MT HOOD Series

VGA Extenders w/Audio

User Guide

VGA-1-E – Single-port VGA Extender
VGA-1-R – Single-port VGA Receiver
VGA-4-SE – 4-port VGA Splitter Extender
VGA-4-SER – 4-port VGA Splitter Extender / Receiver

Version 1.0

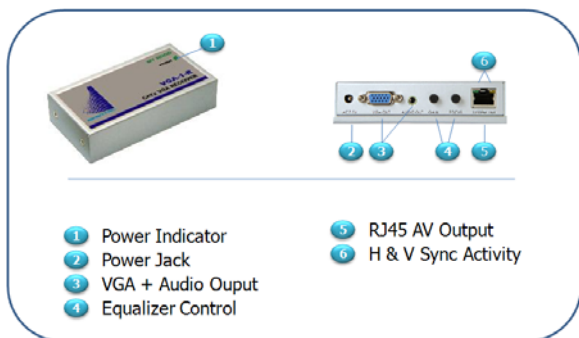*Dated: July, 2008*

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KEY FEATURES

- VGA Extender Series can send VGA and Audio signal from Extender over Cat5/5e/6 cable, and broadcast AV signal in Receiver. The maximum broadcasting distance of each pair is 300 m (1000ft) and by stacking more system extender/receivers, it can reach the maximum distance of up to 900 m (2950ft).

- Extending different video type of VGA, Component, Composite, and S-Video by different cable kit

- Remote and local monitors and speakers can broadcast simultaneously

- Use Cat5 Enhance UTP cable (350MHz bandwidth) for superior video quality

- Plug & Play

- No Software required

- Supports VGA, SVGA, XGA, TFT_LCD, LCD TV, PDP, Projector with DDC2B function

- Extenders and Receivers have built-in LEDs to indicate system status

- Multiple units can be cascaded together for expansion

- Single-Port Extender is equipped with magnetic pad and metal plate for easy installation

PANEL DIAGRAMS

VGA-1-E - Single Port VGA + Audio Extender

1 Power Indicator
2 Power Jack
3 VGA + Audio Ouput
4 VGA + Audio Input

5 RJ45 AV Output
6 H & V Sync Activity

<u>VGA-1-R – Single Port VGA + Audio Receiver</u>

1. Power Indicator
2. Power Jack
3. VGA + Audio Ouput
4. Equalizer Control
5. RJ45 AV Output
6. H & V Sync Activity

VGA-4-SE – 4 Port VGA Splitter Extender with Audio

1. VGA Activity
2. Power Indicator
3. Power Jack
4. VGA + Audio Input
5. VGA + Audio Output
6. RJ45 AV Output
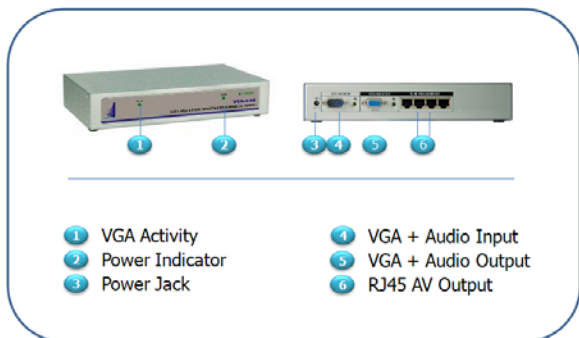
VGA-4-SER - 4 Port VGA Splitter / Extender / Receiver with Audio

1. VGA Activity
2. Power Indicator
3. Gain Control
4. Focus Control
5. RJ45 AV Input
6. Power Jack
7. VGA + Audio Output
8. RJ45 AV Output
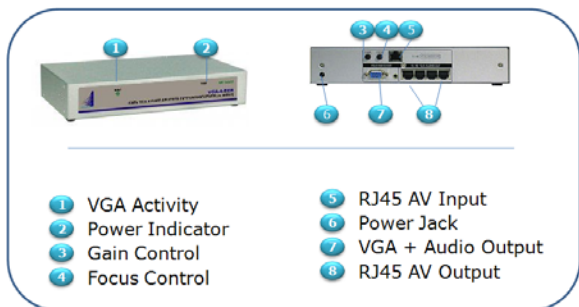
INSTALLATION AND OPERATION

Extending VGA Video and Audio

1. **Site Selection:** For first time installation, place Extender near the PC or AV devices (Audio + Video outputs); you can use a magnetic pad to attach the unit on metal plane (e.g. PC / Server enclosure) or use attachable mounting kit to fix the unit on selected area.

