SAFETY CONCERNS

For product safety and correct operation, the following information shall be read before the installation and operation.

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 the product.

**NOTE**
Indicates additional information for reference.

Symbols

**Caution**
Indication of a general caution

**Restriction**
Indication for prohibiting an action for the product

**Instruction**
Indication for performing a specific required action
## WARNING

### Power

<table>
<thead>
<tr>
<th><strong>Insert the power plug firmly.</strong></th>
<th><strong>Do not touch the main body, power cord, or power plug with wet hands.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to do so may cause a fire.</td>
<td>Doing so may cause an electric shock.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Do not connect multiple devices to a single outlet simultaneously.</strong></th>
<th><strong>If video/sound cable generates heat after connection, pull out the power cord and contact customer service immediately.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Doing so may cause a fire.</td>
<td>Failure to do so may cause a fire.</td>
</tr>
</tbody>
</table>

### Installation/Maintenance

<table>
<thead>
<tr>
<th><strong>Install the product in an area with good ventilation.</strong></th>
<th><strong>Do not install in humid or dusty areas, and avoid installing near heating devices.</strong></th>
<th><strong>Keep flammable substances or sprays away from the STB.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not doing so may cause product malfunction resulting from the rise of inside temperature.</td>
<td>Doing so may cause a fire or electric shock.</td>
<td>Failure to do so may cause a fire or an explosion.</td>
</tr>
</tbody>
</table>
# Installation/Maintenance

<table>
<thead>
<tr>
<th>Do not place heavy objects on this product.</th>
<th>Do not cover the top.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doing so may cause product damage or a fire resulting from the rise in temperature.</td>
<td>Doing so may cause product malfunction resulting from the rise of inside temperature.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pull out the power plug during thunderstorms or when not used for a prolonged period of time.</th>
<th>Pull out the power plug at once and contact customer service if unusual noise, smell, or smoke comes out.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to do so may cause an electric shock or a fire.</td>
<td>Failure to do so may cause an electric shock or a fire.</td>
</tr>
</tbody>
</table>

# General

<table>
<thead>
<tr>
<th>Check if the coaxial cable is correctly grounded before connecting to the STB.</th>
<th>Ask the installation engineer to check if the STB to be connected is correctly grounded.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-grounded cable may cause a fire.</td>
<td>A non-grounded STB may cause a fire.</td>
</tr>
</tbody>
</table>
## CAUTION

### Power

**Connect your TV after powering off the TV and the STB by pulling out the power plugs.**
Failure to do so may cause a wrong connection with the TV or product damage.

**Do not insert the power plug before connecting the power cable to the product.**
Doing so may cause product damage.

### Installation/Maintenance

**Install the product correctly complying with the instructions in the user guide.**
Failure to do so may cause a product malfunction or reduce its life time.

**Do not spray water directly on the unit and do not use chemical solvents such as wax, benzene, thinner, mosquito spray, aerosol, alcohol, lubricant or detergent.**
Doing so may cause product damage.

**Do not place the product on unstable support.**
The product may fall down from the support and cause product damage.

**Do not disassemble, repair, or remodel.**
Doing so may cause product damage.

**Wipe the product with a soft and dry cloth when cleaning.**
Failure to do so may cause product damage.
Installation/Maintenance

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

Risk of Electric Shock, Do NOT OPEN.
Doing so may cause an electric shock.

General

Class 1 Laser Product.
This product applies 21 CFR 1040.10 (2002), Clause (c), (d) and (e) standard.

Do not remove the CableCARD™ from the STB.
Doing so may cause a CableCARD™ or service failure.
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<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
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<td><strong>TROUBLESHOOTING</strong></td>
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</tr>
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<td><strong>APPENDIX</strong></td>
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</tr>
<tr>
<td>Specifications</td>
<td>26</td>
</tr>
<tr>
<td>Cable Specifications</td>
<td>27</td>
</tr>
</tbody>
</table>
BEFORE USING THE STB

Digital HD STB
Digital HD OCAP STB (Digital High-Definition OpenCable™ Set-top Box) provides high quality video and audio broadcasting, and interactive services including Video-On-Demand.

