

OMX-10HMIP0002 Transmitter

OMX-11IPHM0002 Receiver

H.264 1080p/60 HDMI Over IP Extender with PoE, RS-232, IR

INSTALLATION & SPECIFICATIONS



OMX-10HMIP0002 Transmitter

Transmitter Kit Includes:

- One Transmitter
- One 5VDC/1A Power Adapter
- One IR Transmitter Cable
- One IR Blaster Extension Cable
- Remote Control
- Two Mounting Brackets & Screws
- One Phoenix Plug
- Set Up and Installation CD



OMX-11IPHM0002 Receiver

Receiver Kit Includes:

- One Receiver
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- One IR Receiver Cable,
- One IR Blaster Extension Cable
- Remote Control
- Two Mounting Brackets & Screws
- One Phoenix Plug
- Set Up and Installation CD

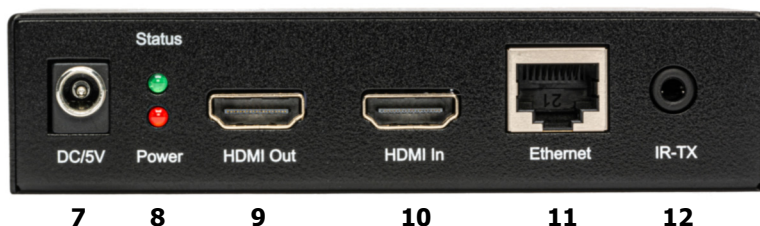


Ocean Matrix OMX-10HMIP0002 & OMX-11IPHM0002 Installation

OMX-10HMIP0002 TRANSMITTER



- 1 RS232 Port
- 2 IR Ext
- 3 Channel Group ID
- 4 Channel Down
- 5 Channel Up
- 6 Reset Button
- 7 Power Input
- 8 LED Indicators: Green—Data Status / Red—Power On
- 9 HDMI Output
- 10 HDMI Input
- 11 CAT5e/6 I/O
- 12 IR-TX



OMX-11IPHM0002 RECEIVER



- 1 RS232 Port
- 2 IR Ext
- 3 Channel Group ID
- 4 Channel Down
- 5 Channel Up
- 6 Reset Button
- 7 Power Input
- 8 LED Indicators: Green—Data Status / Red—Power On
- 9 HDMI Output
- 10 CAT5e/6 I/O
- 11 IR-RX



SPECIFICATIONS

| | |
|-----------------------|---------------------------------|
| Protocol | H.264 Encoder over TCP/IP |
| Compliance | HDMI, HDCP |
| Audio Format | LPCM, Audio sampling rate 48KHZ |
| Transmission Distance | 394 feet/120m over Cat5e/6 |
| IR Frequency | 38-56kHz |
| Streaming Bit Rate | 15Mbps |

SPECIFICATIONS

| | |
|------------------------------|------------------------------|
| Default Baud Rate | 2400bps |
| Supports | IGMP, DHCP |
| Input Voltage | 5VDC@1A |
| Enclosure | Black Powder-Coated Steel |
| Dimensions Each Unit (LxWxH) | 4 3/4 x 3 1/8 x 1 1/8 inches |
| Weight Each Unit | 9.88 oz |

| INPUT RESOLUTION | |
|------------------|--|
| 50Hz | 576i/576P/720P/1080P/1080i |
| 60Hz/59.94Hz | 480i/480p/720p/1080p |
| 30Hz/29.97Hz | 1080P |
| 24Hz | 1080P |
| 25Hz | 1080P |
| VESA 60Hz | 640x480/800x600/1024x768/1280x768/1280x960/1280x1024/1680x1050/1920x1080/1280x720/1360x768/1400x1050 |

CONFIGURATION—Refer to instructions on the included CD

1. When connecting a point-to-point application there is no need to configure the transmitter nor the receiver.
2. To configure point-to-many, many-to-point, or many-to-many, ensure each transmitter and receiver has a unique IP and MAC address and that each transmitter has a unique group ID number using the **IPTV Control Center Program GUI** on the CD.
3. This extender system has been assigned a unique default MAC address for each transmitter and receiver, so there is no need to set the MAC for each unit. You will need to set the IP address and Group ID.

