SMT-H4372
User Guide

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

<table>
<thead>
<tr>
<th>Warning</th>
<th>Provides information or instructions that you should follow in order to avoid personal injury or fatality.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caution</td>
<td>Provides information or instructions that you should follow in order to avoid a service failure or damage to your set-top box.</td>
</tr>
<tr>
<td>Note</td>
<td>Indicates additional information for reference.</td>
</tr>
<tr>
<td>Checks</td>
<td>Provides the operator with checkpoints for stable system operation.</td>
</tr>
</tbody>
</table>

Symbols

<table>
<thead>
<tr>
<th>Caution</th>
<th>Indication of a general caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restriction</td>
<td>Indication for prohibiting an action for a product</td>
</tr>
<tr>
<td>Instruction</td>
<td>Indication for commanding a specifically required action</td>
</tr>
</tbody>
</table>
WARNING

Power
- Insert the power plug firmly.
- Do not touch the main body, power cable, or power plug with wet hands.
- Do not connect multiple devices to a single outlet simultaneously.
- If video/sound cable generates heat after connection, pull out the power cord and contact customer service immediately.

Installation/Maintenance
- Do not install in humid or dusty areas, and avoid installing near heating devices.
- Keep flammable substances or sprays away from the set-top box.
- Do not place heavy objects on this product.
- Do not cover the top.
- To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.
- Pull out the power plug during thunderstorms or when not used for a prolonged period of time.
- 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.
- Class 1 LED Product.
- Ask the installation engineer to check if the set-top box to be connected is correctly grounded.
- This product complies with 21 CFR Chapter 1, subchapter J.
## CAUTION

### Power

<table>
<thead>
<tr>
<th>Icon</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>⚠️</td>
<td>Connect your TV after powering off the TV and the set-top box by pulling out the power plug.</td>
</tr>
<tr>
<td>✖️</td>
<td>The socket-outlet shall be installed near the equipment and shall be easily accessible.</td>
</tr>
<tr>
<td>✖️</td>
<td>Do not insert the power plug before connecting the power cable to the product.</td>
</tr>
<tr>
<td>⚠️</td>
<td>Before connecting the power source, permanent protective earth connection to the cable distribution should be made.</td>
</tr>
<tr>
<td>⚠️</td>
<td>The Mains plug is used as a disconnect device and shall stay readily operable at any time.</td>
</tr>
</tbody>
</table>

### Installation/Maintenance

<table>
<thead>
<tr>
<th>Icon</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>⚠️</td>
<td>Install the product correctly complying with the instructions in the user guide.</td>
</tr>
<tr>
<td>✖️</td>
<td>No connection to an antenna.</td>
</tr>
<tr>
<td>✖️</td>
<td>Apparatus shall not be exposed to dripping or splashing and no objects filled with liquid, such as vases, shall be placed on the apparatus.</td>
</tr>
<tr>
<td>✖️</td>
<td>Do not remove the CableCARD™ from the set-top box.</td>
</tr>
<tr>
<td>✖️</td>
<td>Do not place any metal items such as pins, paper clips or coins on the top of the product.</td>
</tr>
<tr>
<td>✖️</td>
<td>Risk of electric shock, Do NOT OPEN.</td>
</tr>
<tr>
<td>✖️</td>
<td>Do not place the product on unstable support.</td>
</tr>
<tr>
<td>✖️</td>
<td>Wipe the product with a soft and dry cloth when cleaning.</td>
</tr>
<tr>
<td>✖️</td>
<td>Do not disassemble, repair, or remodel.</td>
</tr>
</tbody>
</table>

### Cautions regarding data loss (HDD management)

1. When handling, take care not to damage the data in the hard disc.
   - Hard discs are vulnerable to problems caused by the external environment or to impact during use, so take care not to damage the device.
   - Take care not to move the set-top box while the power is on, or to subject it to impact, as this may damage the data.
2. Situations where the hard disc and data may be damaged
   - The hard disc and data may be damaged if subjected to shock while moving the set-top box or during installation.
   - The hard disc and data may be damaged when the set-top box is reset (reconfigured) or if there is a power outage while the hard disc is running.
   - Data may be irrecoverable for a variety of several reasons (e.g. a virus infection).
   - The hard disc and data may be damaged by turning the power off while recording or playing.
   - Files may be damaged or bad sectors may result if the set-top box is subjected to shock or moved while the hard disc is operating.
Important Safety Instructions

Read these operating instructions carefully before using the unit. Follow all the safety instructions listed below. Keep these operating instructions handy for future reference.

