of a mechanical keypad and a glass display, volume buttons on the front; Small footprint— excellent use of desktop space ▪ Optional handset (corded or cordless Bluetooth handset with a magnetic switch hook) ▪ Hinged stand for smooth multi-angle positioning; Desk stand or a wall-mount stand Display. Display size & Orientation- 5"; Landscape. Display resolution 720 x 1280-pixel, Capacitive Touch with 24-bits color depth Touch Screen, Audio Codecs: Wideband audio available on all transducers, handset, headset, and handsfree.

Supported codecs: G.722, G.711, G.729, G.726, Opus Microphones -4 Wideband audio Buttons & Status Indicators ▪ Mechanical dial-pad available ▪ Message Waiting Indicator Connectors / Ports Headphone connector ports ▪ 3.5 mm headset connector ▪ RJ9 headset connector for a high-quality wired headset Supported headsets ▪ Wideband Bluetooth headsets ▪ 3.5 mm headsets ▪ RJ9

headsets ▪ USB headsets HDMI Micro HDMI 2.0 port to extend display Video codecs Support the H.264 codec with the following encoding profiles: ▪ High Profile AVC ▪ Baseline Profile AVC Handset ▪ 1x Handset cradle connector USB 3.0 Type-C General purpose port: USB flash drive for data transfer to and from the device.

Each 62,113.00 62,112.00 62,108.00 62,108.00

17.4 **EXTENSION LINE CARD**

Supply, installation, testing & commissioning of extension (24 line) card with caller id compatible to the existing one.

Suitable for use in tropical country like Bangladesh complete with required accessories and in conformity to specified codes & specification of international standards & CE / UL / CSA certified. Model & sample to be approved by the Engineer in charge.

Each 35,584.00 35,584.00 35,584.00 35,584.00

17.5 **IP PABX Software**

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Supply, installation, testing & commissioning of IP PABX software for the following specification & features as per direction of the Engineer in charge.

Free PBX web-based interface for managing phone system. Includes enterprise phone system features, such as IVRs, conferencing, dial by name directory, call queues, voicemail, and more. Low-cost calling through SIP trunking or VoIP providers. Use any SIP-based IP phone or a softphone. Use D-Series IP phones for easy setup and advanced features. Connect traditional phones and lines with Digium telephony cards or gateways. Operating system included. Capacity 50-800 users.

Each 423,945.00 423,945.00 423,945.00 423,945.00

17.6 **IP-PABX Communications Server**

Supply, installation, testing & commissioning of IP-PABX Server under the following specifications & features as per direction of the Engineer in charge

Technical Specifications:

The system should be a converged communication System with ability to run TDM and IP on the same platform using same software load based on Linux OS and server and Gateway architecture.

For seamless integration of all the offered IP PBX System components like IP PBX, Voice Gateway, Voice Mail, IP Phones and Operator Phone must be from the same OEM. The IP PBX system should support contact center application in future and should be from the same OEM.

System shall be non-blocking and open standard (based on H.323 and SIP). The call control system should be fully redundant solution.

The Solution should be capable of supporting at least 700 users from day 1 and expandable up to 2000 user in future.

The systems should be able to integrate with Elevator/Lift Phone (Analog/SIP).

The system should be capable of deployment on virtualized platforms like VMWare/Hyper-V etc..

[Handwritten signatures and initials in blue and black ink at the bottom of the page]

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

The OEM must be in leaders' quadrant in latest Gartner Magic Quadrant for UC report. Documentary evidence for the same should be provided.

System should provide call control, mobility, IM and presence, Web-Collaboration, Messaging and centralized licensing.

The system should support standards-based multi-site networking, using QSIG, H.323 trunks or advanced networking, to interoperate with other PABX's, allowing feature transparency.

Voice CODEC support G.711, G.729, G.729a & G.722 or any less utilization bandwidth across WAN and LAN

Video CODEC: H.264 or Equal

System should have built-in SIP and H.323 gatekeeper functionality without the need to put any additional hardware

System should support SIP trunking to Internet Telephony Service Providers, allowing non-SIP phones to make SIP calls

The system should support at least 30 remote sites on the same platform through gateways.

