Digital Satellite Receiver

LIFETIME ULTRA+

User's Manual

FORTEC STAR®

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SAFETEY PRECAUTIONS

This STB (Integrated Receiver & Decoder) has been manufactured to meet international safety standards. Please read the following safety precautions carefully before you handle the STB.

MAINS SUPPLY	Use only 100-250V AC 50/60Hz.
CABLE	Use standard certified cables to prevent any malfunction of the STB.
LOCATION	Locate the STB indoors. Locate STB away from potential hazards such as houseplants, lightening, raining and direct sunlight.
OVERLOADING	Do not overload wall outlets, extension cords or adapters. These can cause fire or electrical shock.
VENTILATION	1. NEVER block ventilation slots of the decoder. 2. NEVER stand the STB on soft furnishings or carpets. 3. Ensure that a free airflow is maintained around the STB. 4. Do not use or store the STB where it is exposed to direct sunlight or near a heater. 5. NEVER stack other electronic equipment on top of the STB.
LIQUIDS	Keep liquids away from the STB.
SMALL OBJECTS	Coins or other small objects must be kept away from the STB. They can fall through ventilation slots of the STB and cause serious damage.
ATTACHMENTS	Do not use any attachments that are not recommended. These may cause hazards or damage the equipment.
LIGHTNING	The STB must remain connected at all times to the main power supply. However, Manufacturer's instructions for safeguarding other equipment connected to the STB, TV set, etc., must be followed during lightning storms.
SERVICING	1. Do not attempt to service this product yourself. 2. Refer all servicing to qualified service representatives.

1. INTRODUCTION

1.1. ABOUT THIS MANUAL

This manual describes how to setup and operate the Model STB. Only the qualified personnel should handle any problems beyond this manual.

1.2. GENERAL DESCRIPTION

The STB is a high-performance digital cable receiver which is fully compliant with the MPEG2 based on DVB transmission standards for in-home reception of digital cable services such as digital TVs and radio channels.

1.3. MAIN FEATURES

Features equipped in STB are as follows:

- 50 programmable satellites / 4,000 programmable channels
- 950~2150 MHz IF range
- MCPC / SCPC, C / Ku reception
- Fully MPEG 2 / DVB compliant
- 1 LNB input, IF loop through for End receiver
- Variable input symbol rate 2-45 Msps
- Auto satellite program searching
- Manual PID scan function
- Picture - In - Graphics function
- Subtitle function
- Electronic Program Guide
- Favorite channel selection / Parental lock
- Auto NTSC / PAL switching
- Teletext supported
- RS - 232 down loading
- Data transfer / receiver - to - receiver and / or PC - to - receiver
- 13 / 18V LNB switching / DiSEqC Version 1.2 / 1.3 / 22KHz On/Off
- SCART connectors, 4 RCA (1Video, 2Audio L/R, 0 / 12V)
- PLL RF modulator UHF Ch.21~69(NTSC, PAL G / I / K)

2. HARDWARE DESCRIPTION

2. 1. FRONT PANEL CONFIGURATION

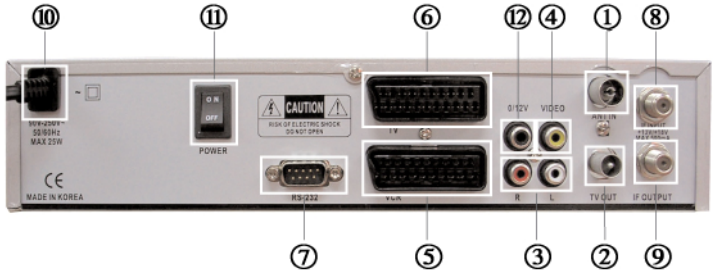
① **POWER** :This key allows you to turn your STB on or off (stand by).

② **CHANNEL UP&DOWN** : These keys are used to change the channels.

③ **LED DISPLAY** : This LED display will show the current channel number. While the receiver is in standby mode, the display will show the current time.

④ **REMOTE SENSOR** : This sensor receives the infrared signal from Remote Control Unit and operates your Receiver. Do not block the view of the sensor.