1) Read these instructions.
2) Keep these instructions.
3) Heed all warnings.
4) Follow all instructions.
5) Do not use this apparatus near water.
6) Clean only with dry cloth.
7) Do not stack equipment
8) Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
9) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
10) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
11) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
12) Only use attachment/accessories specified by the manufacturer.
13) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
14) Unplug this apparatus during lightning storms or when unused for long periods of time.
15) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
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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-H4372) 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 HDMI
- Content Protection
- CableCARD Interface for CAS
- OCAP™ 2.0 application platform
- Recording: Up to 400 hours for SD (Standard Definition) stream, Up to 90 hours for HD (High Definition) stream.
- DVR Features
- MoCA 2.0 (Multimedia over Coax Alliance)

Package Contents

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

SMT-H4372

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:

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Active/Standby Button</td>
<td>- Active Mode: The STB is in operation mode and you can get broadcasting.</td>
</tr>
<tr>
<td></td>
<td>- Standby Mode: The power is supplied and it is in ready to active status. All the A/V outputs are disabled.</td>
</tr>
<tr>
<td>2  Remote Control Sensor</td>
<td>Detect signals from the remote control.</td>
</tr>
<tr>
<td>3  Power LED</td>
<td>- Active Mode: The LED is illuminated.</td>
</tr>
<tr>
<td></td>
<td>- Standby Mode: The LED is dimmed.</td>
</tr>
<tr>
<td>4  MoCA LED</td>
<td>Turn on YellowGreen LED when the STB is linked with other STB by MoCA application.</td>
</tr>
<tr>
<td>5  REC LED</td>
<td>Turn on red LED when the STB is recorded to HDD.</td>
</tr>
</tbody>
</table>
Rear Panel

The port names and functions of the rear panel are described as follows:

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 CABLE IN</td>
<td>Connect the coaxial cable that transmits the signal from the Cable Service Provider.</td>
</tr>
<tr>
<td>2 IR INPUT</td>
<td>TBD</td>
</tr>
<tr>
<td>3 Y/Pb/Pr OUT (HDTV)</td>
<td>Connect the component (Y/Pb/Pr) output ports to the component input ports on your HDTV.</td>
</tr>
<tr>
<td>4 VIDEO/AUDIO OUT</td>
<td>Connect a Video &amp; Audio cable (RCA cable) to send an analog Video/Audio signal to the TV or VCR.</td>
</tr>
<tr>
<td>5 DIGITAL AUDIO OUT (OPTICAL)</td>
<td>Connect a Digital Audio cable (Optical cable) to send a digital audio signal to a digital audio device (an amplifier or home theater).</td>
</tr>
<tr>
<td>6 HDMI OUT</td>
<td>Connect a HDMI cable to a HDMI port supported HDTV.</td>
</tr>
<tr>
<td>7 LAN</td>
<td>Only for maintenance purposes.</td>
</tr>
<tr>
<td>8 USB</td>
<td>Only for maintenance purposes.</td>
</tr>
<tr>
<td>9 E-SATA</td>
<td>Connect to external HDD.</td>
</tr>
<tr>
<td>10 CableCARD Slot</td>
<td>Allow CableCARD access. Normal Cover is for Cisco CableCard. Blue Cover is for Motorola CableCard.</td>
</tr>
<tr>
<td>11 POWER</td>
<td>Connect the power cable to supply AC power to the STB.</td>
</tr>
</tbody>
</table>
DVR Features

