Wall Plate VGA CAT5 Extender

ITEM NO.: AT-VGA-SR

The VGA Extender allows VGA video signals to be transmitted up to 135 meters via 4-paris CAT5 STP or UTP cable. Used in pairs, the VGA Extender is used in home or commercial applications as a smart, fast and cost-effective, eliminates costly and bulky VGA cable, allowing VGA monitors to be connected extended distances from the PC via standard twisted pair cable. Ideal for classrooms video distribution, lecture halls, retail kiosks, video information displays, overhead projector systems, PC-training systems, and tradeshows PC demo systems. Wall mountable type could be using CAT5 structuring cable for easy installation to simplifies and beautifies any audiovisual environment.

AT-VGA-SR   Wall Plate VGA CAT5 Extender

- Used in pairs via one CAT5 UTP cable to send VGA up to 135 meters.
- VGA connector to shielding RJ45 female.
- Wall plate outer dimension: 115 x 71 mm
- Passive device, no power required, not support VGA DDC protocol.
- Supports up to 1280x1024 pixels.
- Up to 135 meters via standard 4 pairs CAT5 STP or UTP cable instead of VGA cable.
- Transmitter built in virtual DDC to avoid improperly setting at resolution and frequency.
- Transmitter built in sync mode selection for signal stability.
- Receiver built in sync filter level adjustment for signal stability.
- Perfect for classrooms, lecture halls, tradeshows, video information displays…etc.

Installation:

Recommend Cable:
1. CAT5e UTP/STP or CAT6 UTP cable.

2. There are some certain models or brands of monitors with very high demand at sync-sensitive, recommend use STP (shielding twisted pair) cable to instead of UTP (unshielded twisted pair) cable.

RJ45 Pin Configuration: TIA/EIA 568B Wiring standard
1. Orange-white   Red +
2. Orange   Red -
3. Green-white   H-Sync
4. Blue   Green +
5. Blue-white   Green -
6. Green   V-Sync
7. Brown-white   Blue +
8. Brown   Blue -

Switch Setting:

## AT-VGA-S Sync Mode Select
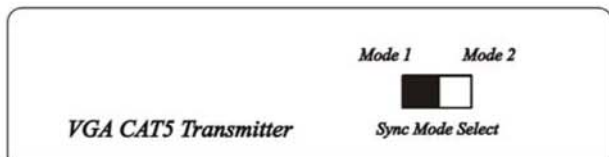

← **Mode 1**
→ **Mode 2**

1. For new type monitors, such like over 17" LCD Monitor, recommends setting at mode 1 for the best stability.   If the picture not normal, then switch to Mode 2.

2. For old type monitors, such like CRT or under 17" LCD Monitor, recommend setting at mode 2.   If the picture still not normal after adjust the dip switch of VE01P-R. Then please use STP (shielding twisted pair) cable.

DIP Switch Setting:
AT-VGA-R Sync Filter Level
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1 2 3 4 5

Level 0 (Min)
Level 1
Level 2
Level 3
Level 4
Level 5 (Max)
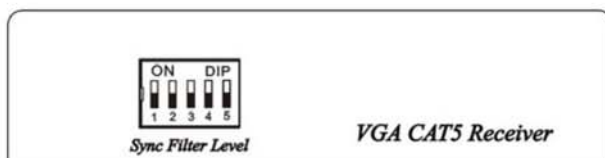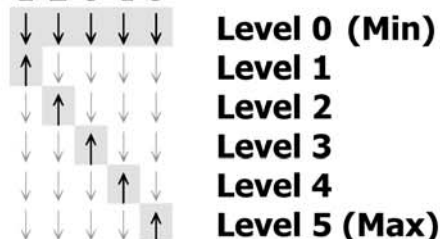
Sync Filter is designed for using UTP CAT5 cabling.
Sync Filter level adjustment is to add the sync stability, but not adjust picture quality or eliminate skew.

Since different brand monitor have different setting, so there is no recommended setting. Please adjust the level based on picture stability. If no picture display or picture not stable, then please use STP cable.

