SAFETY CONCERNS

The purpose of the Safety Concerns section is to ensure the safety of users and prevent property damage. Please read this document carefully for proper use.

Conventions

Warning

Provides information or instructions that you should follow in order to avoid personal injury or fatality.

Caution

Provides information or instructions that you should follow in order to avoid a service failure or damage to your set-top box.

Note

Indicates additional information for reference.

Checks

Provides the operator with checkpoints for stable system operation.

Symbols

Caution

Indication of a general caution

Restriction

Indication for prohibiting an action for a product

Instruction

Indication for commanding a specifically required action

⚠ WARNING

Power

Insert the power plug firmly.

Do not connect multiple devices to a single outlet simultaneously.

Do not touch the main body, power cable, or power plug with wet hands.

If video/sound cable generates heat after connection, pull out the power plug and contact customer service immediately.

Installation/Maintenance

Do not install in humid or dusty areas, and avoid installing near heating devices.

Do not cover the top.

Keep flammable substances or sprays away from the set-top box.

Pull out the power plug during thunderstorms or when not used for a prolonged period of time.

Do not place heavy objects on this product.

Pull out the power plug at once and contact customer service if unusual noise, smell, or smoke comes out.

General

Check if the coaxial cable is correctly grounded before connecting to the set-top box.

Ask the installation engineer to check if the set-top box to be connected is correctly grounded.

Class 1 LED Product.

This product complies with 21 CFR Chapter 1, subchapter J

⚠ CAUTION

Power

Connect your TV after powering off the TV and the set-top box by pulling out the power plug.

Do not insert the power plug before connecting the power cable to the product.

The socket-outlet shall be installed near the equipment and shall be easily accessible

Before connecting the power source, permanent protective earth connection to the cable distribution should be made

Installation/Maintenance

Install the product correctly complying with the instructions in the user guide.

Do not remove the CableCARD™ from the set-top box.

Do not spray water directly on the unit and do not use chemical solvents such as wax, mosquito spray, alcohol or detergent.

Do not place any metal items such as pins, paper clips or coins on the top of the product.

Do not place the product on unstable support.

Risk of electric shock, Do NOT OPEN.

Do not disassemble, repair, or remodel.

Wipe the product with a soft and dry cloth when cleaning.

No connection to an antenna.

TABLE OF CONTENTS

TROUBLESHOOTING **19**

ANNEX **20**

BEFORE USE

Digital HD DVR OCAP STB

Digital HD DVR OCAP STB (Digital High-Definition Digital Video Recorder OpenCable Application Platform Set-Top Box) provides high quality video and audio broadcasting, and interactive services including Video-On-Demand.

Digital HD DVR OCAP STB (SMT-H3272) provides the following functions.

– An MPEG decoder capable of processing HD/SD stream

– SCTE55-1, 55-2 and DOCSIS Cable Modem for OOB Signaling

– Digital AV transmission, such as IEEE1394 and HDMI

– Content Protection

– CableCARD Interface for CAS

– OCAP™ 1.0 application platform

– Recording: Up to 130 hours for SD (Standard Definition) stream, Up to 30 hours for HD (High Definition) stream.

– DVR Features

– MoCA (Multimedia over Coax Alliance)

Package Contents

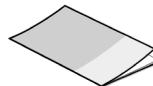Please make sure the following items are contained in your product package box.