SMT-H4372 supports DVR feature through the HDD (Hard Disk Drive) as follows.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Playback</td>
<td>Play, Stop, Rewind, Pause for recorded contents.</td>
</tr>
<tr>
<td>File Trick Mode</td>
<td>1, 4, 8, 32 times FFP (Fast Forward Play)</td>
</tr>
<tr>
<td></td>
<td>1, 4, 8, 32 times FRP (Fast Rewind Play)</td>
</tr>
<tr>
<td></td>
<td>1/2, Frame by frame slipping SFP (Slow Forward Play)</td>
</tr>
<tr>
<td></td>
<td>1/2, Frame by frame SRP (Slow Rewind Play)</td>
</tr>
<tr>
<td>Time-Shift Recording</td>
<td>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.</td>
</tr>
<tr>
<td>Instant Recording</td>
<td>Record live TV program instantly</td>
</tr>
<tr>
<td>Watching and Recording</td>
<td>Record six live TV programs simultaneously while watching one recorded programs on HDD.</td>
</tr>
<tr>
<td>Audio/Radio Recording</td>
<td>Audio or Radio program recording</td>
</tr>
<tr>
<td>Simultaneous Recording and</td>
<td>Up to six Simultaneous Recording and up to two</td>
</tr>
<tr>
<td>Time Shift Recording</td>
<td>Simultaneous Time-Shift Recording on live TV programs</td>
</tr>
<tr>
<td>EPG Recording</td>
<td>Scheduled recording using EPG</td>
</tr>
</tbody>
</table>

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.

**CableCARD Use**

Do not remove the CableCARD.
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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation Temperature</td>
<td>32~104 °F</td>
</tr>
<tr>
<td>Operation Humidity</td>
<td>Equal to or lower than 95% (104 °F)</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>33 W Max.</td>
</tr>
<tr>
<td>Rated Input Voltage</td>
<td>AC 120 V, 60 Hz</td>
</tr>
<tr>
<td>Channel Input Frequency</td>
<td>54~1002 MHz</td>
</tr>
</tbody>
</table>
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.)*

* Samsung does not supply a HDMI cable.
Connection to a TV Having a Composite Port

This section describes how to connect to a TV having a composite port.

### 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 Cable

* Samsung does not supply a 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.

**High Definition Multimedia Interface (HDMI)**

The HDMI port provides high-definition video and audio, and is the highest quality video connection.
Digital Audio Connection

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

Using a Digital Audio cable (Optical cable), connect the DIGITAL AUDIO IN port on the rear panel of the STB to the DIGITAL AUDIO IN 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 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.

Recommended Installation Notice

If degraded picture quality is observed while viewing copy-protected pay-per-view programs, connect the set-top box directly to the TV set. Do not connect through a VCR.
# 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

<table>
<thead>
<tr>
<th>Trouble</th>
<th>Solution</th>
</tr>
</thead>
</table>
| 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

<table>
<thead>
<tr>
<th>Trouble</th>
<th>Solution</th>
</tr>
</thead>
</table>
| 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

<table>
<thead>
<tr>
<th>Trouble</th>
<th>Solution</th>
</tr>
</thead>
</table>
| No sound in the TV or the digital 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. |
### Specification