Caution:

1. The wiring must be away from electro magnetic equipment, i.e. microwave, wireless, hi voltage cable…etc.

2. The maximum distances supported by the VGA Extender are dependent on the type of twisted pair cable and image resolution of the PC's VGA interface.   Make sure that the maximum recommended operational distances have not been exceeded.

3. All wiring is "straight-through" twisted pair cable, not being used for other LAN or telephone equipment.

4. Do not connect the VGA Extender to a telecommunication outlet wired to unrelated equipment.

Troubleshooting at picture problem:
1. No picture display:

Check Link cable.
Check DIP switch setting.
Check VGA cable connect.

Change the resolution or frequency.
Change Link cable for STP cable.

2. Picture not stable or disappear intermittence or no picture display:

Check DIP switch setting.
Change the resolution or frequency.
Wiring away from electro magnetic equipments.
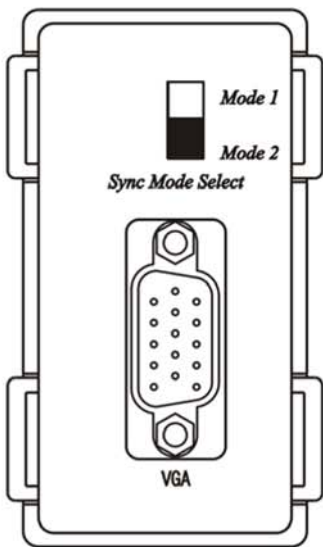Change Link cable for STP cable.

3. Picture tilt:

Check DIP switch setting.
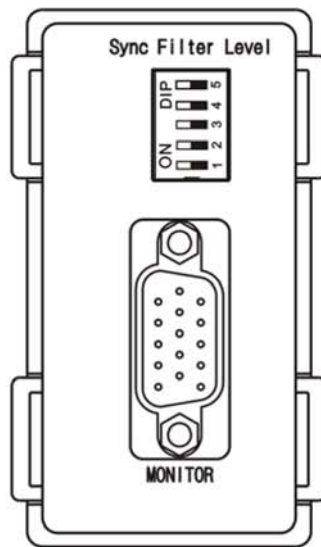Change the resolution or frequency.
Change Link cable for STP cable.

T568A and T568B Wiring   T568B RECOMMENDED FOR ALL SOLUTIONS

Pin	T568A Pair	T568B Pair	Wire	T568A Color	T568B Color	Pins on plug face (socket is reversed)
1	3	2	tip	white/green stripe	white/orange stripe	
2	3	2	ring	green solid	orange solid	
3	2	3	tip	white/orange stripe	white/green stripe	
4	1	1	ring	blue solid	blue solid	
5	1	1	tip	white/blue stripe	white/blue stripe	
6	2	3	ring	orange solid	green solid	
7	4	4	tip	white/brown stripe	white/brown stripe	
8	4	4	ring	brown solid	brown solid	

Pin Position
8
7
6
5
4
3
2
1

Rj45plug-8p8c.png

Panel View:

AT-VGA-S

Mode 1
Mode 2
Sync Mode Select

VGA

AT-VGA-R

Sync Filter Level

ON DIP
5 4 3 2 1

MONITOR

Installation View:

135M (Max)