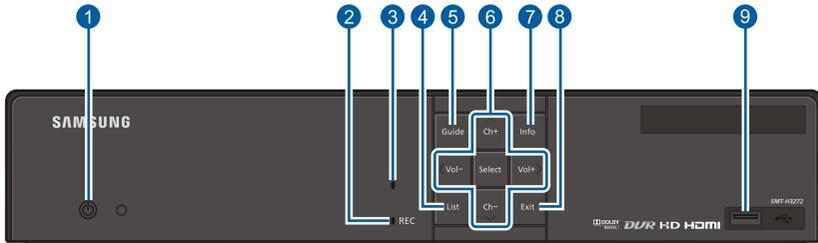| SMT-H3272 |
|---|

HDMI Cable	Power Cable	User Guide

Names and Functions

Names and functions on the front and rear panel of the STB are described as follows:

Front Panel

The buttons and LEDs on the front are described as follows:

Name	Function
❶ **Active/Standby Button**	– Active Mode: The STB is in operation mode and you can get broadcasting. The LED is illuminated. – Standby Mode: The power is supplied and it is in ready to active status. The LED is dimmed and all the A/V outputs are disabled.
❷ **REC LED**	Turn on red LED when the STB is recorded to HDD.
❸ **MoCA LED**	Turn on blue LED when the STB is linked with other STB by MoCA application.
❹ **List Button**	Display the program list saved in HDD.
❺ **Guide Button**	Move to the **[On screen Guide]** screen.
❻ **Ch±/Vol±/Select Button**	– **[Ch+] [Ch–]:** menu movement, channel selection. – **[Vol+] [Vol–]:** menu movement, volume adjustment. – **[Select]:** select the menu.
❼ **Info Button**	Display the current channel number, selected menu and detailed information of an item.
❽ **Exit Button**	Exit menus, guide and program information.
❾ **USB Port**	Connect to external USB devices, such as a keyboard or mouse.

Rear Panel

The port names and functions of the rear panel are described as follows:
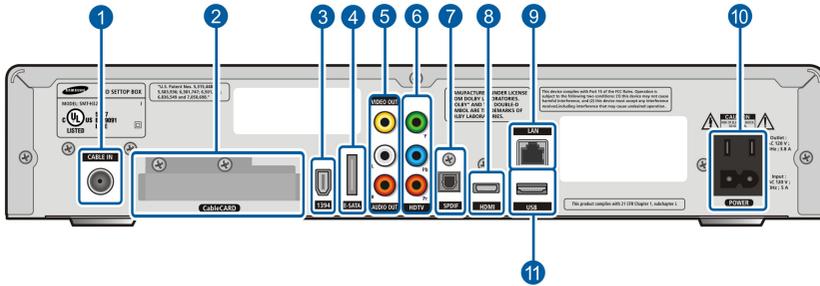
Name	Function
❶ **CABLE IN**	Connect the coaxial cable that transmits the signal from the Cable Service Provider.
❷ **CableCARD Slot**	Allow CableCARD access.
❸ **1394**	Connect an IEEE1394 cable to IEEE1394 (Firewire) supported HDTV.
❹ **E-SATA**	Connect to external HDD
❺ **VIDEO/AUDIO OUT**	Connect Video & Audio cable (RCA cable) to send an analog Video/Audio signal to the TV or VCR.
❻ **Y/Pb/Pr OUT (HDTV)**	Connect the component (Y/Pb/Pr) output ports to the component input ports on your HDTV.
❼ **SPDIF**	Connect a Digital Audio cable (Optical cable) to send a digital audio signal to a digital audio device (an amplifier or home theater).
❽ **HDMI**	Connect a HDMI cable to a HDMI supported HDTV.
❾ **LAN**	Connect a LAN cable to a LAN port of another STB. (option)
❿ **POWER**	Connect the power cable to supply AC power to the STB.
⑪ **USB**	Connect to external USB devices, such as a keyboard or mouse.

DVR Features

SMT-H3272 supports DVR feature through the HDD (Hard Disk Drive) as follows.