Digital HD STB (SMT-H3050) 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
Checking Items

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

- **Audio Cable** [GL39-00087A]
- **Video Cable (Component Cable)** [GL39-00054A]
- **Power Cable** [GL39-00092A]
- **User guide** [GL68-00219A]

(The product image may differ from the actual product.)
Names and Functions
Names and functions on the front and rear panel of Set-top box 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>
</table>
| 1 [Active/Standby] Button         | Enable/Disable Standby mode. When Standby mode is on, the LED display is dimmed and all the A/V outputs are disabled. In normal operation mode, the LED in the button is illuminated.  
- Active Mode: The set-top box is in operation mode and you can get broadcasting.  
- Standby Mode: The power is supplied and it is in ready to active status. |
| 2 Time/Channel Display            | - Time: Displays the current time.  
- Channel: Displays the channel number. |
| 3 Exit Button                     | Exit menus, guide and program information.                               |
| 4 Ch +/-, Vol +/- Button          | [Ch +] [Ch -] menu movement, channel selection.  
[Vol +] [Vol -] menu movement, volume adjustment. |
| 6 Info Button                     | Check the current channel number and display the selected menu or detailed information of an item. |
| 7 USB                             | Connect to external USB devices, such as a keyboard or mouse.            |
| 8 CableCARD Slot                  | Allows CableCARD access.                                                 |
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>Power</td>
<td>Connect the power cord to supply AC power to the set-top box.</td>
</tr>
<tr>
<td>CH3/4 OUT</td>
<td>Connect a coaxial cable to RF 3/4 Out to send analog audio and video signals to a TV or VCR. The audio signal from this output only supports mono audio and the video signal only supports Standard Definition (SD) format.</td>
</tr>
<tr>
<td>USB</td>
<td>Connect to external USB devices, such as a keyboard or mouse.</td>
</tr>
<tr>
<td>S-VIDEO OUT</td>
<td>Connect an S-Video cable from S-Video Out to a TV or VCR. Only Standard Definition (SD) format is supported.</td>
</tr>
<tr>
<td>HDMI</td>
<td>Connect an HDMI cable to an HDMI supported HDTV.</td>
</tr>
<tr>
<td>AUDIO OUT/OPTICAL</td>
<td>Connect an optical cable to send a digital audio signal to a digital audio device.</td>
</tr>
<tr>
<td>1394</td>
<td>Connect an IEEE1394 cable to IEEE1394 (Firewire) supported HDTV.</td>
</tr>
<tr>
<td>Y/Pb/Pr Out</td>
<td>Connect the component output ports to the component input on your HDTV.</td>
</tr>
<tr>
<td>Digital Audio Out</td>
<td>Connect an RCA cable to send digital audio signal to the digital audio device.</td>
</tr>
<tr>
<td>Video Out</td>
<td>Connect an RCA cable to send an analog Video signal to the TV or VCR.</td>
</tr>
<tr>
<td>Cable In</td>
<td>Connect the coaxial cable that transmits the signal from the Cable Service Provider.</td>
</tr>
<tr>
<td>Audio Out</td>
<td>Connect an RCA cable to send an analog Audio signal to the TV or VCR.</td>
</tr>
</tbody>
</table>
This page was left blank intentionally.
CableCARD™

What is CableCARD?
CableCARD is an 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. 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 Set-top box 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>Storage Temperature</td>
<td>-4~140 °F</td>
</tr>
<tr>
<td>Operation Humidity</td>
<td>Equal to or lower than 95% (104 °F)</td>
</tr>
<tr>
<td>Storage Humidity</td>
<td>Equal to or lower than 98% (140 °F)</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>Maximum 30 Watts</td>
</tr>
<tr>
<td>Rated Input Voltage</td>
<td>AC 120 V, 60 Hz</td>
</tr>
<tr>
<td>Channel Input Frequency</td>
<td>54~864 MHz</td>
</tr>
</tbody>
</table>

Product Usage and Installation
Make sure to use the product in an environment conforming to the conditions specified in the above table. Failure to do so may result in product damage or reduction in the product life time.