SETTING THE IP ADDRESS—Refer to instructions on the included CD

1. **DHCP (Dynamic host configuration):** When using a DHCP switch, enable DHCP so that the switch assigns a unique IP for the transmitter and receiver. Don't change the IP for the units manually.

Ethernet:

Use DHCP

Default IP address: 192 . 168 . 1 . 11

Default Netmask: 255 . 255 . 255 . 0

Default Gateway: 192 . 168 . 1 . 1

Uart Setting:

Baud Rate: 115200

File to Upgrade Encoder Firmware:

Use DHCP

Default IP address: 192 . 168 . 1 . 12

Default Netmask: 255 . 255 . 255 . 0

Default Gateway: 192 . 168 . 1 . 1

Multicast Group: Group 01(239.255.42.43) Port: 5004

Uart Baud Rate: 115200

2. **Set the IP Via Web Browser:** When using a switch that doesn't support DHCP, change the default IP manually:
 - Transmitter: 192.168.1.11
 - Receiver: 192.168.1.12

INSTALLATION—Refer to instructions on the included CD

1. Use an Ethernet cable to connect the PC and the extender.
 - Ensure that the transmitter and the PC are in the same domain.
 - The IP address of the PC should be different from the IP address of the transmitter and receiver
 - Access the Network Setting Control Panel in Windows to change the IP address to 192.168.1.1
 - Press "OK" to save the configuration.

Continued

INSTALLATION—Refer to instructions on the included CD

2. Login into a Browser:

- 192.168.1.11 (TX default IP) or 192.168.1.12(RX default IP)
- Setup IP address for the TX and RX. TX requires user name: admin and password: admin
- Setup a unique IP address for each TX and each RX, IP: 192.168.1.XX (XX:1-255)
- IP addresses for each TX and RX must be different and can't be the same as the PC's address.

3. After selecting "Use DHCP" or reset the IP Address, click "Submit" (transmitter) or "update DHCP" (receiver).

4. Click 'Reboot'

5. Wait 30 to 60 seconds and restart the extender.

6. Setting the Group ID and Baud Rate Using the Remote Control

- **Factory Reset:** When the Channel LED displays 00 on each unit, press the G/B button on the remote control to select Group ID or Baud Rate. Press the Factory Reset.
- **Choose Group ID 00-63:** press the G/B button to switch to Group ID mode and press + or—on the control to change to the previous or the next Group ID or press the numbers.
- **Choose the Baud Rate:** press the G/B button to switch to Baud Rate mode and press + or—on the control to change the Baud Rate.

| | |
|----|--------------|
| F0 | 2400 default |
| F1 | 4800 |
| F2 | 9600 |
| F3 | 19200 |

| | |
|----|--------|
| F4 | 28800 |
| F5 | 38400 |
| F6 | 57600 |
| F7 | 115200 |

- **Choosing the Source**

As an example, if the connection is:

Source (DVD1) - TX (TX1) - Gigabit Switch – RX (RX1) - TV1
 Source (DVD2) - TX (TX2) - Gigabit Switch – RX (RX2) - TV2
 Source (DVD3) - TX (TX3) - Gigabit Switch – RX (RX3) - TV3

The group ID of the transmitters is: TX1 (01), TX2 (02), TX3 (03)

If you need to display Source on TV1, then set the Group ID of RX1 the same as TX1.