Feature	Description
File Playback	Play, Stop, Rewind, Pause for recorded contents.
File Trick Mode	1, 4, 8, 32 times FFP (Fast Forward Play) 1, 4, 8, 32 times FRP (Fast Rewind Play) 1/2, Frame by frame skipping SFP (Slow Forward Play) 1/2, Frame by frame SRP (Slow Rewind Play)
Time-Shift Recording	User can pause live TV program for a certain amount of time, and resume it to watch. The STB allows 90 minutes of recording for Time-shift recording.
Instant Recording	Record live TV program instantly
Watching and Recording	Record two live TV programs simultaneously while watching two recorded programs on HDD.
Audio/Radio Recording	Audio or Radio program recording
Simultaneous Recording and Time Shift Recording	Up to two Simultaneous Recording and Time-Shift Recording on live TV programs
EPG Recording	Scheduled recording using EPG

CableCARD™

CableCARD is the STB authorization device, which allows subscribers to watch digitally encrypted programs.

CableCARD is inserted by the service provider when a digital broadcasting receiver is installed.

> ⚠ CAUTION
>
> **CableCARD Use**
>
> Do not remove the CableCARD. CableCARD failure or service disruption may occur.

INSTALLATION

Follow the instructions below to see how to install the digital HD STB.

Installation Environment

The proper installation environment for the STB is as follows.

| Item	Description
Operation Temperature	32~104 ℉
Operation Humidity	Equal to or lower than 95% (104 ℉)
Power Consumption	33 W Max.
Rated Input Voltage	AC 120 V, 60 Hz
Channel Input Frequency	54~1002 MHz

Peripheral Device Connection

The method of connecting the cable and each peripheral device to the STB is as follows:
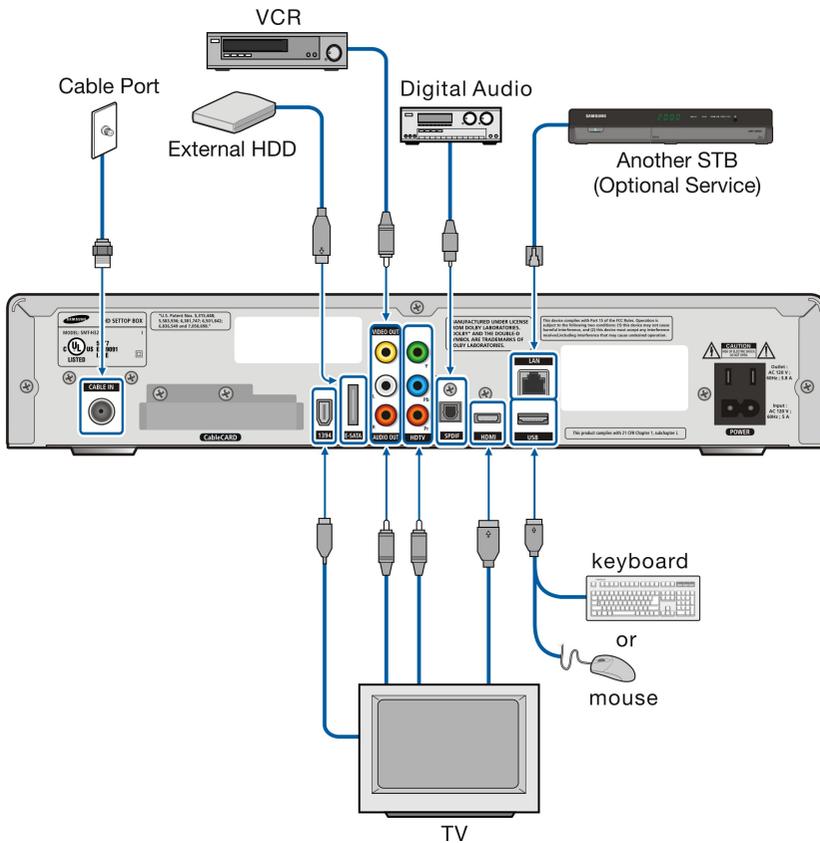
(The product image may differ from the actual product.)

