DSGio

IPMX-A4HF-x100CP Series Quick Start Guide

This guide will help you install and use your AST Extender for the first time.

Visit www.dsgio.com/ast_av_ip_matrix/, select your model and go to the '**Downloads**' tab to download the latest user manual and check for the most recent firmware updates.
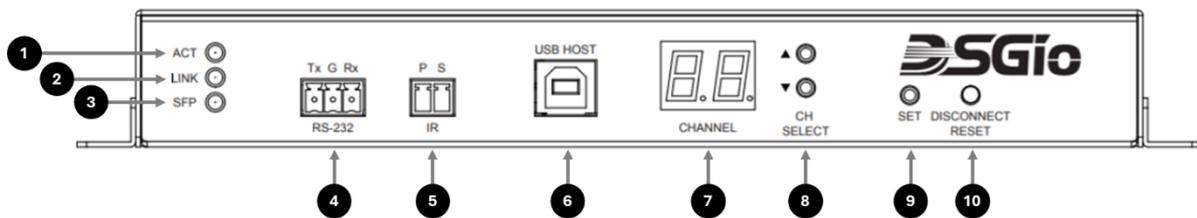
❶ Check the Packaged Contents

IPMX-A4HF-T100CP Transmitter Unit

- o 1 × AST Series Transmitter Unit
- o 1 × 12V/2A DC Power Adapter
- o 1 × IR Emitter
- o 1 × Phoenix Connectors Set for IR, RS-232 and Audio
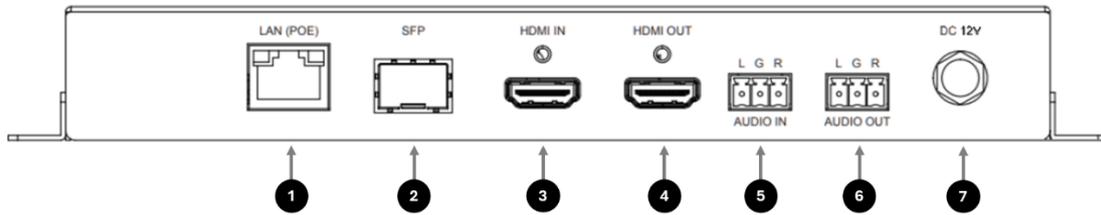- o 1 × Mounting Brackets Set

IPMX-A4HF-R100CP Receiver Unit

- o 1 × AST Series Receiver Unit
- o 1 × 12V/2A DC Power Adapter
- o 1 × IR Receiver
- o 1 × Phoenix Connectors Set for IR, RS-232 and Audio
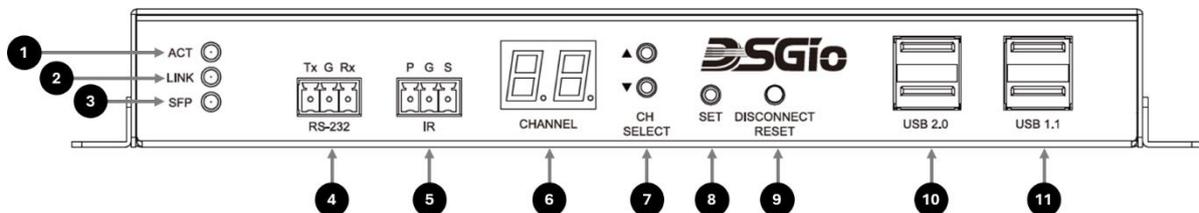- o 1 × Mounting Brackets Set

❷ Transmitter (TX) Front and Rear Panel

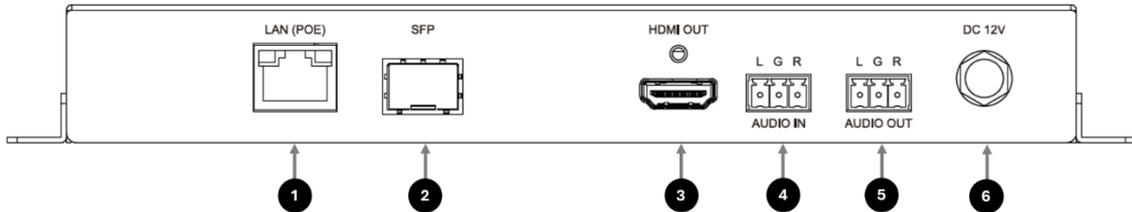| No.	Feature	Function
1	ACT LED Indicator	LED indicator turns **blue** when the unit is powered up.
2	LINK LED Indicator	LINK LED indicator **flashes green** when network connection is waiting for video source, turns **green** when network connection and video source are functioning properly. **Off** when no link or services running.
3	SFP LED Indicator *(Not applicable for PoE model)*	SFP LINK LED indicator **flashes green** when network connection is waiting for video source, turns **green** when network connection and video source are functioning properly *(Port is covered with a lid)*.
4	RS-232 Port	3-Pin Phoenix Connection (TXD, GND, RXD) for RS-232 remote extension
5	IR Port	2-Pin Phoenix Connection (P - VCC Power, S - Signal) for IR emitter to control source device.
6	USB Type B Port	USB port for connecting to a computer or USB host device to extend USB 2.0/1.1 functionality for remote USB peripherals.
7	Channel Display	Displays the Channel Number.
8	CH Select Buttons	Push Button **Channel Select**: ▲ CH+ : Press to increase the Channel Number ▼ CH- : Press to decrease the Channel Number
9	Set Button	Push Button **Set**: Enter to confirm the channel number.
10	Disconnect / Reset Button	Push Button **Disconnect/Reset**: **Disconnect** – Press to disconnect the link **Reset** – Press and Hold at least 4 seconds until the Channel LEDs are flashing, then release the button to reset to Factory Default.

