

6.2 List of Required Equipment and Technical Specification

List of Equipment

Supply, installation, testing, balancing and commissioning of digital transmitter, antenna system, UPS and allied equipment for 16 stations on turn-key basis.

Important Note:

Any item (1+1) with auto change over that means, 02 (two) identical equipment with integrated automatic change over system.

For Lot 01

Item No.	Description	Qty	Unit
1.0	Headend system		
1.1	Headend system for Headquarter (Dhaka)		
1.1 (1.1.1)	MPEG Encoder (1+1) with auto change over	1	Set
1.1 (2.0.0)	Multiplexer		
1.1 (2.1.1)	MPEG Multiplexer (1+1) with auto change over	2	set
1.1 (3.0.0)	T2 Gateway		
1.1 (3.1.1)	T2 Gateway (1+1) with auto change over system.	2	set
1.1 (3.2.1)	ASI/IP Redundancy Switch for Digital TV Signal	1	set
1.1 (4.0.0)	System Management & Control		
1.1 (4.1.1)	System Controller including necessary hardware, OS.	1	set
1.1 (4.2.1)	KVM Drawer	1	set
1.1 (5.0.0)	Peripherals (IP base network)		
1.1 (5.1.1)	48x48 Frame Router (IP base network)	1	set
1.1 (5.1.2)	Control Panel for quoted Frame Router (IP base network)	1	set
1.1 (5.2.1)	Ethernet Switch (48 Ports) for Video Data	4	set
1.1 (5.3.1)	1+1 Ethernet Switch (48 Ports) for Control Data	2	set
1.1 (5.4.1)	Patch Panel with Patch Cable 2X32 HD/SD ADC	2	set
1.1 (5.5.1)	Distribution Amplifier with EQ and Reclocking	1	Set
1.1 (6.0.0)	EPG System (Electronic Program Guide System)		
1.1 (6.1.1)	EPG TS Generator (1+1) with auto redundancy system	1	set

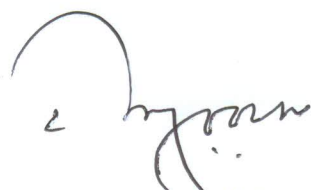

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1.1 (6.2.1)	EPG Data server (1+1) with auto redundancy system	1	set
1.1 (6.0.0)	Master Clock (GPS System)		
1.1 (6.1.1)	GPS Unit with GPS Antenna and Cable	2	sets
1.1 (6.2.1)	Change over switch	1	set
1.1 (7.1.1)	DVB-T/T2 Monitoring Probe	2	
1.1 (8.0.0)	Operation Console and Rack		
1.1 (8.1.1)	Operation Consoles	1	set
1.1 (8.1.1)	EIA Rack	2	sets
1.2	Headend system for 6 (Six) Regional Transmitting Station with Local insertion (Sylhet, Khulna, Barisal (Patuakhali), Rajshahi, Rangpur & Mymensingh)		
1.2 (1.1.1)	MPEG Encoder (1+1) with auto change over for Local program	6	lot
1.2 (2.0.0)	Re-Multiplexor		
1.2 (2.1.1)	MPEG Multiplexer (1+1) with auto change over	12	sets
1.2 (2.1.2)	T2 Gateway		
1.2 (2.1.3)	T2 Gateway (1+1) with auto change over system.	12	sets
1.2 (3.0.0)	Program Inserter		
1.2 (3.1.1)	Program Inserter	12	sets
1.2 (3.2.1)	ASI/IP Redundancy Switch for Digital TV Signal	6	set
1.2 (4.0.0)	Master Clock (GPS System)		
1.2 (4.1.1)	GPS Unit with GPS Antenna and Cable	12	sets
1.2 (4.2.1)	Change over switch	6	set
1.2 (5.0.0)	Network Management System (NMS)		
1.2 (5.1.1)	More PoW with NMS	6	set
1.2 (5.2.1)	Measurement and Telecontrol	6	set
1.2 (5.3.1)	L3 Switch (Router)	12	sets
1.2 (5.4.1)	L2 Switch (Hub)	12	sets
1.2 (6.0.0)	Peripherals		
1.2 (6.1.1)	ASI changeover Switch	12	sets
1.2 (6.2.1)	Distribution Amplifier with EQ and Reclocking	6	lot
1.2 (6.3.1)	Patch Panel with Patch Cable	6	lot