2.2. REAR PANEL CONFIGURATION



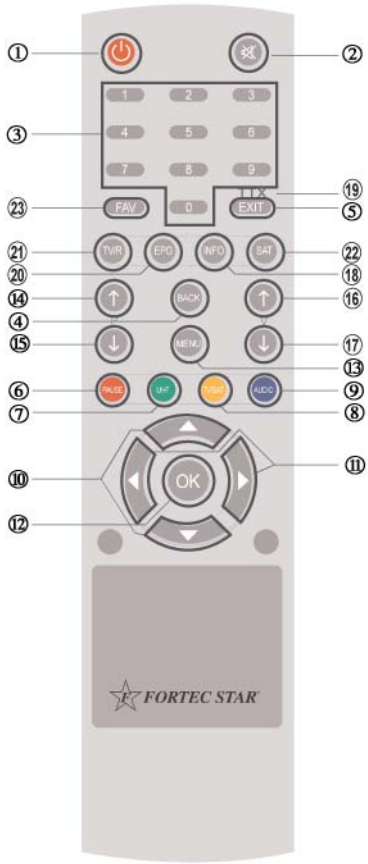
① **ANT.IN** : For a terrestrial(conventional) TV aerial.
② **TO TV** : For connecting an RF cable to the aerial input of a TV.
③ **Audio R/L Phone Connectors** : Stereo outputs. Connect these terminals to audio L/R input terminals of TV, VCR or HI-FI audio system.
④ **Video Phone Connector** : Connect this terminal to the corresponding video input terminal of TV or VCR.
⑤ **VCR SCART** : For connection to a VCR.
⑥ **TV SCART** : For connection to a TV.
⑦ **RS-232C Serial Port** : A customer services representative can use this port to re-load preprogrammed channel information to the STB. This port can also be used for upgrading software. RS232C Connection Configuration PinNo Satellite Receiver PC PinNo.

RS 232C Connection Configuration

Pin No	Satellite Receiver	PC	Pin No
2	Rx →	→ Tx	3
3	Tx →	→ Rx	2
5	Gnd →	→ Gnd	5

⑧ **IF Input** : Satellite dish input(F-connector).
⑨ **IF Output** : It is for the connection of the other STB.
⑩ **Power Cord** : 100-250VAC, 50/60Hz Max, 30W.
⑪ **Power Switch :** Power On or Off.
⑫ **0/12V :** 0V.12V Output.

2.3. REMOTE CONTROL UNIT



1) POWER : Turns the receiver On/Off.
2) MUTE : Mutes audio output.
3) NUMERIC KEY(0-9) : Controls the numerical operation and especially changes program directly.
4) BACK : This key returns you to the previous mode or menu.
5) EXIT : Use this key returns to the viewing mode from any menu function.

6) PAUSE : To pauses video during viewing normal display but audio remains active.
7) UHF : Display and select the UHF channel for the RF modulator. The factory default setting is channel 36.
8) TV/SAT : Selects TV or SAT service.
9) AUDIO : Selects audio mode(stereo, mono, language) Red, Freen, Tellow, Blue keys: These color keys ard used to select functions such as Delete, move, Rename.
10) CH UP/DN(▲,▼) : Changes channels in No-menu state and moves up/down in the Menu.
11) VOL UP/DN(◀,▶) : Changes the volume level in the Non-menu state and settings in the Menu state. Moves to next or previous steps.
12) OK : The OK key is used to select a program, highlighted line or parameter value. It is also used to show the TV/Radio channel list while watching TV or listening to the Radio.
13) MENU : Shows the Main menu on the screen or moves to previous menu.
14) Page UP : Used to move the highlight bar to upwards one page at a time on menus.
15) Page DN : Used to move the highlight bar to downwards one page at a time on menus.
16) + : Volume up
17) - : Volume down.
18) INFO : Shows the program information on the screen.
19) TTX : This key shows teletext information about the channel.
20) EPG : This key shows program information about the channel.
21) TV/RADIO : Selects TV/Radio channel.
22) SAT : Selects a satellite.
23) FAV : Change to last Favorite channels or selects the favorite channels in the channel list.

3. VIEWING GENERAL INFORMATION

3.1. Edit Channels

Main menu shows the following information.

Edit Setup	Edit TV / Radio Program Rename / Move / Delete / Lock / Hide / Favorite Channels.
Program Guide	See Current / Weekly Program Guide.
System Installation	Allow you to set up Antenna Configuration, Transponder setup, PID Edit, search channel Automatically / Manually, set up the Antenna Positioner and the system.
User Preferences	Allow you to set up OSD Languages, TV Screen Format, Format of Audio / Video Output, Menu Style, Parental Control, Change Password, Time Adjustment, RF Modulator and the System Information..
Games	Play Game in Slot Machine, Tetris and Othello.