The specification of SMT-H4372 as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Output</td>
<td>Composite (VIDEO OUT), Component (Y, Pb, Pr)</td>
</tr>
<tr>
<td>Audio Output</td>
<td>Stereo L/R (AUDIO OUT), SPDIF Optical (SPDIF)</td>
</tr>
<tr>
<td>Video/Audio Output</td>
<td>HDMI 1.4a</td>
</tr>
<tr>
<td>OOB (Out of Band)</td>
<td><strong>FDC (Forward Data Channel)</strong></td>
</tr>
<tr>
<td></td>
<td>− RF Input Tuning Range: 70 to 130 MHz</td>
</tr>
<tr>
<td></td>
<td>− RF Input Level Range: -15 to +15 dBmV (QPSK)</td>
</tr>
<tr>
<td></td>
<td>− Format: SCTE 55-1, 55-2</td>
</tr>
<tr>
<td>RDC (Reverse Data Channel)</td>
<td>− RF Output Frequency Range: 5 to 42 MHz</td>
</tr>
<tr>
<td></td>
<td>− Transmit Level Range: +26 to +58 dBmV</td>
</tr>
<tr>
<td></td>
<td>− Encoding: QPSK</td>
</tr>
<tr>
<td>DSG (DOCSIS Set-top Gateway)</td>
<td><strong>Downstream</strong></td>
</tr>
<tr>
<td></td>
<td>− RF Input Tuning Range: 88 to 1002 MHz</td>
</tr>
<tr>
<td></td>
<td>− RF Input Modulation: 64QAM/256QAM</td>
</tr>
<tr>
<td></td>
<td>− RF Input Level Range: -15 to +15 dBmV</td>
</tr>
<tr>
<td>Upstream</td>
<td><strong>Upstream</strong></td>
</tr>
<tr>
<td></td>
<td>− RF Output Frequency Range: 5 MHz to 42 MHz</td>
</tr>
<tr>
<td></td>
<td>− RF Output Modulation: QPSK/16 QAM, 64QAM</td>
</tr>
<tr>
<td></td>
<td>− Transmit Level Range: +8 to +58 dBmV</td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>MoCA: Input Frequency</td>
<td>1125 to 1675 MHz MoCA D-Band Standard Channel Plans.</td>
</tr>
<tr>
<td>Signal Modulation</td>
<td>OFDM</td>
</tr>
<tr>
<td>Channel Bandwidth (TX/RX)</td>
<td>100 MHz</td>
</tr>
<tr>
<td>Max. Number of Nodes</td>
<td>16</td>
</tr>
</tbody>
</table>
| Max. MAC Throughput | Up to 400 Mbps (baseline mode)  
500 Mbps (turbo mode) |
| Compatibility       | Backward compatible with the MoCA 1.1                                       |
| Rated Input Voltage | AC 120 V, 60 Hz                                                              |
| Power Consumption    | 33 W Max.                                                                   |
| Operation Temperature | 32~104 °F                                                                 |
| Size (mm)            | 380 (Width) × 277 (Depth) × 65 (Height)                                     |
| Weight (kg)          | 2.8                                                                         |
| HDD                 | 1 TB (SATA)                                                                  |
Cable Specifications

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel Input Frequency</td>
<td>54 to 1002 MHz</td>
</tr>
<tr>
<td>Cable Input Signal level Range</td>
<td>-15 to +15 dBmV</td>
</tr>
<tr>
<td>Cable Input Signal Modulation</td>
<td>64/256 QAM</td>
</tr>
</tbody>
</table>

Rovi Product Notice

This item incorporates copy protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation. Reverse engineering and disassembly are prohibited.

Dolby Logo Usage Approval

Manufactured under license from Dolby Laboratories.

Dolby and the double-D symbol are trademarks of Dolby Laboratories.

Trademarks of Cable Television Laboratories Usage Approval

OpenCable™, DOCSIS™, CableCARD™, OCAP™ are trademarks of Cable Television Laboratories, Inc. All other trademarks are the property of their respective owners.

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.

HDMI Product Notice

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.
ENERGY STAR qualified model only

- Your Samsung Set-top Box is ENERGY STAR qualified in its factory default settings. Change to certain features, settings and functionality in this Set-top Box can change the power consumption, possibly beyond the limits required for ENERGY STAR qualification.
- As an ENERGY STAR partner, Samsung has determined that this product or product models meets the ENERGY STAR guidelines for energy efficiency.

FCC Class B Notice

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
  1. This device may not cause harmful interference, and
  2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

User Information

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. If necessary, consult with your dealer or an experienced radio/television technician for additional suggestions. You may find the booklet called How to Identify and Resolve Radio/TV Interference Problems helpful. This booklet was prepared by the Federal Communications Commission. It is available from the U.S. Government Printing Office. Washington, DC 20402, Stock Number 004-000-00345-4.

The party responsible for product compliance:

SAMSUNG ELECTRONICS CO., LTD.
America QA Lab of Samsung
3351 Michelson Drive
Suite #290, Irvine, CA92612 USA

22 © SAMSUNG Electronics Co., Ltd.
Open Source Announcement

Some software components of this product incorporate source code covered under the GNU General Public License (GPL) and the GNU Lesser General Public License (LGPL) etc.

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