

SATELLITE (DVB-S2) DIGITAL SET TOP BOXES MINIMUM TECHNICAL SPECIFICATIONS

A. STB BASIC FEATURES	OPERATIONAL EFFECT(S)
Auto and manual search modes	Basic features for broadcasting channel searching
Signal Quality Level indicator	Basic feature for signal level indication(green or yellow) for acceptable signal quality
Parental Control/Lock	Basic feature for controlling viewers
Electronic Program guide (EPG)	On screen electron guide
Full function standard IR remote control , using AA or AAA size battery.	Small size battery, hence an easier to handle (small in size) remote control
Languages: English and French	Availability language selection feature
PAL I/B/G auto conversion	

B: DVB-S2 SHALL HAVE THE FOLLOWING MINIMUM TECHNICAL SPECIFICATIONS		
RF TUNER & DVB-S2 CHANNEL	Input impedance	75Ω
	Modulation	Single Carrier QPSK with multiple streams
	Modulation schemes	QPSK, 8PSK, 16APSK,32APSK
	Frequency	950-2150 MHz
	Input signal level	-25 dBm to -65 dBm
	FEC coding	LDPC + BCH 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
	C/N range	-2.0 dB (QPSK) to +16 dB (32APSK)
	Signal Bandwidth	Depends on the transponder
	Interleaving	Bit-Interleaving
	Symbol rate	2~45Msps
MPEG TRANSPORT STREAM VIDEO AND AUDIO DECODING	Rotated constellations	2 bit/s/Hz to 5 bit/s/Hz, optimized for operation over non-linear transponders.
	Transport stream	MPEG-2 and MPEG-4 ISO/IEC13818-1
	Video decoding	MPEG-2/MPEG4 AVC(H.264)
	Aspect Ratio (image rate)	4:3, 16:9
	Frame frequency	25Hz (PAL)
	Video Resolution	720X576 (PAL) - standard definition, 1920X1080 (High definition)
	Audio decoding	MPEG-2 , MPEG-4
Audio mode	Stereo	
SCANNING FUNCTION	The STB should include a frequency scanning function to detect the availability of DVB-S2 signals	
	Be capable of program memory in case of cut off	

	It should be able to display the number of channel currently being scanned
	It should be able to display number of services located
	The decoder shall display details of its name, network ID, signal strength and quality
SOFTWARE	<p>EPG: current and next program information, 24x7 days schedule Auto/manual tuning 24-hourclock</p> <p>OTA: STB software's, EPG, CA features must be upgradable over the air Support receive mail Provides the instant and personalized message prompt including the following:-</p> <ul style="list-style-type: none"> • Display and withdrawal of subtitles • Support multi-language info • Able to display current software and hardware version stored in the decoders • Able to indicate whether an updates are available or not • Able to indicate the unique serial number and state of the STB decoder (error code) • Able to indicate type of middleware and other resident applications version numbers
INTERFACES	<p>RF input connector: female connector, input impedance 75 ohms</p> <p>One RCA (CINCH) female connector for video output and two RCA (CINCH) female connectors for stereo sound output</p> <p>RF output: female connector</p> <p>LNB control: STB shall have provisions to provide proper power supply and switching signal for oscillator selection and polarization selection for LNB</p>
CONDITIONAL ACCESS	STB must include at least one embedded smartcard reader or a DVB-CI (Common Interface) slot to allow any type of conditional access module to be plugged in to the set top box. The CI should be upgradable to newer version
PHYSICAL ATTRIBUTES	Power supply AC 220±10%, 50±1Hz
ENVIRONMENTAL ATTRIBUTES	<p>Operating Temperature 0~45°C</p> <p>Operating humidity Up to 90%</p>
RELIABILITY	MTBF >80,000Hrs