3. 1.1. Edit Channels

You can edit the TV & Radio channels and Favorite channel group in this menu.
The factory set password is 0000.
From these menus you can create and edit channel lists. You can create a favorite channel list, add, delete, rename and arrange the. The TV list can contain hundreds of channels. By creating your own favorite list, you can make channel handling a bit more convenient or by factory default.

Within any of your favorite lists you can rename the channels.
Mark the channel you want to rename and press the YELLOW key.
The rename dialog box will then appear and let you modify the existing name.

① Select the specific channel which you want to change the name of.
② Press the YELLOW key on your RCU to display RENAME mode.
③ Enter the characters (A...1, 0...9) one - by - one using the ▼,▲ keys.
④ Press the ◄,► keys to move the cursor.
⑤ Press the GREEN key if you wish to delete a character.

3.1.2. Move Channels

In this mode you can arrange the sequence of channels within your lists.

① Select the channel you want to move Using the ▲,▼ keys.
② Press the GREEN key to select the Move mode. The right side of the highlighted channel will change to indicate Move mode has been selected.
③ Press ▲,▼ keys again to move the channel.
④ When the channel is in the desired position, press OK to confirm the move. abnormal full complete picture.

3.1.3. Delete Channels / Delete All Type

In this mode you can delete individual channels or all channels from within your lists.
Please note : Channels deleted in this way will be permanently deleted.
The only way to get them back is to perform a new channel search.
① Select the channel you wish to delete using the ▲,▼ keys
② Select Delete Mode by pressing the Red Key.
③ Select Delete Selected Channel or Delete All Channels by using the ◄,► keys.
④ Confirm the deletion by pressing the OK key, or else press the BACK or EXIT key if you wish to cancel the operation.

3.1.4. Channel Lock / Hide / Favorite

By pressing the key from the Edit Channel menu, you will enter this mode. If you turn the lock attribute on, the channel will only be
viewable after you enter password. This feature is useful to prevent young viewers from watching in appropriate channels. If you turn on the hide feature, the channel will never be accessible unless you turn the hide attribute off again. If you turn on the favorite attribute, the channel will be added to your favorite list. When you are finished changing the channel's attributes, press OK to accept your Changes, or press BACK if you want to cancel the changes.

3.2. Program Guide

By pressing the EPG key from the viewing mode(or by selecting Program Guide from t he Main Menu), you will access the Program Guide which will give the titles of the current and next programs on different channels.

3.2.1. Current Program Guide

This mode consists of the program name, event name, event start time, end time and Picture-in-Graphics(PIG) display for preview. The PIG display and Program Guide information will change when any desired program is highlighted and the OK key is pressed.

3.2.2. Weekly Program Guide

This mode displays all the events for the day. Select the desired channel using the ▲,▼ keys and the desired day of the week using the ▲,▼ keys. Then press the OK key to display the events for that selected item. There will be a short delay while the program information is retrieved. Once the program information is displayed, use the ▲,▼ keys to highlight the event time for the program you wish to view information about. To reserve adesired program, highlight the program and press the YELLOW key on the RCU.(Option)

3.3. System Installation

The factory set password is 0000.
Once you have correctly connected the receiver, you will then need to perform the System Installation. The OK key always confirms a selection within these menus.
You can always go back to the previous menu by pressing the BACK key. Use the ◀,▶keys to move upwards and downwards from one line to another. Use ▲,▼ to change settings. In some cases, you can use the numeric keys on the RCU to enter numeric values.

3.3.1. Antenna Configuration

This mode will display the Antenna adjustment menu on the screen and can adjust all required installation information for each selected Satellite.
By selecting the Red, Green, Yellow or Blue keys in Satellite name list box, you can rename a satellite, add a new satellite, delete the satellite or change the sequence of the satellite order. When you select a satellite name in the l i st box, the required installation information is Displayed. Press the OK key and adjust the items according to your system such as LNB, 22KHz, DiSEqC input and Network search.
When finished, press the OK key again.

3.3.2. Transponder Setup

The information to enter in this menu is available in magazines covering satellite TV reception, or from your service provider You can use this menu if you are looking for some special channels(i.e.Non DVB standard channels) which can only be found when you have entered the necessary settings here by selecting color keys for Adding or Deleting a Transponder.

Transponder Frequency : Specify the frequency in MHz.
Symbol Rate : Enter with the numeric keys.
Polarization : Select Horizontal or Vertical.
FEC : Selectt he FEC(Forward Error correction) value.

