HD DVB-T2 SET TOP BOX

USER GUIDE

SP1505-SS
IMPORTANT SAFETY INSTRUCTIONS

- The ventilation should not be impeded by covering the ventilation with items, such as newspapers, table-cloths, curtains, etc.;
- No naked flame sources, such as lighted candles, should be placed on the apparatus;
- Attention should be drawn to the environment aspects battery disposal. Don’t throw used batteries in dustbin. Please contact your retailer in order to protect the environment;
- Don’t use the apparatus in tropical climates;
- The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus;
- Where the mains plug is used to as the disconnect device, the disconnect device shall remain readily operable. The main plug shall remain readily operable;
- Keep minimum distance (5cm) around the apparatus for sufficient ventilation. (Minimum distance around the apparatus for sufficient ventilation).
- If the electric cable is damaged, it must be replaced by the manufacturer, or by the qualification persons, in order to avoid a danger.
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1 Introduction

Front Panel

- Remote Sensor
- Right Button
- Power Indicator
- USB Host
- Display
- Left Button
- Power Button

Rear Panel

- RF Loop out
- Composite Video
- HDMI Video
- TV Aerial Input
- Coaxial Digital Audio
- DC 12V Input Jack
- Down Mix Audio L & R
## 2 Remote Control

### 2.1 Appearance of Remote Control

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3 Basic functions

3.1 First Installation

If you are using the unit for the first time or have restored the unit to Factory Default, the installation Guide Menu will appear on your TV screen. Follow each of the option of the Installation Menu to setup your preferred menu languages and suitable country (Region) etc.

First installation shall setup some important settings.

Use the arrow keys on the remote control to select your preferred Language, Country, Time Zone, LCN, then select Start Search.

![Init Install](image)

3.2 TV/RADIO Programs Switch

Press “TV/RADIO” to switch between Digital TV programs and Digital Radio programs when watching TV.

3.3 Channel Switch

Press CH+/CH- to switch to the previous or next program.
Press number keys to input program number.

3.4 TV & Radio Channel List / FAV List

Press “OK” to switch to the channel program list, press “LEFT/RIGHT” to select different program column (All Channels, Fav1, Fav2, Fav3 & Fav4), press “UP/DOWN” to select program item.
Press “OK” to confirm program selection, press “EXIT” to exit the program list. If there are some favorite programs that been set up, just press “LEFT/RIGHT” key to enter into the favorite program list: Press “UP/DOWN” to select favorite program, press “OK” to confirm the selection, press “RECALL” to return to previous menu.

3.5 Display Information of Programs

Press “INFO” to show the information of current programs when it is in normal playing state.

Press again “INFO” to show more detail of the TV program information.

3.6 Program Recall

Press “RECALL” under state of full-screen to return to the previous played program.

3.7 Multi Audio Language Switch and L/R Channel Switch

The program might have multilingual audio languages and the audio broadcast on different audio mode such as Stereo, left or Right. All the available audio languages will be displayed while you press “AUDIO” key.
The screenshot is illustrated as below. If there is no audio output after you select the audio language, it indicates that there is no audio on the current audio mode, so you have to select preferable audio mode.

1. Press “AUDIO” to switch the language of sound of current programs and switch among “Stereo”→ “Left”→ “Right” (Stereo→Left channel→Right channel).

2. Press “LEFT/RIGHT” to switch among “stereo”→ “left”→ “right”(stereo→left channel→right channel), press “UP/DOWN” to switch the language of sound.

3. Press “OK” to confirm the selection and press “EXIT” to return to full-screen play mode and save the setting.

3.8 Electronic Programs Guide (EPG)

1. You can press “EPG” on the remote control to enter into the EPG page to know more about the programs to be played.

Enter into EPG mode menu default enter is Daily Mode, menu under this mode contain 7 parts:
(1) Tab 1 shows the Title.
(2) Tab 2 shows time and date list.
(3) Tab 3 shows particular date list.
(4) Tab 4 shows program list, press “UP/DOWN” to switch between programs.
(5) Tab 5 shows the time range and program information.
(6) Tab 6 shows the detailed program information in Tab 5.
(7) Press “LEFT/RIGHT” to switch between channel list and program information.

2. Press “RED” key to enter into Weekly/Now and Next Mode to display the programs and program information in different time ranges of the current program list within one week.
   (1) Press “BLUE” key to go to Next Day when in Daily Mode.
   (2) Press UP/DOWN key to move upward and downward to switch between the different programs.
   (3) Press LEFT/RIGHT key to choose to view the program information in different time ranges.