Connection to a TV Having a Composite Port

This section describes how to connect to a TV having a composite port.
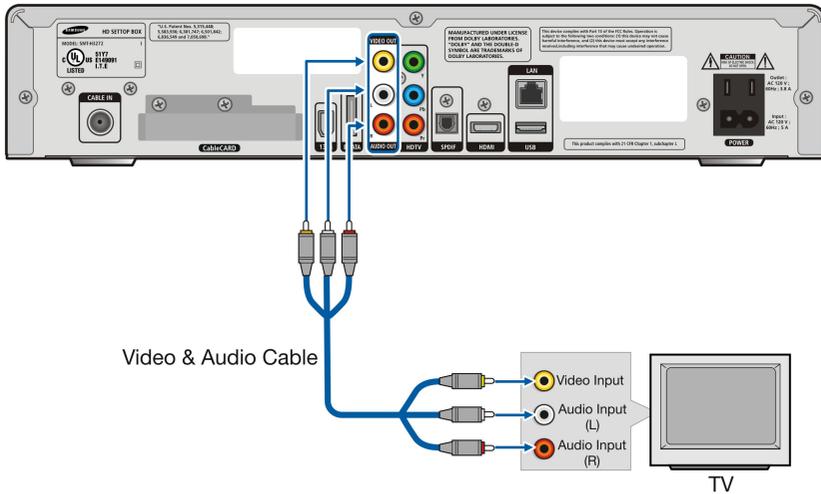
Video & Audio Cable

Video Input
Audio Input (L)
Audio Input (R)

TV

Video Connection

Using a video connector of Video & Audio cable, connect the **VIDEO OUT** port on the rear panel of the STB to the **Video Input** port on the TV.
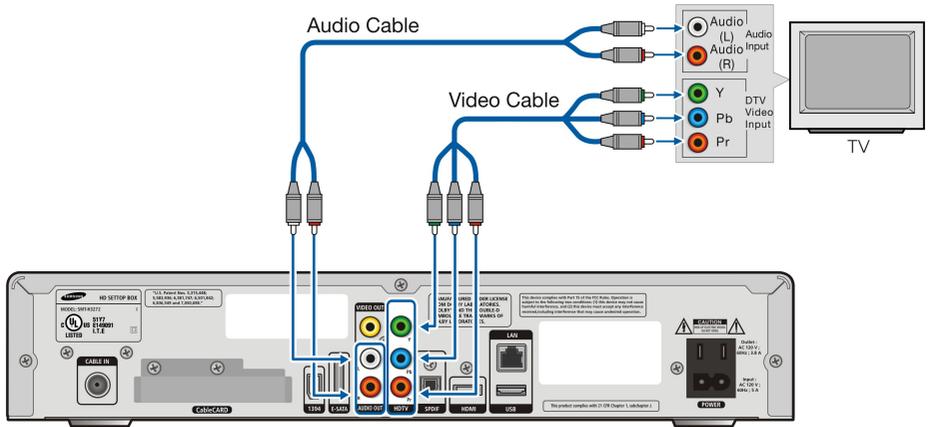
Audio Connection

Using an Audio cable or audio connectors of Video & Audio cable, connect the **AUDIO OUT (L/R)** ports on the rear panel of the STB to the **Audio Input (L/R)** ports on the TV.

Be sure to match the audio ports with the plugs of the same color.

Connection to a TV Having Component Ports (Y, Pb, Pr)

This section describes how to connect to a TV having component ports (Y, Pb, Pr).