No.	Feature	Function
1	LAN (PoE) Port	10/100/1000Mbps Ethernet Interface with 802.3af PoE support. **Green LED (right):** Flashes when the CATx cable is connected and the unit is powered on, indicating an active connection and signal transmission. **Yellow LED (left):** Lights up when activated, indicating 1 Gbps speed.
2	SFP Port **(N.A.)**	1Gbps Fiber Port. *(**N.A. for PoE model. Port is covered with a lid.**)*
3	HDMI In	Connects to HDMI source for A/V extension over IP. Supports HDMI embedded audio. Refer to the User Manual for "Audio Port Usage Scenarios".
4	HDMI Out	Connects to a local HDMI display.
5	Audio In	3-Pin Phoenix Connection (L, GND, R), stereo audio input (unbalanced). Refer to the User Manual for "Audio Port Usage Scenarios".
6	Audio Out	3-Pin Phoenix Connection (L, GND, R), stereo audio output (unbalanced). By default, HDMI audio is extracted. Refer to the User Manual for "Audio Port Usage Scenarios" for more information.
7	Power Connector	Connects to DC 12V Power Supply with locking connector.

❸ Receiver (RX) Front and Rear Panel

| No.	Feature	Function
1	ACT LED Indicator	LED indicator turns **blue** when the unit is powered up.
2	LINK LED Indicator	LINK LED indicator **flashes green** when network connection is waiting for video source, turns **green** when network connection and video source are functioning properly. **OFF** when no link or services running.
3	SFP LED Indicator *(Not applicable for this model)*	SFP LINK LED indicator **flashes green** when network connection is waiting for video source, turns **green** when network connection and video source are functioning properly *(Port is covered with a lid)*.
4	RS-232 Port	3-Pin Phoenix Connection (TXD, GND, RXD) for RS-232 remote extension.
5	IR Port	3-Pin Phoenix Connection (P - VCC Power, G - GND, S - Signal) for IR receiver to control source device.
6	Channel Display	Displays the Channel Number.
7	CH Select Buttons	Push Button **Channel Select**: ▲ CH+ : Press to increase the Channel Number ▼ CH- : Press to decrease the Channel Number
8	Set Button	Push Button **Set**: Enter to confirm the channel number.
9	Disconnect / Reset Button	Push Button **Disconnect/Reset**: **Disconnect** – Press to disconnect the link

		Reset – Press and Hold at least 4 seconds until the Channel LEDs are flashing, then release the button to reset to Factory Default.
10	USB 2.0 Type A Ports	USB 2.0 Ports for connecting to USB 2.0 peripherals such as flash drive, webcam, etc.
11	USB 1.1 Type A Ports	USB 1.1 Ports for connecting to USB HID devices such as keyboard, mouse, etc.

No.	Feature	Function
1	LAN (PoE) Port	10/100/1000Mbps Ethernet Interface with 802.3af PoE support. **Green LED (right):** Flashes when the CATx cable is connected and the unit is powered on, indicating an active connection and signal transmission. **Yellow LED (left):** Lights up when activated, indicating 1 Gbps speed.
2	SFP Port **(N.A.)**	1Gbps Fiber Port. *(N.A. for PoE model. Port is covered with a lid.)*
3	HDMI Out	Connects to HDMI display. Supports HDMI embedded audio.
4	Audio In	3-Pin Phoenix Connection (L, GND, R), stereo audio input (unbalanced). Refer to the User Manual for "Audio Port Usage Scenarios".
5	Audio Out	3-Pin Phoenix Connection (L, GND, R), stereo audio output (unbalanced). By default, HDMI audio is extracted. Refer to the User Manual for "Audio Port Usage Scenarios" for more information.
6	Power Connector	Connects to DC 12V Power Supply with locking connector