3. Press the “INFO” key to choose the detailed information corresponding to the current program.

4. Press the “Green” key to set Timer to book programs.

5. Press “EXIT” to exit from EPG.

3.9 Teletext

1. If you want to watch teletext, please press “TEXT” on the remote controller to enter into EPG page.
2. Input three digits to go to corresponding page you want to reach.
3. Press “UP” to go to the previous page, while press “DOWN” to go to the next page.
4. Press “OK” to adjust the transparency of the Teletext page.
5. Press “TEXT” or “EXIT” to exit from teletext menu.

3.10 Subtitle

1. Subtitle is defaulted to be off. The programs might have multilingual subtitle information. Press “SUB” key on the remote controller to enter the Subtitle menu of the current programs. All available subtitle languages will be displayed.

![Subtitle Menu]

2. Press UP/DOWN key move upward and downward to select language.

3.11 REC & Time shift functions

3.11.1 REC (Instant Recording)

![Instant Recording]

During TV watching press “REC” to start recording, system has 3 seconds for initialization. When initialization is finished, the screen left top will show “REC” icon, then it’s recording and playing current program. You can press “Info” to watch current recorded information.
Press “Stop” key while recording, will stop recording and resume normal play mode.

In recording mode, you can also use “Rec” key to set timer for subscribe stop record, besides you can reset the time optionally. (Can set the time length as cancel (00:00), or user define length). When the space is insufficient while recording, system will show “Storage Device Disk is Full” then stop recording and resume normal playback mode.

During recording mode, you also can operate “Menu”, EPG, TTX, SUB, and so on functions like normal playback mode.

### 3.11.2 Time shift

1. In Time Shift mode, you can watch the program meanwhile record the program.

2) In the below case press “PAUSE” key can into time shift mode, then the “TIMESHIFT” icon will be shown on left top side of the screen, and record program play will begin at recording start time.

   a) In normal playback mode, and Timeshift set as Auto or Pause within PVR Config menu.

   b) In recording mode.

3) In the below case press “<<” key also can into time shift mode, and playing program will fast rewind.

   a) In normal playback mode, and time shift set as Auto or Pause within PVR Config menu.

   b) In recording mode.

4) In time shift mode, when press “STOP” key will exit Timeshift mode and other functions will be continued.

5) In time shift mode, when operate fast forward, the recording is still going on.
4 Installation

There are two kinds of Installation mode as follow:

1. Auto Search
2. Manual Search

You can enter into parameter “installation page” via input password digitals (default password is “0000”).

![Installation Mode Screenshot](image-url)
4.1 Auto Search

Auto search is a kind of intelligent and convenient mode of programs searching, which covers programs of all frequent points of target countries or regions.

At present, this system covers many targets countries and regions.
You can move the cursor to “Auto Search” via press “UP/DOWN” key under “Installation Menu”, then press “OK” to enter into Auto Searching page.
1. After entering into auto search page, system will scan all programs one by one under frequency points of current countries or regions selected automatically.
2. During scanning, press “EXIT” key to stop and exit scanning.
3. When all channels are detected and the scanning process is finished, press ‘Exit” to quite the “Main Menu/ Installation” page and display the channel to play.

4.2 Manual Search

If you understand much about digital TV and know the frequency of the program or if you want to scan the program at any frequency required, you can select manual search, which will allow you to save much time.

1. You can move the cursor to “Manual Search” via press “UP/DOWN” key under “installation menu”, then press “OK” to enter into manual search page.
2. Prior manual search, you need to setup relevant parameters including:
   (1).Frequency (KHz): the default frequency is settled by different country, you can input relevant digital to modify it.
   (2).Bandwidth: the default value of bandwidth is settled by different country, while you can set it to 6MHz, 7MHz or, 8MHz.
3. Press “OK” key after setting all parameters to start manual scan.
4.3 Channel Filter

All of channels or only unencrypted channels are set to be searched by selective settings.

4.4 Country

Choose your country to be searched by selective settings.

4.5 LCN (Logical Channel Numbering)

Enables/Disables LCN.

4.6 Active Antenna

STB will provide 5V power to your active antenna if you turn on the active antenna.
5 Channel

System offer an efficient function of channel management such as channel deleting, marking, moving, locking, rename and grouping.,

There are two independent pages for channel management, TV and RADIO, as shown in the figure below.

