CAT5E VGA Extender

GVGA-EXT

Quick Start Guide

Please read these instructions carefully before operating the unit and keep for further reference. All the examples and pictures used here are for reference only. The contents of this manual are subject to change without notice.

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The Genie GVGA-EX is a VGA extender designed to use 4 pairs of CAT5e UTP cable to carry the signal for a long distance, with the resolution up to 1920 × 1080 @ 60Hz, replacing costly and bulky VGA cable. It's an ideal solution for classrooms, lecture halls, retail store, PC-training systems, and demo systems for trade shows.

Features

- Resolution up to 1920 × 1080 @ 60Hz
- Signal extension up to 100m over a 4 pairs CAT5e UTP cable
- No external power required at both TX and RX unit
- Supports sync mode at TX unit for signal stability
- Built-in virtual DDC at TX unit to avoid improper setting for resolution and frequency
- Built-in sync filter level adjustment at RX unit for signal stability

Specifications

Supports	Compliance	TTL
	Maximum Video Resolution	1920 × 1200 px
	Maximum Transmission Distance	100m over CAT5/ CAT5e/ CAT6/ STP or UTP Cable
	Video Bandwidth	300kHz
	Insertion Loss	Less than 3dB
	Video Return Loss	-15dB
Ports & Interfaces	Video Input	1 x DB15 (75Ω, 1Vp-p) (Transmitter) 1 x RJ45 (100 ohms) (Receiver)
	Video Output	1 x RJ45 (100 ohms) (Transmitter) 1 x DB15 (75Ω, 1Vp-p) (Receiver)
	Setting Switch	1 × 2-position Slide Switch (Transmitter) 1 × 5-position DIP Switch (Receiver)
Others	Temperature	Operation: 0 to 55°C Storage: -20 to 85°C Humidity: Up to 95%
	Dimensions	110 × 76.6 × 26 mm
	Weight	175g

Dimensions

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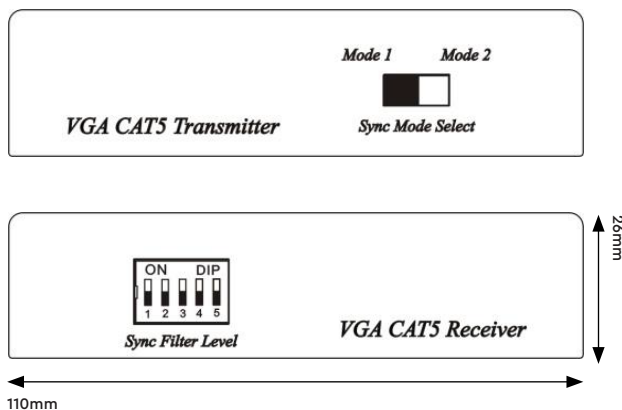
Application
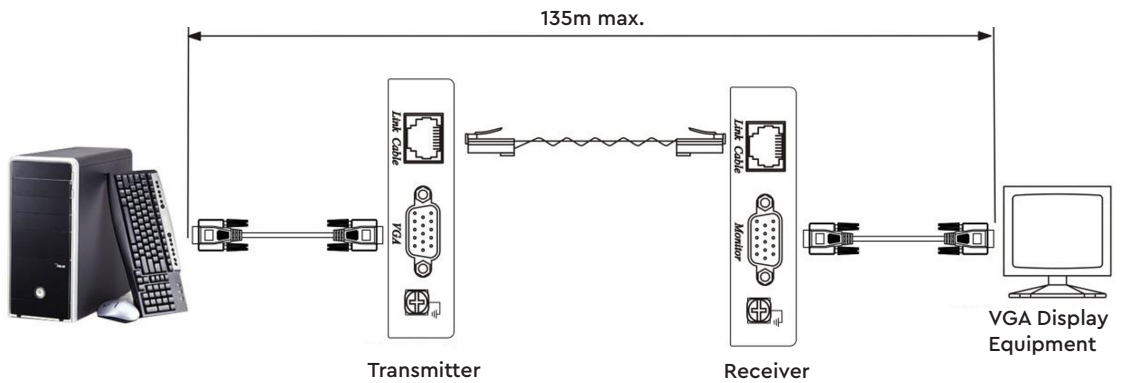
Transmission Distance

Max. Distance via CAT5e Cable	
800x600 pixels (60Hz)	100M
1024x768 pixels (60Hz)	75M
1280x1024 pixels (60Hz)	60M
1920x1080 pixels(60Hz)	40M