❹ **Getting Started: Prerequisites and Key Information**

The Transmitter and Receiver can be Ⓘ directly connected using a CATx cable to create a point-to-point extender solution, or Ⓘⓘ connected to a 1 Gigabit Ethernet Switch, which offers the benefit of accessing the endpoints through the Web GUI to configure settings.
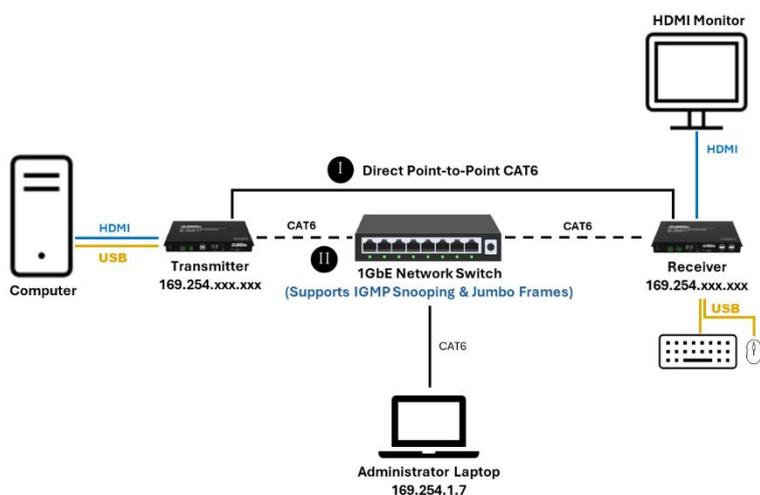
By default, the Transmitter and Receiver are factory-set with the following:

i. **Auto IP** Mode i.e., Auto-assign itself an IP address in the range of 169.254.xxx.xxx and a subnet mask of 255.255.0.0 upon boot-up.

ii. **Multicast** Casting Mode

iii. Channel ID of '**00**'

Network Switch Specifications:

i. 1GbE Switch with non-blocking architecture

ii. Supports IGMP snooping, IGMP v2

iii. Supports IGMP querier and fast-leave

iv. Supports Jumbo Frames of ≥ 9000 bytes

⑤ Set Up the Devices

ⓘ Point-to-Point Extension with a CATx Cable

Connect the Inputs and Outputs

a. Connect the HDMI In and USB Type B Port of the Transmitter to the computer.
b. Connect the HDMI Out of the Receiver to a monitor.
c. Connect any other USB peripherals, such as a keyboard and mouse, to the USB 1.1 ports of the Receiver.
d. Plug both ends of the CATx cable into the LAN ports of the Transmitter and Receiver, respectively.

Connect the Power

e. Connect the power adapters of the Transmitter and Receiver, and plug them into power outlets.
f. Power on the Transmitter and Receiver.
g. Power on the monitor. **Note:** The IP address of the Receiver (Local IP) and the Transmitter (Remote IP) will be shown at the bottom-right corner of the Splash Screen once the devices have booted up and are connected. Both devices must have the same channel number.

h. Power on the computer. The video source will be detected once the computer boots up and will be displayed.
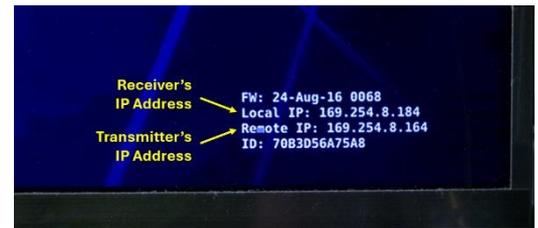
Set Up the Devices

i. Both the Transmitter and Receiver are set to Channel '00' by factory default. Press the ▲ button to increase the Channel Number from '00', then press the '**Set**' button to confirm the Channel Number for both devices.

ⓘⓘ Using a Network Switch

Note: The network switch must be configured to support IP multicast before connecting the Transmitter and Receiver to the network. This is particularly important if there are other devices on the network or on the same VLAN, or if you plan to set up multiple transmitters and receivers.

Repeat the above Steps (a) to (i), with the following exceptions:

Step (d): Connect the Transmitter and Receiver to the Network Switch using a CATx cable.

Step (j): You may set up an administrative computer with an IP address (e.g., 169.254.1.7 / subnet mask 255.255.0.0) and connect it to the switch. Using the IP address noted in Step (g), type the IP address of the Transmitter or Receiver into a browser on your computer. Through the Web GUI of the endpoint, you can further configure the device.

To learn more about setup, configuration options, and advanced features, please refer to the user manual.