![Channel Management Page](image)

5.1 Channel Manager

Channel manager page includes channel deleting, moving, locking and rename.

1. You can enter the page as shown in the figure below via “MENU > Channel > Channel Manager”.

2. It will pop up and dialogue box prompting that “Channel not available” when there are no channels in database to enter into, and it will not enter into channel organizer page.

3. Channel Organizer menu includes: Delete Channel, Skip Channel, Lock Channel and
channel rename. Press “UP/DOWN” key to choose the line where Channel is, then press the 4-color key on the remote controller:

- Press the “Red” key to set and cancel lock Channel
- Press the “Green” key to set or cancel Delete Channel
- Press the “Yellow” key to set or cancel Skip Channel
- Press the “Blue” key to set or cancel Rename Channel. After setting, corresponding figure will appear;

![Channel Manager](image)

Figure 4.3 Channel manager edit page

4. To rename channel, press UP/DOWN key to choose the line where the channel to be renamed, press the “Blue” key to enter the page to rename the channel.

5. Press the “Blue” key to exit Channel rename page.

6. To set or cancel Lock Program, the system will hint to input “0000”. To set Delete Program, the system will hint to choose dialogue box “Delete selected Channels?”; Press LEFT/RIGHT key to choose, choose “Yes” to delete the program or chosen, “No” to cancel.

7. To swap/renumbering channel, press “OK” key to choose the channel where the channel to be swap/renumbering.

8. Press “EXIT” key to exit Channel manager page and saving the edit result.

### 5.2 Favorite List

1. You can enter the page in the figure below via “Main Menu > Channel > Favorite list”.
2. It will pop up a dialogue box prompting that “Channel not available” when there are no programs in database to enter into, and it will not enter into channel grouping page.  

3. Press “UP/DOWN” key to choose the line where the channel to be grouped is in, then press the color keys on the remote controller to set different channel grouping.  

4. When changing favorite channel is finished, press “EXIT” key and then saving the selection and indicating with the hint of “Data Saving …”
6 Preference Setting

6.1 OSD Language

OSD Language option: The system has the user interface supporting a couple of languages, you can set language via OSD Language option:

(1) Move the cursor onto OSD Language option, press “RIGHT” key to enter OSD Language List.

(2) Press UP/DOWN key choose language

(3) Press “OK” key to confirm system interface language selection, then the setting is effective, and then the interface language turns into the currently chosen language, the cursor can move onto OSD Language option on the left.

6.2 OSD Timeout

To set the automatic exit time from Menu: 1S-6S

6.3 OSD Transparency

To set the transparency of Menu: from 0% to 60%.

6.4 Preferred Subtitle

(1) Sets the subtitle to your preferable languages.
(2) When the preferred subtitle is selected, it will be displayed automatically while the stream has the selected subtitle.

(3) User can set another preferred subtitle language in the “2nd preferred subtitle” option.

6.5 Hard Hearing

Enables/Disables the “hearing impaired”

6.6 Preferred Audio

(1) Sets the audio to your preferable languages.

(2) 1st preferred audio option: Press RIGHT key to enter the currently supported Audio Language list, in the Audio Language list, press UP/DOWN key to choose language, press ENTER key to confirm;

3.2nd preferred audio option: Press “RIGHT” key to enter the currently supported Audio Language list, in the Audio Language list, press UP/DOWN key to choose language, press “OK” key to confirm;

6.7 PVR Configuration

You can enter the page via “MENU > Preference > PVR Config”, it contains four options as follow:

- File Size
- Timeshift
- Timeshift Length
- Timeshift to Record
1. **File Size**
   Any of options, 4G/3G/2G/1G/Auto, can be selected to set the size of the file to be recorded. If the size of the file exceeds the setting size during the record of the program, record program will divide the file into different set files.

2. **Timeshift**
   Any of options, AUTO/OFF/PAUSE, can be selected to set the status of the current Timeshift, if Auto is selected, Timeshift operation will perform automatically on the background, can change channel but discard previous Timeshift buffer and restart a new one. If Off is selected, Timeshift operation will stop, if Pause is selected, Timeshift operation will be Manual start by Pause key, screen freeze at once, can resume by Play key, allow channel change only in the same TP, Timeshift buffer only record first channel and if the preceding three options are changed when the Auto is selected, Timeshift will restart.