When connecting the Component Video and Audio cables, be sure to match the ports to the plugs of the same color.
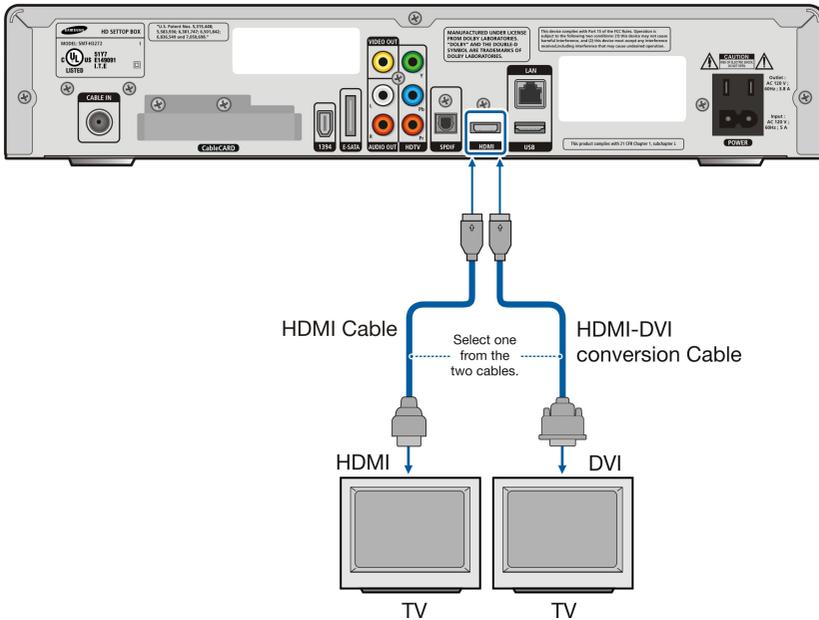
Video Connection

Using a Video (Component) cable, connect the **Y, Pb, Pr (HDTV)** port on the rear panel of the STB to the **Y, Pb, Pr (DTV Video Input)** port on the TV.

Audio Connection

Using an Audio cable, connect the **AUDIO OUT (L/R)** ports on the rear panel of the STB to the **Audio Input (L/R)** ports on the TV.

HDMI Cable Connection

This section describes how to connect a TV to the STB by using an HDMI cable.

HDMI Connection

Connect the **HDMI** port on the rear panel of the STB with the **HDMI** port of your digital TV by using an HDMI cable. As an HDMI cable carries audio signals, a separate audio connection to your TV is not needed.

DVI Connection

Connect the **HDMI** port on the rear panel of the STB with the **DVI input** port of your digital TV by using the HDMI-DVI conversion cable.

If using a DVI cable, a separate audio connection must also be made.

> **NOTE**
>
> **High Definition Multimedia Interface (HDMI)**
>
> The HDMI port provides high-definition video and is the highest quality video connection.

◻◻ DOLBY DIGITAL Digital Audio Connection

This section describes how to connect a digital audio (an amplifier or home theater that has a Dolby Digital decoding function).