7. Setting the Group ID and Baud Rate Using a Browser

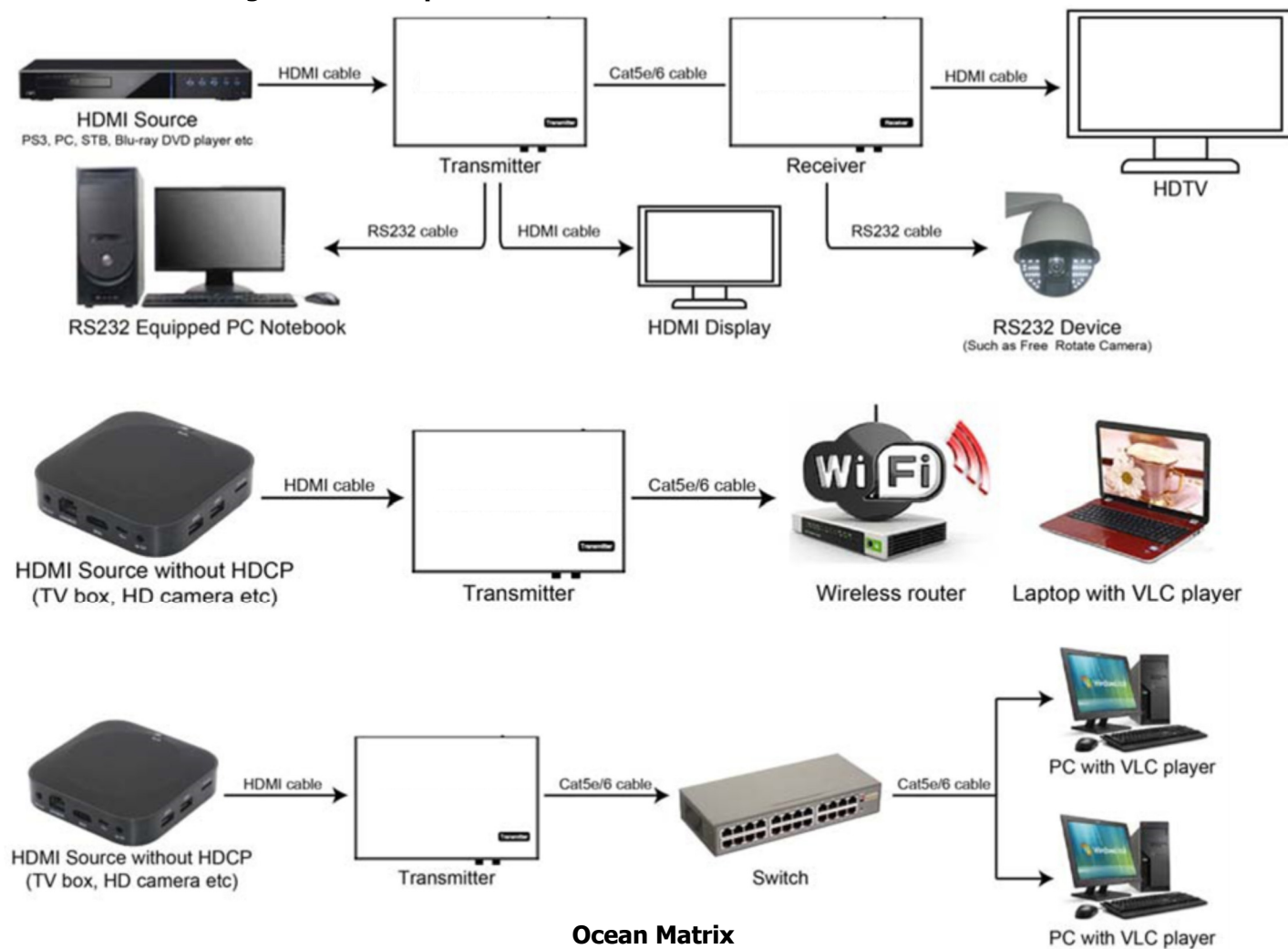
- Use an Ethernet cable to connect the PC and the extender.
- Ensure that the transmitter and the PC are in the same domain.
- Connect the TX or TX with the 5VDC/1A power supply
- Login in IE: 192.168.1.11 (TX default IP) or 192.168.1.12(RX default IP)
- TX requires user name: admin and password: admin
- Change Group ID at 'Stream Setting'. Choose 00-63.
- Click 'Submit' (transmitter) or 'Update' (receiver).
- Setting the Baud Rate—Login in IE: 192.168.1.11 (TX default IP) or 192.168.1.12(RX default IP). See baud rates above. Default baud rate is 2400.
- RS232 devices—the transmitter and the receiver must have the same baud rate as the RS232 device.
- When you change the baud rate using the Remote Control and through the Web Browser, the last change will be used by the transmitter and receiver.