3. **Timeshift Length**
   Any of options, Auto/30min/1h/2h, can be selected to set the time depth of the Timeshift. If Auto is selected, the time depth of the Timeshift is depended on the available size of USB equipment. If any of options, 30min/1h/2h, is selected, the usable time depth of the Timeshift is 30min/1h/2h in the case that the available size of USB equipment is big enough, whereas, the usable time depth of the Timeshift is depended on available size of USB equipment.

4. **Timeshift to Record**
   Either of options, ON/OFF, can be selected. If ON is selected, Timeshift operation will stop and the recorded file buffered by the timeshift will be stored in USB equipment. If Off is selected, Timeshift will operate continuously and the recorded file buffered by the Timeshift will not be stored in USB equipment.
7 System Setting

System Setup menu can provide convenient system setup.

7.1 Timers

If you want to set channel playing at certain time or REC some programs, you can set via Timers menu. Or you can direct press “Yellow” key to show this timer list.

- Application shall provide list of timer for adding, viewing, editing and deleting.
- “Timer” shall list all the timers that are added through the “EPG” as well as the timer that are manually added by the user through the “Timer” menu.
- Application supports a maximum of 99 “Timer”.

```
71  Timers

If you want to set channel playing at certain time or REC some programs, you can set via Timers menu. Or you can direct press “Yellow” key to show this timer list.

- Application shall provide list of timer for adding, viewing, editing and deleting.
- “Timer” shall list all the timers that are added through the “EPG” as well as the timer that are manually added by the user through the “Timer” menu.
- Application supports a maximum of 99 “Timer”.
```
In Timer Edit menu, the system can support at most 10 events.

**Date:** Specifies the timer date

**Program Name:** Specifies the channel for which the timer is set

**Start time:** Specifies the start time of the timer

**End time:** Specifies the end time of the timer, be used in Recorder Type

**Duration:** Specifies the duration time of the timer, be used in Recorder Type

**Mode:** Specifies the frequency of the timer, duration can be any of the following:
- Once - timer will be triggered only once.
- Daily - timer will be triggered daily at the specified time.
- Weekly - timer will be triggered every week at the specified time.
- Monthly - timer will be triggered every Monthly at the specified time.

**Type:** Specifies the channel type for which the timer is set, user can select below options:

- **Channel, Recorder, Standby, or On.**
  - **Channel:** you can preset the time to switch to selected channel. You can only enter START TIME but not End Time and Duration.
  - **Standby:** you can preset the time you want the unit to go into standby mode. You can only enter START TIME but not End Time and Duration.
  - **On:** you can preset the time you want the unit to power ON. Enter the start time and then switch off the unit. The unit will power on at the preselected Start Time.
  - **Recorder:** you can set the Channel you want to record, the start time and the duration. After setting the duration, the system will calculate the End Time automatically.

Then press "OK" key to confirm your setting and press POWER key to enter the unit into standby mode.

**Remark: WARNING!** Please do not omit to insert an USB device in the USB port compatible for recording function.

If you select recorder type, it can be set Enable or Disable options such AD Record, Subtitle Record and Teletext Record.

Press “OK” after your setting and the system will return to previous menu.
7.2 Child Lock

Child Lock menu can provide convenient locked setup. The default password is set as “0000”.

1. Here you can set Enables or Disables the system lock, and also can set the parental rating from G, PG, PG13, NC16, M18, R21 and OFF.
2. You can revise system Password.
   (1) Press the 0—9 number key on the remote controller to input Old Password, the default Password is set as “0000”.
   (2). If the password is input correctly, the cursor can move onto Input New Password option, press 0—9 number key on the remote control to input new 4-digit Password.

7.3 Date Time

Clock Menu contains different clock settings. Following menu layout shows the Time Settings.
If the “Time Mode” is set to “Auto” then, “Time Zone” and “DST” shall be active for editing. If the Mode is “Manual”, these options shall be disabled.

If the “Time Mode” is set to “Manual” then, “Date” and “Time” shall be active for editing. If the Mode is “Auto”, these options shall be disabled.

7.4 Factory Reset

It allows you to restore the unit its default factory setting. When you select this option, you will be asked to enter your password (or default password is “0000”). Press OK to resume the unit to factory settings.

7.5 Upgrade

We offer this function for upgrade STB software by USB or OTA upgrade.