AT-VGA-S
Transmitter

AT-VGA-R
Receiver

VGA Display Equipment
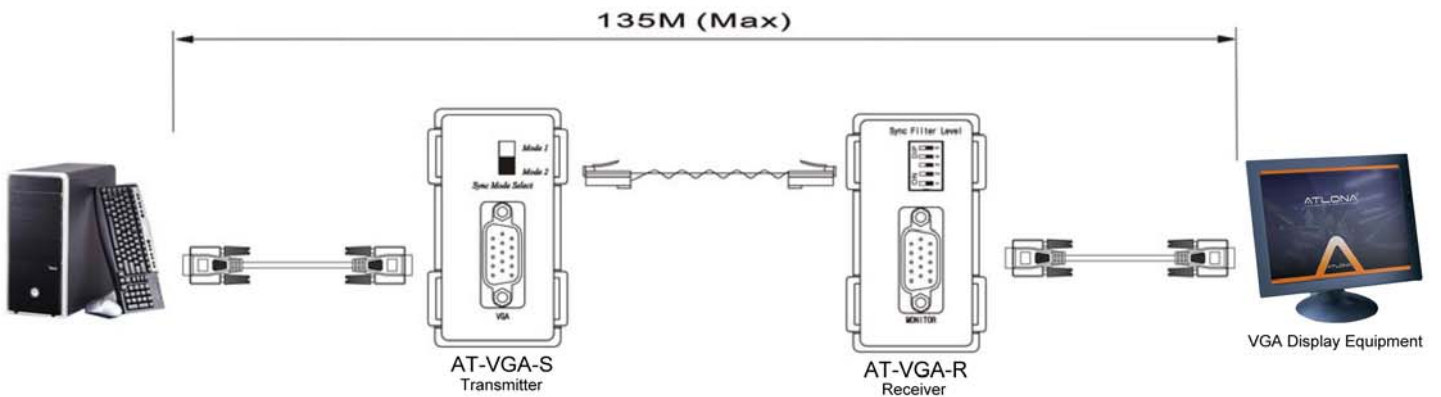
Max. Distance via CAT5 Cable	
640x480 pixels (15MHz)	135M
800x600 pixels (30MHz)	105M
1024x768 pixels (60MHz)	75M
1280x1024 pixels (100MHz)	60M

**Specification:**

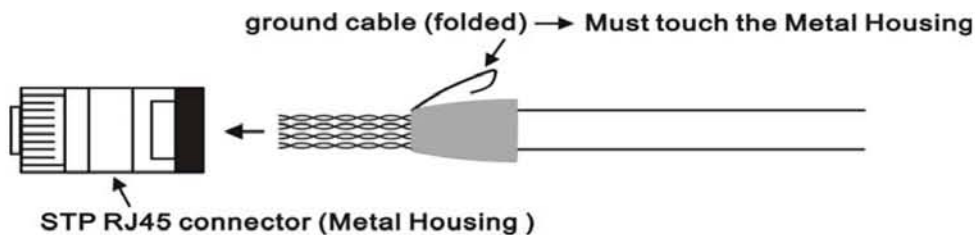| ITEM NO.	AT-VGA-S	AT-VGA-R
Devices	DVR, PCs, Laptops	VGA Monitors, Projectors
Input Signals	Video: 1 Vp-p	
	Horizontal & Vertical SYNC : TTL standard. 300kHz max. bandwidth	
Insertion Loss	Less than 3dB per pair over the frequency range	
Video Signal Return Loss	-15dB max from DC to 60Mhz	
RJ45 Pin Configuration: EIA 568B Wiring standard	R video (Red): Pin 1 (+), Pin 2 (-) Balanced	
	G video (Green): Pin 4 (+), Pin 5 (-) Balanced	
	B video (Blue): Pin 7 (+), Pin 8 (-) Balanced	
	Horizontal Sync: Pin 3, Vertical Sync: Pin 6	
Impedance	Input : RGB 75 ohms (DB15 HD) Unbalanced	Input : RGB 100 ohms (RJ45 shielded) Balanced
	Output : RGB 100 ohms (RJ45 shielded) Balanced	Output : RGB 75 ohms (DB15 HD) Unbalanced
	Horizontal and vertical sync : TTL standard	
Setting Switch	2 Stage Slide Switch	5 Stage Dip Switch
Transmission Distance	60 -135 meters depend on image resolution	
Link Cable	CAT5 / CAT5e / CAT6 / STP or UTP Cable	
Temperature	Operation: 0 to 55 C, Storage: -20 TO 85 c, Humidity: up to 95%	
Dimensions W x H x D mm	70x61x115	

Application Tips to use CAT5 STP cable:

Following is the correct cable connection when use STP cable:

1. STP (shielding twisted pair) Cable.
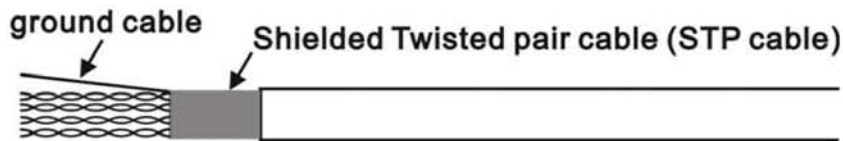
2. STP (shielding) RJ45 connector with STP cable connection.