Digital Audio Cable
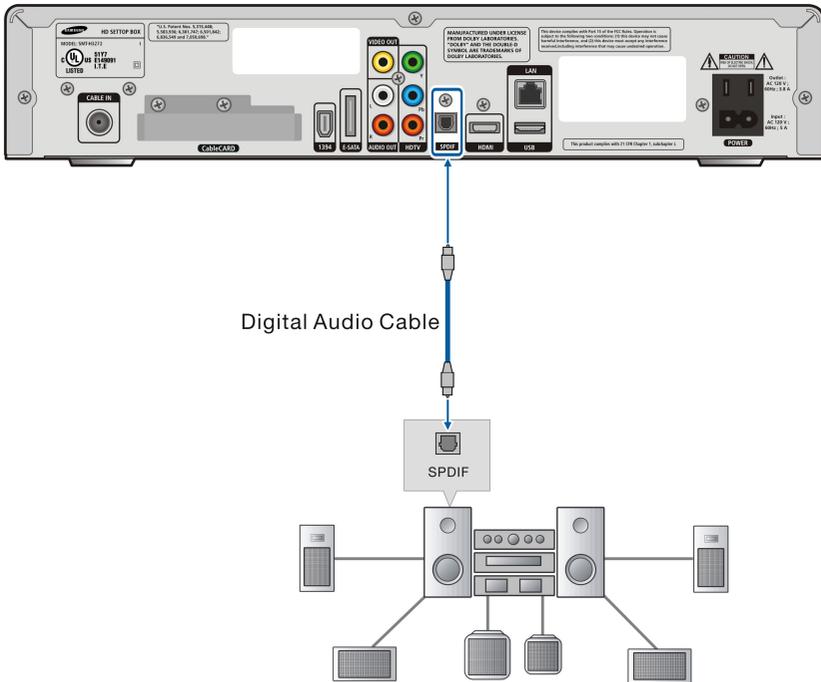
SPDIF

Using a Digital Audio cable (Optical cable), connect the **SPDIF** port on the rear panel of the STB to the **SPDIF** port on the digital audio (an amplifier or home theater that has a Dolby Digital decoding function).

Use the connection to enjoy the digital sound of 5.1 channels.

VCR Connection

This section describes how to connect a VCR to the STB.
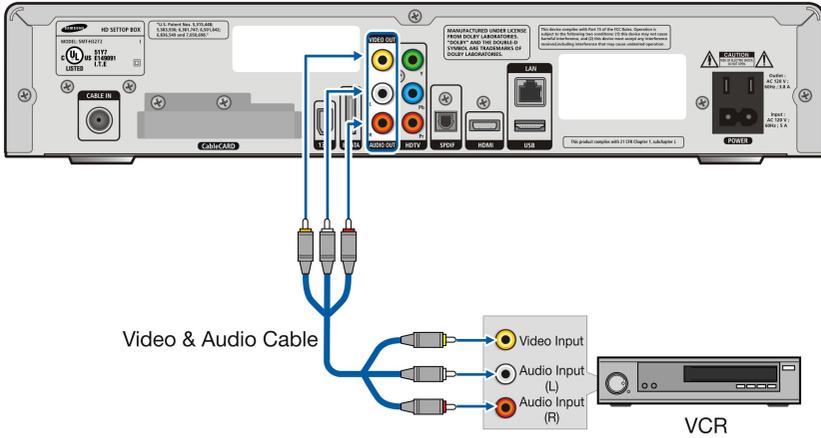
Video & Audio Cable

VCR

Video Connection

Using a video connector of Video & Audio cable, connect the **VIDEO OUT** port on the rear panel of the STB to the **Video Input** port on the VCR.

Audio Connection

Using an Audio cable or audio connectors of Video & Audio cable, connect the **AUDIO OUT (L/R)** ports on the rear panel of the STB to the **Audio Input (L/R)** ports of the VCR.

Be sure to match the audio ports with the plugs of the same color.

Home Network Connection (optional service)

This section describes how to connect another STB to your STB by using an Ethernet cable.

Ethernet Cable

Another Set-top box
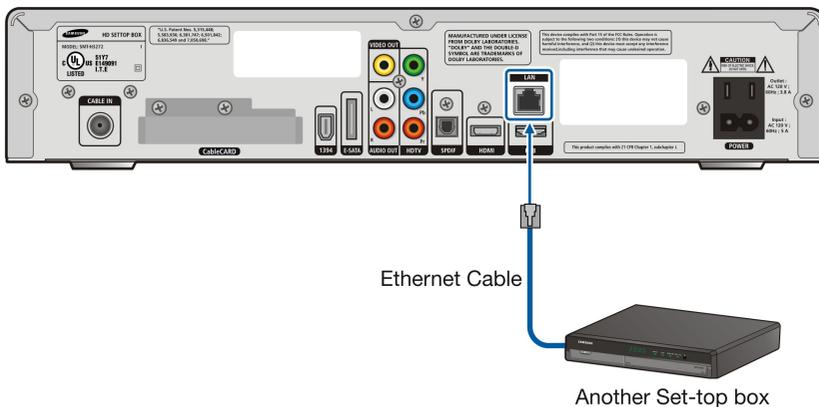
Connect the **LAN** port on the rear of the STB with the **LAN** port of another STB by using an Ethernet cable.