7.5.1 USB/Card Upgrade

Refer to SOFTWARE UPGRADE Section for details. It shows at Part 9 at page 30.

7.5.2 OTA Upgrade

Software upgrade by OTA functions.

7.6 Version

Via menu (MENU > Setting > Version) to check the software version.

7.7 Auto Standby

Enables/Disables “Auto Standby”.

8 Audio / Video Setting

Video output mode can be change the mode of video output, you can adjust TV mode according to the actual situation of you receiving equipment.

(1) Move the cursor to the corresponding option to be adjusted and press OK / Right key to display the available setting, and then press UP/DOWN key to move circularly and choose the desired option.

(2) Press OK key to save the settings.

8.1 SPDIF

Used to select AVC mode: Mute, PCM and Bitstream

8.2 Aspect Ratio

Aspect Ration can be set as 16:9, 4:3 Pan Scan, 4:3 Letter Box and or Full Screen.

8.3 Video Output

AV Output mode can change the mode of video output to adjust TV set according to your connected device.

The available options are: YUV or CVBS.
8.4 Video Resolution

Below are the available options you can adjust under Video Resolution: Auto Detect/480p_60 / 480i_30 / 576p_50 / 576i_25 / 720p_60 / 720p_50 / 1080i_30 / 1080i_25 / 1080p_60 / 1080p_50

8.5 HDMI Audio

Below are the available options: HDMI Mute, HDMI PCM and HDMI RAW.

9 Multi-Media

This product is compatible to play of MP3, JPEG and MPEG files. It can support only the files displaying in the list and the file format this product is compatible with.

Insert USB external device into the YSB port compatible of the decoder.

Press “USB” key to enter into the Multi Media Menu.

Press “Exit” key to return to previously viewed TV program and exit the Multi Media menu.

9.1 Media Selection Mode

Use the “LEFT” or “RIGHT” key to select the Movie / Music / Photo / Record Manager / Disk Manager mode. Then press “OK” to enter the file list.

9.2 Movie
9.2.1 Movie File Browser

This menu helps the user to select and play a movie from a list of movies that are stored in the USB device.

Supported file formats are MPG, AVI, VOB, DAT, ASF, MKV, RM, RMVB, WMV, TSF, MOV, TS, MPEG1, MPEG2, MPEG4, etc.

Following menu layout shows the “Movie” menu.

9.2.2 Movie Playback

When the video is playing, the following information shall be displayed on OSD:

a. File name.
b. Total time and the current time for this playing file.
c. Play state of this video.
d. Progress bar.
e. File size and resolution of this video.
f. Repeat mode such as Off/One/Dir.

9.3 Music

This menu helps the user to select and play a song from a list of songs that are stored in the storage device.

WMA, WAV, RA, MP3, FLAC format will be supported for playing.

When the music file is playing, the following information shall be displayed on OSD.
g. Equalizer information
h. Total time for this playing file.
i. Play state of this music.
j. Progress bar.
k. Current number of this file in total file list.
l. File size, artist, album and genre.

9.4 Photo

To view all the photos stored in the storage device. Follow the instructions at the bottom of OSD screen.

Supported file formats are JPG, TIF, PNG, GIF and BMP.
To go to next picture, press Right navigation key. Press Ok key to see the picture on the screen. To navigation keys, you can reverse the picture up, down, right and left.

9.5 Record Manager

9.5.1 Recorder Manager Browser

To view the record TV programs stored in storage device.

9.5.2 Rename

In this menu the user can change the program’s name as they like.
9.6 Disk Manager

9.6.1 Disk Manager Browser

You can – Move/Copy, Rename, Delete, Delete All – which are store in the USB device. Please follow the OSD hints to press the corresponding key of the remote controller.

10 Software Upgrade

The software is the operating system installed on the device. Software upgrades can bring new features, improvements and bugs fixes.

To check whether you have the latest version of software:

1. Press Menu > Setting > Version
2. The software version number is displayed behind Build Date.

Please download the latest software from our official website.
10.1 USB Upgrade

You need a USB Flash Drive for software upgrade.

Before upgrade, please make sure the upgrade file name is *.bin (not case sensitive), Otherwise the system can’t enter the upgrade mode.

Copy the upgrade file to the root directory of your USB Flash Drive.