PREPARING THE SWITCH—Refer to instructions on the included CD

1. A switch is required when connecting point-to-many, many-to-point, or many-to-many.
2. If the switch supports IGMP to manage Group ID and DHCP to assign IP addresses to TX and RX automatically then enable the DHCP switch —see SETTING THE IP ADDRESS on page 3).
3. If the switch does not support DHCP, include a DHCP device such as a router to the network/ethernet setup.

POINT-TO-POINT CONNECTION—Refer to instructions on the included CD

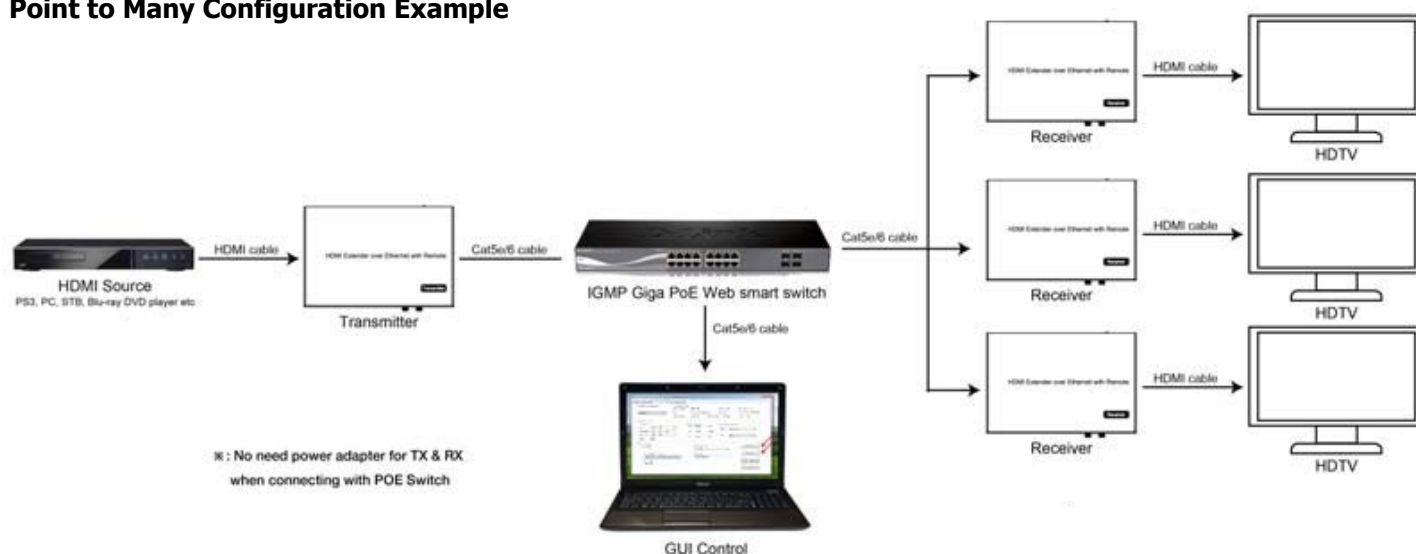
1. Connect cable ONLY when power is OFF.
2. Connect the source and the TX using HDMI cable.
3. Connect the HDMI looping output of the TX to the local HDMI display.
4. Connect another HDMI display to the HDMI RX using HDMI cable.
5. Connect the TX and the RX with Cat5e/6 cable.
6. Connect the IR TX cable to the IR TX port on the transmitter.
7. Connect the IR RX cable to the IR RX port on the receiver to control the source at the RX end.
8. Connect one RS232 cable from the PC or system to the RS232 port on the TX.
9. Connect one RS232 cable from the RX to the RS232 device to be controlled.
10. Plug in the included power supplies to turn on the TX and RX.