The system should provide complete inbuilt encryption capabilities or features without any external firewall, with the ability to encrypt all traffic (media and call control signaling) between IP phones, soft phones, call controllers and all other associated endpoints via a strong encryption algorithm like IPSec or SRTP etc..

System should be able to provide centralized voicemail with the option of Distributed centralized voicemail in case of connectivity failure.

The system should support BRI/ PRI/ T1/ E1/Analog/IP/SIP Trunks.

The communication server should offer BHCC (Busy Hour Call Completion) of at least 7200 per server to ensure superior traffic handling capacities.

[Handwritten signatures and scribbles in blue and black ink at the bottom of the page.]

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

The offered system should be modular in design. The architecture of IP PBX should be capable of seamless migration to its maximum capacity by simply adding licenses/peripheral cards on the set of control server without compromising on any functions/ features of this system or any degradation of service.

The system should be able to provide hybrid end points i.e. both IP and TDM. They should also provide support for 100% TDM endpoints.

The proposed communication system should have a highly secured, encrypted IP supporting hybrid Trunks e.g. Analog CO, Digital Trunks (BRI and PRI), IP Trunks (H.323/SIP)

System should have in built-in DHCP Server, which should be able to give IP Addresses to the endpoints.

System should support built-in Remote access server (RAS) functionality.

System should support Diffserv for QoS (Quality of service) for the voice packets traveling over data networks

System should support standards-based CTI integration with 3rd party applications

System should support WebRTC based application for Web Collaboration users for Windows and Mac OS

Should support Active Directory integration for directory synchronization and user authentication.

The offered system should have a valid TEC approval. TEC approval certificate copies for ISDN connectivity should be enclosed along with the offer.

DESIRED FEATURES & FACILITIES OF IP PBX:

The offered solution should provide the following features as a part of its telephony functions.

Call Coverage

Call Forwarding

Call Hold

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

- Call Intrude
- Call Park
- DND
- Ring Back When Free
- Suspend Call Waiting
- Distinctive and Personalized Ringing
- Toggle Calls
- Account Codes
- Call Barring
- Bridged Appearance
- Group Paging
- Hot Desking
- Mobile Twinning
- Multiple Appearance Directory Number (MADN)
- Intrusion Warning Tone
- Alternate Route Selection
- Flexible numbering Schemes
- Time of Day and Date Routing of Calls
- Call Recording
- PIN Restricted Calling
- Time Profiles
- Queue announcements
- Call Detail Recording
- SMDR (Station Messaging Detail Record)
- Fax on demand integration
- Station Call – User can dial any extension anywhere in central location and other distributed location by dialing simple extension number.

Support Tone dialing from an extension.

[Handwritten signatures and notes in blue and black ink, including 'tu', 'R.R.', 'S.P.', and various initials.]

Item No.	Description of items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Day/Night Trunk Control – To reduce cost and improve system security it should be possible to restrict the access to certain trunks depending on time of day.

Distinctive Ringing – To provide audibly different ringing patterns between internal, external and special feature calls.

Flexible numbering plan – Support up-to 2-15 Digit for an extension number and allow phone number assigned to a station to a station to be changed through software.

System Abbreviated dialing - To have the ability to store a list of frequently called numbers that will be available on a system wide basis to all users.

The system should support internal MOH (Music on Hold), which should be uploaded using the .Wav file and should have an audio input port for external MOH connectivity.

CLI (Caller Line Identification) facility (CLIP/CLIR) - Calling Numbers (internal & external) should be displayed on all Analog extensions (FSK support phone).

Web collaboration for desktop and application collaboration, whiteboarding and document sharing. It should be possible to escalate from an audio call to web collaboration. It should provide a document library possible to upload documents, presentations and pictures to a document library for quickly sharing during a web collaboration session.

Terminal Support

System should support the following type of terminals:

Analog Phones

Digital Phones

IP Hardphones

IP/SIP Softphones

Video Hard/Softphone

Wireless IP Phones (802.a/b/g/n)

[Handwritten signatures and marks in blue and black ink are present at the bottom of the page, including a large signature on the left and several smaller ones and initials on the right.]