The size of USB upgrade file must be less than or equal to flash size 4M/8M bytes, if not may lead to failure to upgrade

USB Upgrade Procedure:

Step 1: Insert the USB flash drive into the device USB Host.
Step 2: Press (Menu > Setting > Upgrade > USB/Card Upgrade) and enter to USB directory list.
Step 3: Select to upgrade file (xxx.bin) and press OK key to start upgrading.
The whole process of USB upgrade maybe need 30 seconds. When upgrade finish, system will automatic restart by itself.

**Caution!**

Please do not cut off the power during upgrading the software.

The USB flash drive is not allow to be unplugged during installation.

## 11 Specifications

**Processor**

<table>
<thead>
<tr>
<th>Processor</th>
<th>SUNPLUS SPHE1505</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Processor</td>
<td>SUNPLUS SPHE1505</td>
</tr>
<tr>
<td>Demodulator</td>
<td>SONY CXD2837</td>
</tr>
<tr>
<td>RF Tuner</td>
<td>SONY CXD2861</td>
</tr>
<tr>
<td>DDR Size</td>
<td>512MBit</td>
</tr>
<tr>
<td>Flash Size</td>
<td>32MBit</td>
</tr>
</tbody>
</table>

**Tuner**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Frequency Range</td>
<td>174MHz~230MHz (VHF)</td>
</tr>
<tr>
<td></td>
<td>470MHz ~ 862MHz (UHF)</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>6, 7 &amp; 8 MHz</td>
</tr>
<tr>
<td>Input Signal Level</td>
<td>-72 ~ -20dBm</td>
</tr>
<tr>
<td>RF Input Connector</td>
<td>IEC Type (Female)</td>
</tr>
<tr>
<td>RF Output</td>
<td>IEC Type (Male)</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>75 Ω</td>
</tr>
</tbody>
</table>
### De-Module Mode

<table>
<thead>
<tr>
<th>Modulation Mode</th>
<th>COFDM (Code Orthogonal Frequency Division Multiplexing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demodulation</td>
<td>QPSK, 16QAM, 64QAM, 256QAM</td>
</tr>
<tr>
<td>Mode</td>
<td>1K, 2K, 4K, 8K, 16K, 32K</td>
</tr>
<tr>
<td>Guard Interval</td>
<td>1/32, 1/16, 1/8, 1/4</td>
</tr>
<tr>
<td>Code Rate</td>
<td>1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 7/8</td>
</tr>
</tbody>
</table>

### Decode

<table>
<thead>
<tr>
<th>Video Decoder</th>
<th>MPEG2 MP@HL, AVC/H.264 HP@L4.1 MPEG4 ASP Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Decoder</td>
<td>MPEG-1, MPEG-2(Layer I/II), AC3, E-AC3, AAC, HE-AAC</td>
</tr>
<tr>
<td>Audio Channel</td>
<td>Mono, Dual-Channel, Stereo</td>
</tr>
<tr>
<td>Video Aspect Ratio</td>
<td>4:3, 16:9, Auto</td>
</tr>
<tr>
<td>Video Resolution</td>
<td>Max. 1920 x 1080</td>
</tr>
</tbody>
</table>

### Rear Panel

<table>
<thead>
<tr>
<th>RF Input</th>
<th>IEC-Type (Female)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Output</td>
<td>IEC-Type (Male)</td>
</tr>
<tr>
<td>CVBS &amp; Audio L/R Output</td>
<td>Yes. (x 1)</td>
</tr>
<tr>
<td>Coaxial Digital Audio Output</td>
<td>Yes. (x 1)</td>
</tr>
<tr>
<td>HDMI Output</td>
<td>Yes. (x 1)</td>
</tr>
</tbody>
</table>

### Front Panel

<table>
<thead>
<tr>
<th>Keys</th>
<th>Power/ Standby / Ch+ / Ch-</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB2.0 Interface</td>
<td>Yes. (x 1)</td>
</tr>
<tr>
<td>LED Lights</td>
<td>USB/REC, Power/Standby</td>
</tr>
<tr>
<td>LED Display</td>
<td>Yes. 1 x 4 digits LED</td>
</tr>
</tbody>
</table>

### Power

<table>
<thead>
<tr>
<th>Input Voltage</th>
<th>DC 12V / 1A Switching Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Consumption</td>
<td>~ 6W max.</td>
</tr>
<tr>
<td>Standby Power Consumption</td>
<td>≤ 0.5W max.</td>
</tr>
</tbody>
</table>