Cable Recommended

1. CAT5e UTP/STP or CAT6 UTP cable.
2. There are some monitor models with very high demand at sync-sensitive, it is recommended to use STP (shielding twisted pair) cable instead of UTP (un-shielded twisted pair) cable.
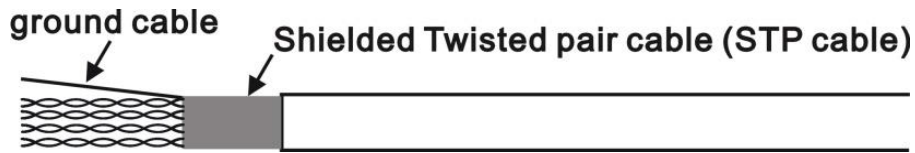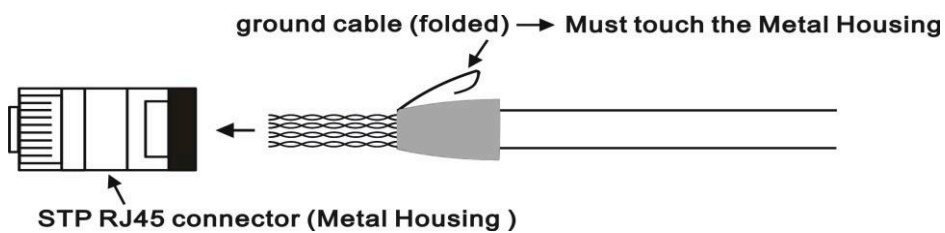
RJ45 Pinout
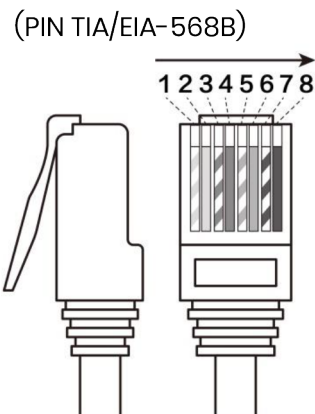
(PIN TIA/EIA-568B)

(PIN TIA/EIA-568B)		
PIN	Wire Color	
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 -

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Tips for using STP Cable
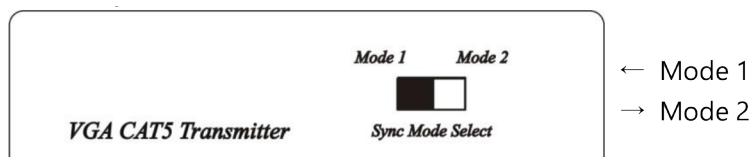
STP (shielding twisted pair) Cable

STP (shielding) RJ45 connector with STP Cable connection

Slide Switch Setting

Sync Mode Select

← Mode 1
→ Mode 2

1. For new type monitors, such as LCD Monitor over 17", it is recommended setting at Mode 1 for the best transmission stability. If the picture is not normal, please switch to Mode 2.

2. For old type monitors, such as CRT or LCD Monitor under 17", it is recommended setting at Mode 2 and adjust Sync Filter Level at receiver. If the picture is not normal after following above suggestion, please change UTP to STP (shielding twisted pair) cable.

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Sync Filter Level Setting

DIP Switch Chart

DIP Switch	1	2	3	4	5
Level 0 (Min)	↓	↓	↓	↓	↓
Level 1	↑	↓	↓	↓	↓
Level 2	↓	↑	↓	↓	↓
Level 3	↓	↓	↑	↓	↓
Level 4	↓	↓	↓	↑	↓
Level 5 (Max)	↓	↓	↓	↓	↑

ON DIP
1 2 3 4 5
Sync Filter Level   *VGA CAT5 Receiver*
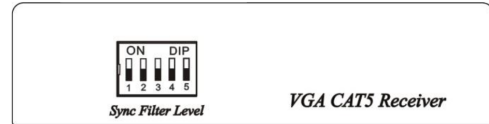
Sync Filter Level is designed for improving signal synchronising stability, not for picture quality or skews problem when using UTP cable.

There is no recommended setting as monitors have different set value. Please try multiple levels of setting to figure out the best stability.

If there is no picture display or picture not stable after adjustment, please change the UTP to STP cable.

Caution

1. The wiring must be away from electromagnetic equipment, i.e. microwave, wireless, high 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

No picture display
- Check Link cable
- Check DIP switch setting
- Check VGA cable connection
- Change the resolution or frequency
- Change UTP to STP cable

Picture not stable or intermittent disappearing
- Check DIP switch setting
- Change the resolution or frequency
- Move cable away from electromagnetic equipment
- Change UTP to STP cable

Picture tilt
- Check DIP switch setting
- Change the resolution or frequency
- Change UTP to STP cable

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