Connection of Digital Broadcasting Receiver and Peripheral Device
- Make sure to request that the technician check if the power of home appliances such as the TV or VCR are properly grounded. If they are not grounded, there may be the danger of a fire.
- After connecting the video/audio cable, in case of generating excessive heat, call the service center. There may be the danger of a fire.
Peripheral Device Connection

The method of connecting the cable and each peripheral device to the digital broadcasting receiver is as follows:

(The product image may differ from the actual product.)

<table>
<thead>
<tr>
<th>Connection Device</th>
<th>Reference Page</th>
<th>Connection Device</th>
<th>Reference Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>18, 19</td>
<td>Video (VCR)</td>
<td>22</td>
</tr>
<tr>
<td>HDMI Cable</td>
<td>20</td>
<td>Coaxial Cable</td>
<td>23</td>
</tr>
<tr>
<td>Digital Audio</td>
<td>21</td>
<td>Connection (TV/Cable Broadcasting)</td>
<td></td>
</tr>
</tbody>
</table>
Connection to a TV Having a Composite or S-VIDEO Jack

Below is the method for connecting to a TV having a composite or S-VIDEO jack.

Connection to TV

When connecting to TV, shut off the power of the TV and the digital broadcasting receiver. Refer to the TV User Guide in order to connect the cables more easily.

♦ Video Connection

1. Connection to the VIDEO OUT jack
   Using a Video cable, connect the VIDEO OUT jack to the Video Input jack on the TV.

2. Connection to the S-VIDEO OUT jack
   Using an S-video cable, connect the S-VIDEO OUT jack to the S-Video Input jack on the TV.

♦ Audio Connection

Using the audio cable, connect the AUDIO OUT (L/R) jacks on the rear panel to the the Audio Input (L/R) jacks on the TV.
Be sure to match the audio jacks with the plugs of the same color.
Connection to a TV Having Component Jacks (Y, Pb, Pr)

See below to connect to a TV having a Component port (Y, Pb, Pr). When connecting the Component Video and Audio cables, be sure to match the jacks to the plugs of the same color.

(The product image may differ from the actual product.)
HDMI Cable Connection

This section describes how to connect the television to the set-top box by using an HDMI cable.

♦ HDMI Connection

Connect the HDMI port on the rear of the Set-top box 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 of the set-top box 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 is the highest quality video connection.
Amplifier Connection

See below to connect a receiver amplifier (an amplifier or Home Theater that has a Dolby Digital decoding function).

Using an Optical cable, connect the Digital Audio Input port of the Dolby digital amplifier to the AUDIO OUT OPTICAL port on rear panel of the STB. If you do not have an Optical cable, use a regular RCA type audio cable to connect the DIGITAL AUDIO OUT port on the STB to the Digital Audio Input on the Dolby Digital Amplifier.

Use either connection to enjoy the digital sound of 5.1 channel.
VCR Connection

See below to connect a VCR to the Set-top box.

(The product image may differ from the actual product.)

♦ Video Connection

1. Connection to S-VIDEO OUT jack
   Using an S-video cable, connect the **S-Video Input** jack of the VCR to the **S-VIDEO OUT** jack on the rear panel of the STB.

2. Connection to VIDEO OUT jack
   Using a video cable, connect the **Video Input** jack of the VCR to the **VIDEO OUT** jack on the rear panel of the STB.

♦ Audio Connection

Using the audio cable, connect the **Audio Input (L/R)** jack of the VCR to the **AUDIO OUT (L/R)** jack on the rear panel of the STB. Be sure to match the audio jacks with the plugs of the same color.
Coaxial Cable Connection

This section describes how to connect your cable service to the Set-top box by using a coaxial cable.

Connect one end of the cable to **CABLE IN** jack of the Set-top box, and connect the other end of the cable to the **Cable Port** inside your home. **The CH3/4 OUT** jack should be connected to the **Cable Input** jack of your television.

When connecting the digital broadcasting receiver with the coaxial cable

Before connecting the coaxial cable to the digital broadcasting receiver, request the installing technician to check if the coaxial cable is grounded. If the cable is not grounded, there may be the danger of a fire.
BASIC SETTING

After connecting power to the STB, if the time is displayed on the Front Panel Time/Channel display screen, the booting is completed.