1.2 (7.0.0)	Analog simultaneous Broadcasting equipment		
1.2 (7.1.1)	Decoder	12	sets
1.2 (7.2.1)	LNB	6	set
1.2 (8.0.0)	Operation Console and Rack		
1.2 (8.1.1)	Operation Consoles	6	set
1.2 (8.2.1)	EIA Rack	18	sets
1.3	Headend system for 10 (Ten) Regional Transmitting Station (Dhaka, Chattogram, Thakurgaon, Natore, Brahmanbaria, Noakhali, Ukhiya, Rangamati, Jhenaidha & Satkhira)		
1.3 (1.0.0)	Master Clock (GPS System)		
1.3 (1.1.1)	GPS Unit with GPS Antenna and Cable	20	sets
1.3 (1.2.1)	Change over switch	10	sets
1.3 (2.1.1)	ASI/IP Redundancy Switch for Digital TV Signal	10	sets
1.3 (3.0.0)	Peripherals		
1.3 (3.1.1)	IP / ASI Switch	10	sets
1.3 (3.2.1)	Distribution Amplifier with EQ and Reclocking	10	sets
1.3 (3.3.1)	Patch Panel with Patch Cable	10	sets
1.3 (4.0.0)	Analog simultaneous Broadcasting equipment		
1.3 (4.1.1)	Decoder	20	sets
1.3 (4.2.1)	LNB	10	sets
1.3 (5.0.0)	Operation Console and Rack		
1.3 (5.1.1)	Operation Consoles	10	sets
1.3 (5.2.1)	EIA Rack	30	sets
2.0	Remote Network and Monitoring System (NMS)		
2.1	Headquarter		
2.1 (1.0.0)	NMS System		
2.1 (1.1.1)	NMS Software	1	sets
2.1 (1.2.1)	Server Hardware for NMS	1	sets
2.1 (1.3.1)	Client Terminal for NMS	1	sets
2.1 (1.4.1)	L3 Switch (Router)	2	sets
2.1 (1.5.1)	L2 Switch (Hub)	2	sets
2.1 (1.6.1)	Workstation	2	sets

2.1 (1.6.2)	42" LED display	2	sets
2.1 (1.6.3)	24" LED display	2	sets
2.1 (2.1.1)	SNMP Alarm Monitoring & Control Application	1	sets
2.1 (2.2.1)	Server for Control and Monitoring System	1	sets
2.1 (2.3.1)	Control and Monitoring Interface Box	1	sets
2.1 (3.0.0)	Operation Console and Rack		
2.1 (3.1.1)	Operation Consoles	1	sets
2.1 (3.2.1)	EIA Rack	1	sets
2.2	16 Sub Site		
2.2 (1.1.1)	Control and Monitoring Interface Box	16	sets
2.2 (2.0.0)	Network Management System (NMS)		
2.2 (2.1.1)	Measurement and Telecontrol	16	sets
2.2 (2.2.1)	VSWR and RF Power monitor	16	sets
2.2 (3.1.1)	L3 Switch (Router)	16	sets
2.2 (3.2.1)	L2 Switch (Hub)	16	sets
2.2 (3.3.1)	Workstation	16	sets
2.2 (3.4.2)	42" LED display	16	sets
3.0	Signal Distribution System		
3.1	Satellite link system for main signal distribution (Headquarter)		
3.1 (1.0.0)	DVB-S2 Uplink Modulator System		
3.1 (1.1.1)	DVB-S2 Modulator for Uplink at Headquarter	2	sets
3.1 (1.1.2)	1+1 Auto Change Over Switch (DVB-T2 MI Signal)	1	sets
3.1 (2.0.0)	TWT High Power Amplifier (HPA)		
3.1 (2.1.1)	TWT High Power Amplifier (HPA)	2	sets
3.2	Uplink Parabola Antenna System		
3.2 (1.1.1)	Waveguide	1	set
3.2 (2.0.0)	DVB-S2 Downlink System		
3.2 (2.1.1)	DVB-S2 De-Modulator	16	sets
3.2 (2.2.1)	LNB	20	sets
3.2 (3.0.0)	DVB-S2 IRD		
3.2 (3.1.1)	DVB-S2 IRD for Digital Broadcasting	16	sets