E-SATA Connection (External HDD)

This section describes how to connect additional HDD for DVR (Digital Video Recording).

E-SATA Cable
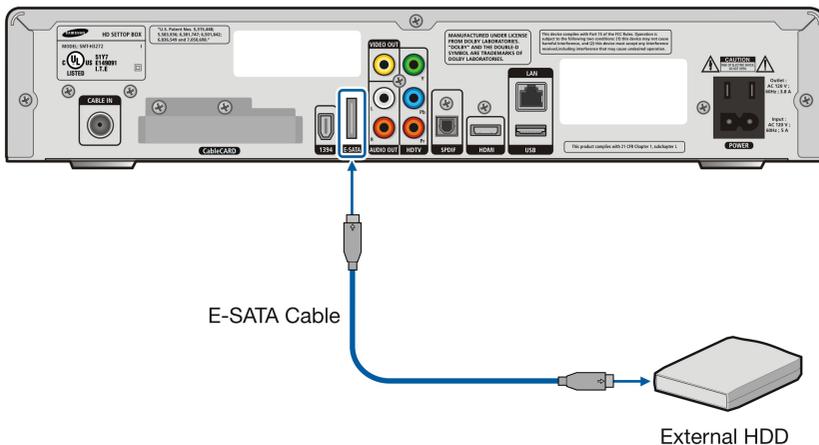
External HDD

Connect the **E-SATA** port on rear of the STB with **E-SATA** port of external HDD by using E-SATA cable.

USB Connection

This section describes how to connect additional USB devices like USB keyboard or mouse.

USB Cable

keyboard

or

mouse
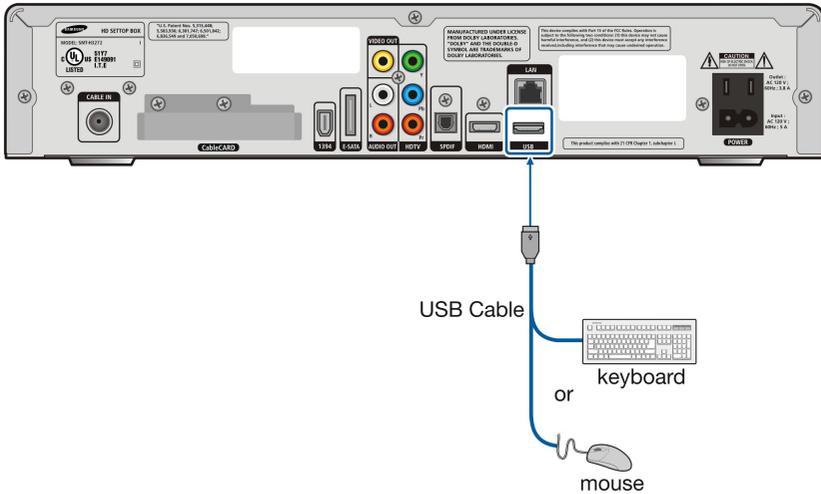
Connect the **USB** port on rear of the STB with USB devices by using USB cable.

TROUBLESHOOTING

This section describes problems you may encounter while using the STB.

If a problem occurs in the STB, check the following items first.

Screen

Trouble	Solution
The TV screen does not appear.	1. Check if the power of the TV and STB are turned on. 2. Check if the cable is connected to the 'CABLE IN' port. 3. Check if the STB is selected as the TV's source.

Remote Control

Trouble	Solution
The remote control does not operate.	1. Check if the remote control is suitable for use with the STB. 2. Check if the remote control operates normally after changing the batteries. 3. Check if the batteries are inserted correctly in the remote control. 4. Check if any obstacle exists between the STB and the remote control. 5. Check if the remote control operates normally when used at a close distance.