3.3.3. PID Edit

Use this in case of a specific Transponder which has non - DVB standard channels and which only can be found when you have entered the necessary settings.
You can also add or delete channels from a specific TP.

PCR PID : Enter the PID(Packet Identifier) for the PCR(Program Clock Reference).
Video PID : Enter PID for the video signal.
Audio PID : Enter PID for the audio signal.

3.3.4. Search All

The channel search procedure can be performed in different ways.
- If there are pre - defined transponders, you can make an Automatic or Manual search.
- If there are no predefined transponders, you can make a Manual search.

Manual Search : After entering all parameters, move the highlight bar to TP Search and press OK to start searching for Channels. Or when you are finished entering all parameters in the Transponder mode, select the Blue key on the RCU for Search All, which will search all transponders on the selected satellite.

3.3.5. Automatic Search

Press the OK key to place a check mark next to the satellites you wish to search. Pressing the OK key a second time will clear the check mark Once you have selected the desired satellites, press the Red key to start searching those satellites. The satellite information shown on the right side of your screen is for informational purposes only and may not be changed from this screen. If you need to change the information, press the Green Key to enter Antenna Configuration or you may press the Yellow key to change the TP Setup.

3.3.6. Default Settings

In the Default Setting mode, you will be asked to confirm your desire to clear all settings to the factory default or not, There are two options for you to select from by using the ◄,► keys - Default Channel List and Empty Channel List. Default Channel List will replace the existing channel list with the factory default channel list. Empty Channel List will just clear the existing channel list and will not add any default channels, Regardless of which option you choose all satellite and transponder lists will be set to the factory default, as will the user preference settings.
When you are ready to confirm setting the system to the factory default, press the OK key. If you press the EXIT key, the function will be cancelled and return to the System Installation Menu.

3.3.7. Antenna Positioning(DiSEqC1.2)

This mode will allow you to set the antenna position for each satellite. In order to use antenna positioning you must use a motor controlled by DiSEqC1.2 commands. To move the antenna, select the desired satellite, transponder, and step size. Then select Move Dish and press ◄,► to move the antenna West or East. If you selected Continuous for the step. size, the antenna will move continuously until you press another Key.
Once the antenna is positioned properly, select Command Mode and choose save, then press OK to save the position. The position number will then be displayed next to the satellite name. When you want to move the antenna to a saved satellite position, select the satellite, choose Go To for the Command Mode and press OK. To clear a saved satellite position select satellite, choose Reset for the Command Mode and press OK.

3.3.8. Antenna Positioning (USALS)

This mode will allow you to use a DiSEqC1.3/2.3 motor controlled by USALS (Universal Satellite Automatic Location System).
To move the antenna, press the Blue Key to select the Satellite Position, My Longitude and My Latitude. Select "Go To 0" and press "OK" in Command Mode for "Position 0" which, for the polar positioner, is the imaginary the polar positioner, is the imaginary point on the geostationary orbit of the satellite, which has the same longitude as the place of installation. Select "Go To Position" and press "OK" in Command Mode to send the "Reference" command for the polar positioner, which is utilized during re-calibration of the polar motorfunction. If you wish to manually control the positioner, use the "Step Size" and "Move Dish" commands to move the antenna.

3.4. User Preference

From here you can access the Language, TV Screen Format, Audio / Video Output, Menu Style, Parental Control, Time Adjustment, RF Modulator, System Information and Data Transfer menus.

3.4.1. Languages

Select the desired menu language simply by using the ◄,► keys, Key usage OK key: confirm the language you selected and return to the User Preferences menu.

① BACK key : cancel your selected language and return to the User Preferences menu.

② EXIT key : return to the Channel Viewing mode.

③ ◄,► keys: change the setting for the selected item.

3.4.2. TV Screen Format

Select the type of television Screen Format you have : either 4:3 or 16:9, Then select the Display Format for how to display transmissions that don't match the picture format of your TV. If your TV set has a different format than the transmission, Full Screen will stretch the image to fill up the screen. Letterbox will give you a normal picture, but leaves black areas at the edges(top & bottom or left & right depending on which format your TV is). If the transmission matches your TV set's screen format, it will be displayed as abnormal full complete picture.

3.4.3. Audio/ Video Output

You can select which type of audio and your receiver for audio outputs video : you can select one of various stereo outputs or mono sound. For video output, you may choose between RGB and and CVBS. If your television set is a Multi-System TV capable of displaying either PAL or NTSC, then you may set the Video Format to Auto, If not, set the Video Format to either NTSC or PAL depending on which format your TV Supports. The Radio Still Image can either be set to on or 0ff. When set to on, a still image will be displayed when you have elected a radio, rather than a TV channel.
When set to off, only a black picture will be displayed when you have selected radio channel.