3.2 (3.2.1)	DVB-S2 IRD for Analog Broadcasting	32	sets
3.3	IP Network System for backup		
3.3 (1.0.0)	IP Gateway		
3.3 (1.1.1)	IP Gateway for Headquarter	2	set
3.3 (1.2.1)	IP Gateway for Transmitting stations	16	sets
4.0	Transmitting System		
4.1	DVB-T2 Digital Transmitting System		
4.1(1.1.1)	DVB-T2 Digital Transmitter with Band Pass Filter	5+ 12	sets
4.2 (2.1.1)	U-Link Patch Panel	16	sets
4.2 (3.1.1)	Dummy Load	16	sets
4.3	Monitoring System		
4.3(1.1.1)	DVB-T2 Receiver with Antenna	200	sets



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List of Equipment of Mandatory Spare Parts

For

Supply, installation, testing, balancing and commissioning of digital transmitter, antenna system, UPS and allied equipment for 16 stations on turn-key basis.

Important Note:

Any item (1+1) with auto change over that means, 02 (two) identical equipment with integrated automatic change over system.

The Specification of Mandatory Spare Parts is referring to the respective item number of technical specification mentioned in the below table:

For Lot 01

Item No.	Description	Qty	Unit
1.1 (1.1.1)	MPEG Encoder (1+1)	1	set
1.1 (2.1.1)	1+1 MPEG Multiplexer	1	set
1.1 (3.1.1)	T2 Gateway (1+1)	1	set
1.1 (3.2.1)	ASI/IP Redundancy Switch for Digital TV Signals	2	sets
1.1 (4.1.1)	System Controller	1	set
1.1 (4.2.1)	KVM Drawer	1	set
1.1 (5.1.1)	48x48 Frame Router (IP base network)	1	set
1.1 (5.1.2)	Control Panel for quoted Frame Router (IP base network)	1	set
1.1 (5.2.1)	Ethernet Switch (48 Ports) for Video Data	1	set
1.1 (5.3.1)	1+1 Ethernet Switch (48 Ports) for Control Data	1	set
1.1 (5.5.1)	Distribution Amplifier	2	sets
1.1 (6.1.1)	EPG TS Generator (1+1)	1	set
1.1 (6.1.1)	EPG Data Server (1+1)	1	set
1.1 (6.1.1)	GPS Unit	1	set
1.1 (6.2.1)	Change over switch	1	set
1.1 (7.1.1)	DVB-T/T2 Monitoring Probe	1	set
1.2 (5.3.1)	L3 Switch (Router)	2	sets
1.2 (5.4.1)	L2 Switch (Hub)	2	sets
2.2 (1.1.1)	Control and Monitoring Interface Box	2	Sets
2.2 (2.1.1)	Measurement and Telecontrol	2	Sets
2.2 (3.3.1)	Workstation	2	Sets
2.2 (3.4.2)	42" LED display	2	Sets
3.2 (2.1.1)	DVB-S2 De-Modulator	2	sets
3.3 (1.1.1)	IP Gateway	1	Set
4.1 (1.1.1)	Transmitter Exciter	2	sets
4.1 (1.1.1)	Full Transmitter control system	5	sets