General

Trouble	Solution
No sound is emitted in the TV or the audio.	1. Check if the audio ports of the TV are properly connected to the audio output ports of the STB. 2. If the audio cable is connected properly, check if the mute function is set. If the mute function is set, press the [Mute] button of the remote control in order to release the mute function.

ANNEX

Specification

The specification of SMT-H3272 as follows:

Category	Description
Video Output	Composite (VIDEO OUT), Component (Y, Pb, Pr)
Audio Output	Stereo L/R (AUDIO OUT), SPDIF Optic (SPDIF)
Video/Audio Output	HDMI, IEEE1394
E-SATA Port	External HDD
USB Port	USB 2.0 2 port (front/rear)
OOB (Out of Band)	**FDC (Forward Data Channel)** – RF Input Tuning Range: 70 to 130 MHz – RF Input Level Range: -15 to +15 dBmV – Format: SCTE 55-1, 55-2 **RDC (Reverse Data Channel)** – RF Output Frequency Range: 5 to 42 MHz – Transmit Level Range: +26 to +60 dBmV – Encoding: QPSK
DSG (DOCSIS Set-top Gateway)	**Downstream** – RF Input Tuning Range: 88 to 860 MHz – RF Input Modulation: 64QAM/256QAM – RF Input Level Range: -15 to +15 dBmV **Upstream** – RF Output Frequency Range: 5 MHz to 42 MHz – RF Output Modulation: QPSK/16 QAM, 64QAM – Transmit Level Range: +8 to +60 dBmV

Category		Description
MoCA	Input Frequency	1125 to 1525 MHz MoCA D-Band Standard Channel Plans.
	Signal Modulation	OFDM
	Channel Bandwidth (TX/RX)	50 MHz
	Max. Number of Nodes	16
	Max. MAC Throughput	Up to 175 Mbps
	Max. Packet Error Rate	1e-5
	QoS	3-Level Prioritized and Parameterized
Rated Input Voltage		AC 120 V, 60 Hz
Power Consumption		33 W Max.
Operation Temperature		32~104 ℉
Size (mm)		380 (Width) × 281 (Depth) × 65 (Height)
Weight (kg)		2.91
HDD		500 GB (SATA)

Cable Specifications

Category	Description
Channel Input Frequency	54 to 1002 MHz
Cable Input Signal level Range	-15 to +15 dBmV
Cable Input Signal Modulation	64/256 QAM

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This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited consumer uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Macrovision Installation Recommendation

Do not connect the unit through a VCR. Video signals fed through VCRs may be affected by copyright protection systems and the picture will be distorted on the television. Some PPV or VOD programs may be protected by copyright protection systems.

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Digital Television Transition Notice

This device contains a digital television tuner, so it should receive digital over the air TV programming, with a suitable antenna, after the end of full-power analog TV broadcasting in the United States on February 17, 2009. Some older television receivers, if they rely on a TV antenna, will need a TV Converter to receive over the air digital programming, but should continue to work as before for other purposes (e.g., for watching low-power TV stations still broadcasting in analog, watching pre-recorded movies, or playing video games).

When a Converter is used with an older television receiver, a signal splitter might be necessary to continue to receive low-power analog broadcasts via an antenna.

For more information, please see ww.DTV.gov.

For information on the TV Converter program, and on government coupons that may be used toward the purchase of one, see www.dtv2009.gov, or call the NTIA at 1-888-DTV-2009.

Note to CATV System Installer

This reminder is provided to call the CATV system installer's attention to Section 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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xfsprogs	GPL 2.0	dhcpd	GPL 2.0
tftpd	GPL 2.0	fdisk	GPL 2.0
libuClibc.so	LGPL 2.1	ld.so	LGPL 2.1
libc.so	LGPL 2.1	libm.so	LGPL 2.1
libpthread.so	LGPL 2.1	libgcc_s.so	LGPL 2.1
libstdc++	LGPL 2.1		

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   c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

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Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

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