Point to Point Configuration Examples

POINT-TO-MANY CONNECTION—Refer to instructions on the included CD

1. Set the IP addresses for the transmitter and the receiver and prepare the switch as instructed previously.
2. Connect the source device and the TX using HDMI cable.
3. Connect the HDMI looping output of the TX to the local HDMI display.
4. Connect the TXs and the switch/router using CAT5e/6 cable.
5. Connect the HDMI displays and the HDMI RXs using HDMI cable.
6. Connect the IR TX cable to the IR TX port on the transmitter.
7. Connect the IR RX cable to the IR RX port on the receiver to control the source at the RX end.
8. Connect one RS232 cable from the PC or system to the RS232 port on the TX.
9. Connect one RS232 cable from the RX to the RS232 device to be controlled.
10. Turn the TX and the RX on using the included power supplies.
11. Notes
 - Daisy chain the switch if more RJ45 ports are needed
 - You can add up to 255 receivers

Point to Many Configuration Example



MANY-TO-MANY CONNECTION—Refer to instructions on the included CD

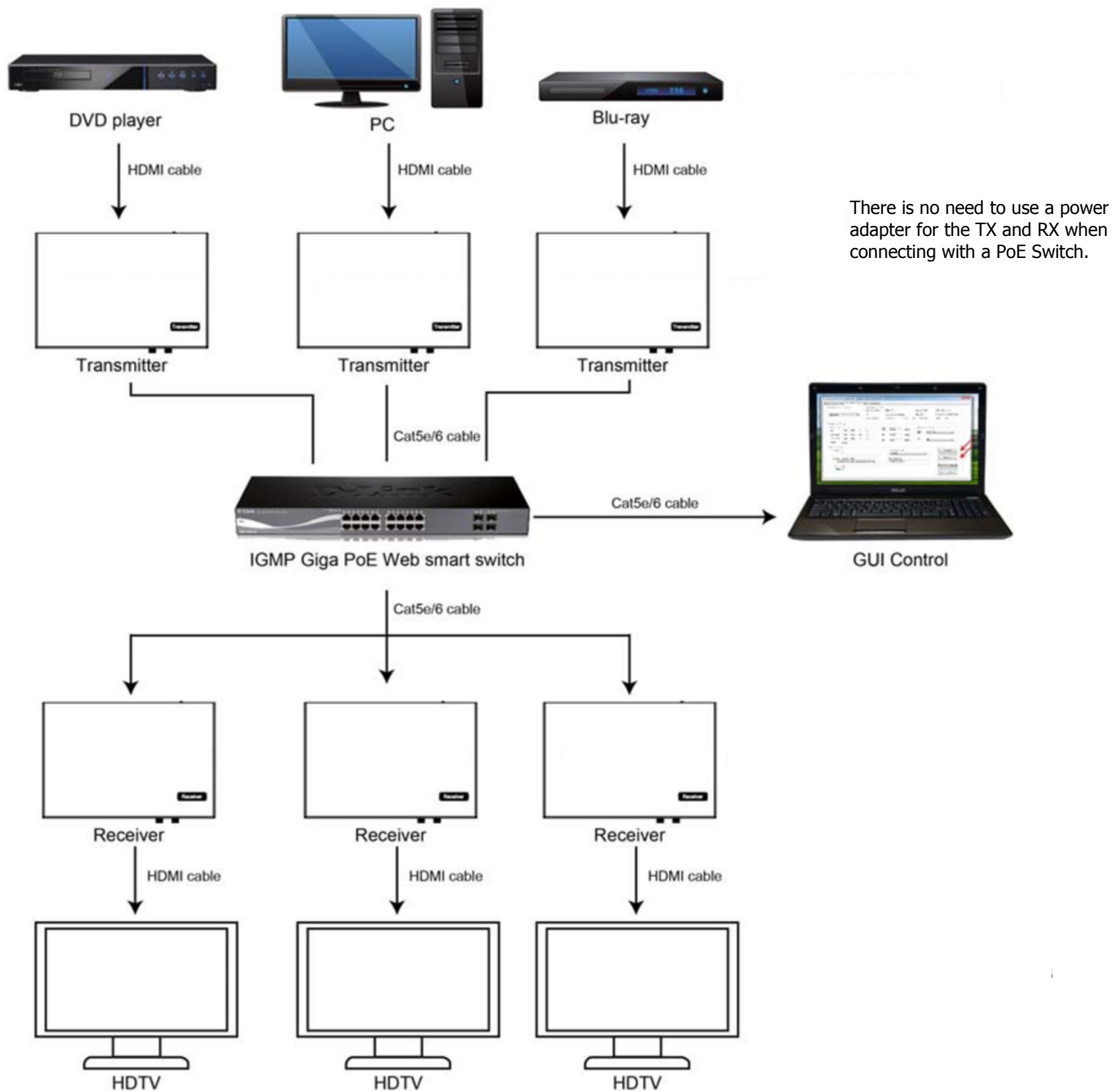
1. Set the IP addresses for the transmitter and the receiver and prepare the switch as instructed previously.
2. Connect the source device and the TX using HDMI cable.
3. Connect the HDMI looping output of the TX to the local HDMI display.
4. Connect the TXs and the switch/router using CAT5e/6 cable.
5. Connect the RXs and the switch/router using CAT5e/6 cable
6. Connect the HDMI displays and the HDMI RXs using HDMI cable.
7. Connect the IR TX cable to the IR TX port on the transmitter.
8. Connect the IR RX cable to the IR RX port on the receiver to control the source at the RX end.