2. **Connecting Monitor and Speaker:** Use 3-in-1 cable (VGA + Audio + USB Power) to connect the signal from AV device to the "VGA + Audio IN" port of Extender box and then connect monitor and speaker to the "VGA OUT" and "AUDIO" ports. The Extender can take the power through the USB port or if you are using DVD Player or other device without USB port. Plug optional power adapter (AC 7.5V, 1A).

3. **Function Test:** Turn ON your AV device, the *POWER LED* should turn ON green to indicate the *POWER On* status and the LEDs above RJ45 will blink before the VGA signal is turned ON and remain ON after the VGA signal is turned ON.

VGA-1-E Extender Installation and UTP Connection

1. **Site Selection:** Place Receiver in an appropriate place and have the UTP cable settled for later connection.

2. **Power Up:** Plug power adapter to the Receiver and connect monitor and speaker to the VGA OUT and AUDIO port. The *POWER LED* will turn ON green to indicate the *POWER ON* status.

3. **Selection of Cables:**

   a. Most makes and versions of Cat 5/5e/6 cables will work with the VGA-1-E Extender. However, since the quality and characteristics of Cat 5/5e/6 cables vary it has been found that some perform better than others. The major factor influencing the transmitting distance is the skew property of the cables. Skew represents the difference in propagation delay between the fastest and slowest set of wire pairs. A lower skew will mean a longer video transmitting distance.

   b. **Skew Property:** A Cat 5/5e/6 cable with a skew lower than 15ns/100m should enable a cascading

length of <80m (275 ft) at 800x600, <50m at 1024x768, and <40m at 1280x1024.

c. **Termination:** The RJ45 terminations to the Cat 5/5e/6 cable must be made to the EIA 568B specifications.

| 1. Orange White	2. Orange	3. Green White	4. Blue
5. Blue White	6. White	7. Brown White	8. Brown
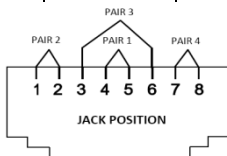
4. **Connect UTP Cable:** Plug two ends of UTP cable to Extender and Receiver's RJ45 UTP link port. The Receiver's connected monitor and speaker should work now. You can adjust the FOCUS and GAIN control of receiver to have the best VGA display.

CATx Cable up to 300 meters
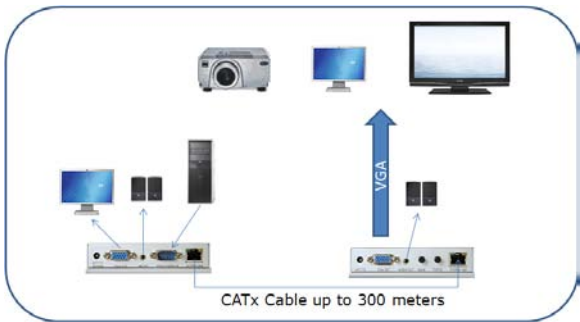
5.   **Function Test:** After above installation, you will be able to broadcast the AV signal to Receiver's connected monitor and speaker.

<u>VGA-4-SE / VGA-SER – 4-port VGA Splitter Extender / Receiver Installation</u>

1. **Site Selection:** For first time installation, place Extender near the PC or AV devices; you can use rack mounting kit to fix the system box.

2. **Connecting Monitor and Speaker:** Plug power adapter to the Extender and connect monitor and speaker to "VGA/AUDIO OUT" port. The POWER LED will turn ON green to indicate the POWER ON status and "ACTIVE" LEDs should turn OFF to indicate the unconnected status. Then prepare VGA and Audio cables to connect the signal from your AV device to the "VGA/AUDIO IN" port of the Extender box.