3.4.4. Menu Style

You can choose which menu style best suits your tastes. If you turn the transparency feature on, the menus will be transparent, enabling you to see t he program video through the menu. There are three different color schemes to choose from which will allow you to pick a combination that is easy to read and pleasing to the eye.

3.4.5. Parental Control

In the Parental Control menu, you can set the censorship classification or change the PIN code. From the factory the default access PIN code is set to 0000. The following settings can be altered from this menu.

Age Rating Control : If you want everyone to have access to all available types of programs, select OFF. If you select ON you may block programs unsuitable for children Select Age Limit between 4-18 years on the line that appears.

3.4.6. Change Password

From here you can change the access PIN code from the standard 0000.
DO NOT FORGET IT. Without it you do not have access to any of the functions where the code is required. To change the new access PIN code, enter the new PIN code number and press to key will then need to confirm your new PIN code by entering it once more and press OK.

3.4.7. Time Adjustment

To set the current time, input the off set value by using the standardized information of yourcurrent service area. The time setting will be used as the standardized time for the TV Guide, Wakeup / Sleeptime. Current time is based on the TDT(Time Description Table) in the stream of the current program. The adjustment step size is 30 minutes by usingthe ◀,▶ keys. If the stream of current service doesn't contain the TDT, the current time cannot be set up.

Wake up : enter the time at which receiver will automatically power ON.
Sleep time : enter the time for receiver to automatically switch off to stand by mode.

3.4.8. RF Modulator

If receiver is connected to the TV by an RF lead, you can select the RF modulator channel and RF audio type. Channel 36 is the default factory setting for the channel to which your TV must be set in order to view the output of your receiver If this channel is currently being used as a broadcast channel or if you are getting interference on this channel, you may change the channel to an unused number and change your TV to that channel in order to view the output.

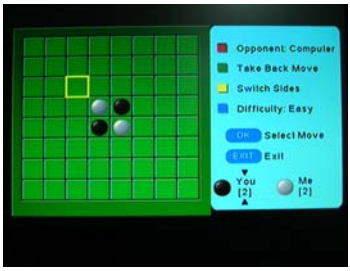
If You get picture but no sound, the RF Audio Type might be wrong.

Select B.G.(5.5MHz) if the receiver is used in Europe. If it is used elsewhere, you may need to change it to the type used by your television set.

3.4.9. System Information

3.5. Games

3.5.1. Othello Game



Receiver has a built-in Othello game for your enjoyment. Use the color keys to change options and right / left / up / down keys to move. When finished, press Exit to return to channel viewing mode.

3.5.2. Tetris Game

3.6. Other Functions

3.6.1. Channel Information

Every time you change channels, program information will be displayed for a few seconds.

The information may include:

① Current time.
② Channel name.
③ Information about the current / next program.
④ Current channel number & name, Satellite name & TP information.
⑤ Symbols for Parental lock, Hide and Age limit information.
⑥ The start and end time of the current / next program.

You can change the channel list with the ▲,▼ keys on your RCU or Front panel.

3.6.2. Changing Channels

You may change the channel by simply entering the channel number using your RCU 0-9 keys. Alternately, you may use the ▲,▼ keys on the RCU and / or the front panel of the receiver

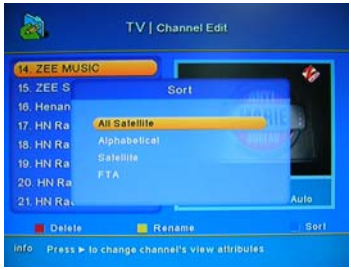
3.6.3. Volume Control

To control the volume, use the ◀,▶ keys on the RCU. The volume indicator will show for a few seconds before automatically disappearing.

3.6.4. Channel List for TV / Radio / Favorite

When you press the OK key, you can directly see the channel list.
You can select the channel you would like to watch bymoving the highlighted bar to the Channel of yourChoice Using ◄,►,▲,▼ and then pressing the OK key. You can select the TV or radio channel list by using the. Radio key. Use the FAV(gray) key for selecting the favorite channel list.