Rebooting procedure

1. By pressing the three [INFO], [VOL-], [VOL+] buttons simultaneously, STB will be rebooted.

2. When the time is displayed on the Time/Channel display screen, then the booting is completed.

HD Resolution setting procedure

When the TV connected to the STB does not support automatic resolution setting, the STB resolution must be set manually by using the STB Front Panel button. The basic resolution of the STB is 1080I.

1. In the Standby mode, press [Active/Standby] button once.

2. The current resolution is displayed while blinking in the Time/Channel display screen. Then, press the [INFO] button.

3. is displayed, and the resolution can be changed selected by pressing the following buttons.
   ♦ [VOL+]: 1080I  [VOL-]: 720P
   ♦ [CH+]: 480I  [CH-]: 480P

4. When the resolution is selected, save by pressing the EXIT button. is displayed in the Time/Channel display screen.
# Troubleshooting

This section describes possible problems you may experience when using the set-top box. If any problem occurs, please check the following cases first. If the problem is not solved by following the methods below, please contact your local cable provider for technical support.

## The TV Screen Does Not Appear

1. Check if the power of the TV and Set-top box are turned on.
2. Check if the cable is connected to the ‘Cable Input’ jack.
3. Check if the STB is selected as the TV’s source.
4. If the CH3/4 OUT port is connected to an analog TV, check if the basic channel number (CH 3) and the external channel number of the TV match.

## 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.

## No Sound is Emitted in the TV or the Audio

1. Check if the audio jacks of the TV are properly connected to the audio output jacks 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.
## Specifications

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Output</td>
<td>Composite (RCA), Component (RCA), S-Video</td>
</tr>
<tr>
<td>Audio Output</td>
<td>Stereo L/R (RCA), SPDIF Optic, SPDIF PCM (RCA)</td>
</tr>
<tr>
<td>Video/Audio Output</td>
<td>HDMI, IEEE1394</td>
</tr>
<tr>
<td>USB</td>
<td>USB 2.0</td>
</tr>
<tr>
<td>OOB (Out of Band)</td>
<td><strong>FDC (Forward Data Channel)</strong>&lt;br&gt;- RF Input Tuning Range: 70 MHz to 130 MHz.&lt;br&gt;- RF Input level range: -15 to +15 dBmV&lt;br&gt;- Format: SCTE 55-1, 55-2&lt;br&gt;<strong>RDC (Reverse Data Channel)</strong>&lt;br&gt;- RF Output Frequency Range: 5 MHz to 42 MHz.&lt;br&gt;- Transmit level range: +26 to +60 dBmV&lt;br&gt;- Encoding: QPSK</td>
</tr>
<tr>
<td>DSG (DOCSIS Set-top Gateway)</td>
<td><strong>Downstream</strong>&lt;br&gt;- RF Input Tuning Range: 88 to 860 MHz&lt;br&gt;- RF Input Modulation: 64QAM/256QAM&lt;br&gt;- RF Input level range: -15 to +15 dBmV&lt;br&gt;<strong>Upstream</strong>&lt;br&gt;- RF Output Frequency Range: 5 MHz to 42 MHz.&lt;br&gt;- RF Output Modulation: QPSK/16QAM&lt;br&gt;- Transmit level range: +8 to +60 dBmV</td>
</tr>
<tr>
<td>Rated Input Voltage</td>
<td>AC 120 V, 60 Hz</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>Maximum 30 Watts</td>
</tr>
<tr>
<td>Operation Temperature</td>
<td>32~104 °F</td>
</tr>
<tr>
<td>Size (inch)</td>
<td>13.78 (Width) × 9.84 (Depth) × 2.36 (Height)</td>
</tr>
</tbody>
</table>
# Cable Specifications

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel Input Frequency</td>
<td>54 MHz to 864 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>64QAM/256QAM, NTSC Analog</td>
</tr>
<tr>
<td>CH 3/4 Output Signal</td>
<td>NTSC Analog, 3/4 Channel</td>
</tr>
</tbody>
</table>

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## B Class IT Device of Registration Compatible with Electromagnetic Waves for Home

This product can be used for home as device of the registration compatible with electromagnetic waves. This can be used in all areas.

## Dolby Logo Usage Approval

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