3. **Local Function Test:** Power ON your AV device, the "ACTIVE" LEDs of the Extender will turn ON orange to indicate the video activation. You are now ready for AV broadcasting.
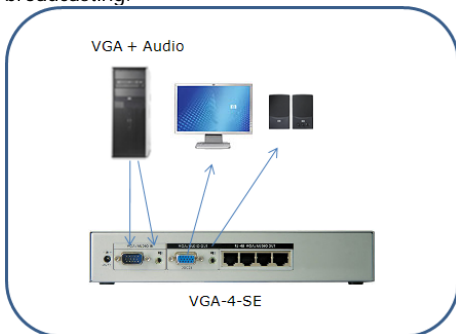
4. **Extender / Receiver Installation:** System Extender/Receivers can be used to expand the AV displays. You can use a 4 Port model VGA-4-SER to expand one AV signal to 4 AV signals. You may also stack more system Extender/Receiver through their local AV port to generate more AV RJ45 outputs locally.
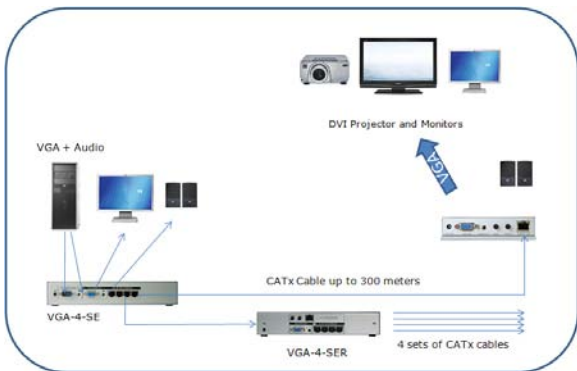
5. **System Expansion through UTP:** This series can stack up to a maximum of three layers of UTP to reach more AV outputs, depending on the display device.
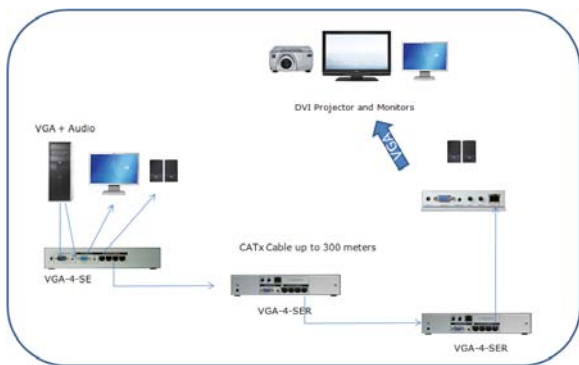
6. **Local System Expansion:** You can also stack up to 4 layers of system Extenders to generate more RJ45 outputs of AV signals locally.
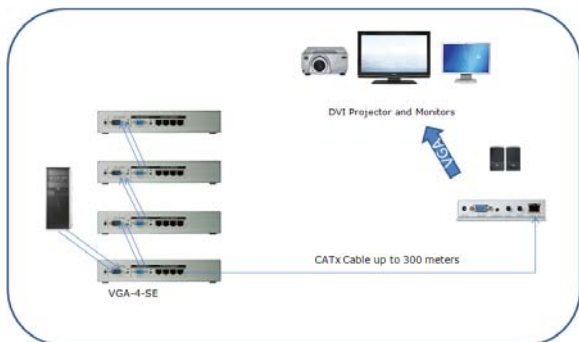
SPECIFICATIONS

Model	VGA-1-E	VGA-1-R	VGA-4-SE	VGA-4-SER
Description	1 Port VGA + Audio Extender	1 Port VGA + Audio Receiver	4 Port VGA Splitter Extender	4 Port VGA Splitter Extender / Receiver
Input	AV x 1	RJ45 x 1	AV x 1	RJ45 x 1
Output	AV x 1 RJ45 x 1	AV x 1 w/ mono audio	AV x 1 RJ45 x 1	RJ45 x 4 w/ mono audio
Video Quality	Maximum Resolution at 2048 x 1536			
Power Consumption	AC 7.5V 250mA	DC 9V 250mA	DC 9V 480mA	DC 9V 550mA
Dimension	62 x 113 x 29 (mm)	62 x 113 x 29 (mm)	240 x 180 x 44 (mm)	240 x 180 x 44 (mm)

WHAT'S IN THE BOX

PART #	ITEM1	ITEM2	ITEM3	ITEM4	ITEM5
VGA-1-E	VGA-1-E	VGA+USB Cable	User Manual	Power Supply	
VGA-1-R	VGA-1-R		User Manual	Power Supply	
VGA-4-SE	VGA-4-SE	VGA Cable (1m), Audio Cable	User Manual	Power Supply	Rack Mounting Kit
VGA-4-SER	VGA-4-SER		User Manual	Power Supply	Rack Mounting Kit

CONTACT INFORMATION
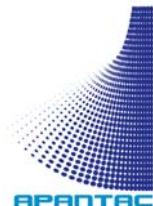
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