Continued

MANY-TO-MANY CONNECTION—Refer to instructions on the included CD

9. Connect one RS232 cable from the PC or system to the RS232 port on the TX.
10. Connect one RS232 cable from the RX to the RS232 device to be controlled.
11. Turn the TX and the RX on using the included power supplies.
12. Choose the source with the Remote Control or Web Browser (see previous instructions)
13. Notes
 - Daisy chain the switch if more RJ45 ports are needed
 - You can add up to 64 transmitters
 - The total quantity of transmitters and receivers cannot exceed 255

Many to Many Configuration Example



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SAFETY PRECAUTIONS

- To prevent fire or shock hazard, do not expose this equipment to dust or high humidity. Do not use in an unprotected outdoor installation or in areas classified as overly damp or wet.
- The installation temperature should be kept between 32°F to 140°F (0°C to 60°C). Avoid direct sunlight exposure or extreme changes of temperature over a short period of time.
- Do not place the unit on an unstable base and avoid heavy impact.
- Proper ventilation is required for permanent installation. Do not block or cover enclosure openings as they protect the unit from overheating.
- Prior to cleaning, turn the power off and unplug the unit from all connections. Use a damp cloth. Do not use liquid or aerosol cleaners.
- Do not overload outlets and extension cords as this may result in a risk of fire or electric shock.
- Enclosure entry is dangerous. Never push objects of any kind, including liquids, through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock.
- Do not open or service this unit yourself as opening or removing covers may expose you to dangerous voltage and other hazards.
- There are no user-serviceable parts inside the unit. If the unit requires service contact your authorized dealer, or authorized repair service company.

Federal Communications Commission (FCC) Compliance Notices

Class A Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution

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.