3.6.5. Channel Sort



By pressing the Blue Key, you will be able to select the sort method either Normal, Alphabetical, or Satellite. Normal sort shows channels in the order in which they have been added to the channel list. Alphabetical sort shows channels in Alphabetical order. If you select Satellite sort, you will need to select which satellite you wish to view and then only the channels on the selected satellite will be shown, in the order in which they were added. If you have selected Satellite sort and need to select a channel not on the selected satellite : you will need to change the sort method before you can select that channel. After changing the sort method, the channel numbers will likely change to reflect the new ordering. The sort method may also be changed from the Edit Channel screen or the EPG screen.

3.6.6. Subtitle

The displays of subtitles are based on transmitted data using the EBU teletext specification and DVB Bitmap. Press select User preference menu and select language item Use the ◄,► keys to select the desired subtitle language. Then press OK key to select the highlighted language, the subtitles will then be shown.

3.6.7. Teletext

The display of Teletext is based on transmitted data using the EBU Teletext specification and DVB Bitmap and can only be viewed on a channel which supports Teletext.

3.6.8. Data Transfer for Updating Software

All program and / or data in the master receiver can be transferred to the next(slave) receiver using this function.

① Connect the serial cable between the two receivers.

② Enter the Data Transfer menu on the Master receiver.

③ Select the type of transfer you wish using the ◄ / ► keys. You can select to transfer both Program and Data, Program only, or Data only.

④ Power on the Slave Receiver.

⑤ Once the data transfer is completed, a message will appear informing you that the transfer was successful. If an error message appears, you will need to start the transfer process over again.

⑥ If you are updating multiple receivers, transfer the serial cable to the newt receiver and power it on. When you are finished, press EXIT to return to the channel-viewing mode. Press the Menu button on the remote controller, you can get the Main Menu. Each menu shows short information at the bottom of the screen.

5. TROUBLE SHOOTING

Problem	Possible causes	What to do
The display on the front panel does not light up.	Main cable is not connected.	Check that the main cable is plugged into the power socket.
No sound or picture.	Wrong connection of the video/audio output to the TV input terminal.	Connect two terminals correctly with a SCART cable or RCA or RF cable.
	Wrong connection of satellite antenna cable.	Connect the antenna cable correctly.
	Wrong direction of satellite antenna.	Adjust the direction of antenna.
Black-and-White screen or VHold problem.	No signal or weak signal.	Check the cable connections LNB and other equipment connected between the LNB and the receiver or adjusts the antenna.
	Wrong setting of channel information in System Installation Menu.	Type the setting value correctly.
	Your TV mode is different from satellite broadcasting mode.	Use TV of same mode. Use a NTSC / PAL converter connected to the receiver TV.
The RCU is not working.	Battery exhausted.	Change the batteries.
	Fluorescent light interfering with the remote controller.	Switch off the light.
	RCU is incorrectly aimed.	Aim the RCU at the receiver.

6. TECHNICAL SPECIFICATIONS

IF / Tuner

1. Input Frequency	950Mhz to 2150MHz
2. Input Signal Level	-25 to -65dBm
3. Input Impedance	75 ohm nominal
4. Input Connector	F-type, IEC109-24, Female
5. FEC Decoder	Convolutional Code Ratel/2,2/3,3/4,5/6 and 7/8 with Constraint Length K=7
6. Demodulation	QPSK
7. Symbol rate	2-45Ms/s
8. IF Frequency / Bandwidth	480MHz / 30MHz Typ.
9. LNB Power & Polarization	V13 / H18, 600mA MAX. over current protection
10. DiSEqC Control	Ver 1.0 / 1.2 Compatilde

Audio/Video Decoding

1. Video Decoder	MPEG-2MP@ML(ISO/IEC 13818-2)
2. Input Rate	60Mbit/s Max
3. Video Resolution	720 x 576(PAL), 720 x 480(NTSC)
4. Aspect Ratio	4:3, 16:9
5. Audio Decoder	MPEG-1(ISO/IEC 11172-3)
6. Audio Mode	Mono L/R, Joint Stereo, Stereo
7. Audio Sampling Frequency	32, 44.1, 48 KHz

Audio / Video Output

1. SCART Connector	TV/VCR
2. RCA Jack	CVBS, Audio L / R, 0 / 12V

Serial Data Interface

1. Connector Type	9 Pin D-Sub(male)
2. Signal	RS-232C, Max. 115200Bps

Power Supply

1. Supply Voltage	100VAC~250VAC 50/60Hz(SMPS)
2. Power Consumption	Max. 30W

General

1. Weight	Approx. 2.1Kg
2. Dimensions	300(W) x 210(D) x 60(H)mm