VGA Keyboard Mouse CAT5 Extender

ITEM NO.:   VKM01, VKM02

The VGA, Keyboard Mouse CAT5 Extender allows VGA video signals and keyboard mouse to be transmitted up to 100 meters via 2 x CAT5 STP or UTP cable.   Used in pairs, the Extender is used in home or commercial applications as a smart, fast and cost-effective, eliminates costly and bulky VGA, keyboard mouse cable.   Applications for classroom projector systems, boardroom systems, collaborative PC systems C-training systems, and tradeshows PC demo systems and medical information systems.

Features:
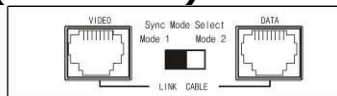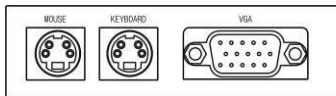### VKM01   Keyboard Mouse CAT5 Extender – PS/2 Interface
- Extend VGA and Keyboard mouse over 2 CAT5 UTP cable to instead of VGA cable and keyboard mouse cable.
- Including local and remote units.
- Up to 100 meters via standard 4 pairs CAT5 STP or UTP cable instead of VGA cable.
- **Transmitter built 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.**
- Supports up to 1280x1024 pixels.
- Passive device, not support VGA DDC protocol.
- Perfect for classrooms, lecture halls, tradeshows, video information displays…etc.

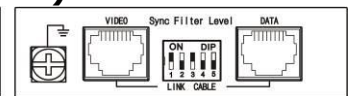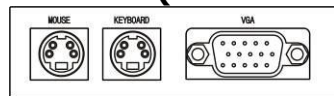### VKM02   Keyboard Mouse CAT5 Extender – USB Interface at Local Unit
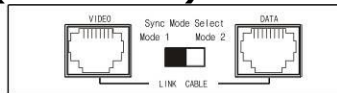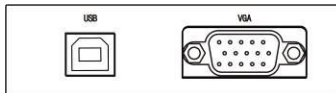- Identical same as VKM01, but the keyboard mouse is USB Interface at local unit.

Panel View:
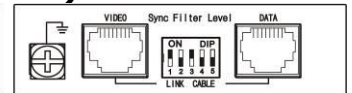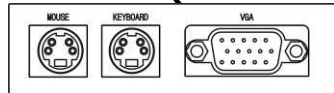### VKM01:   VKM01T (Local unit)   VKM01R (Remote unit)
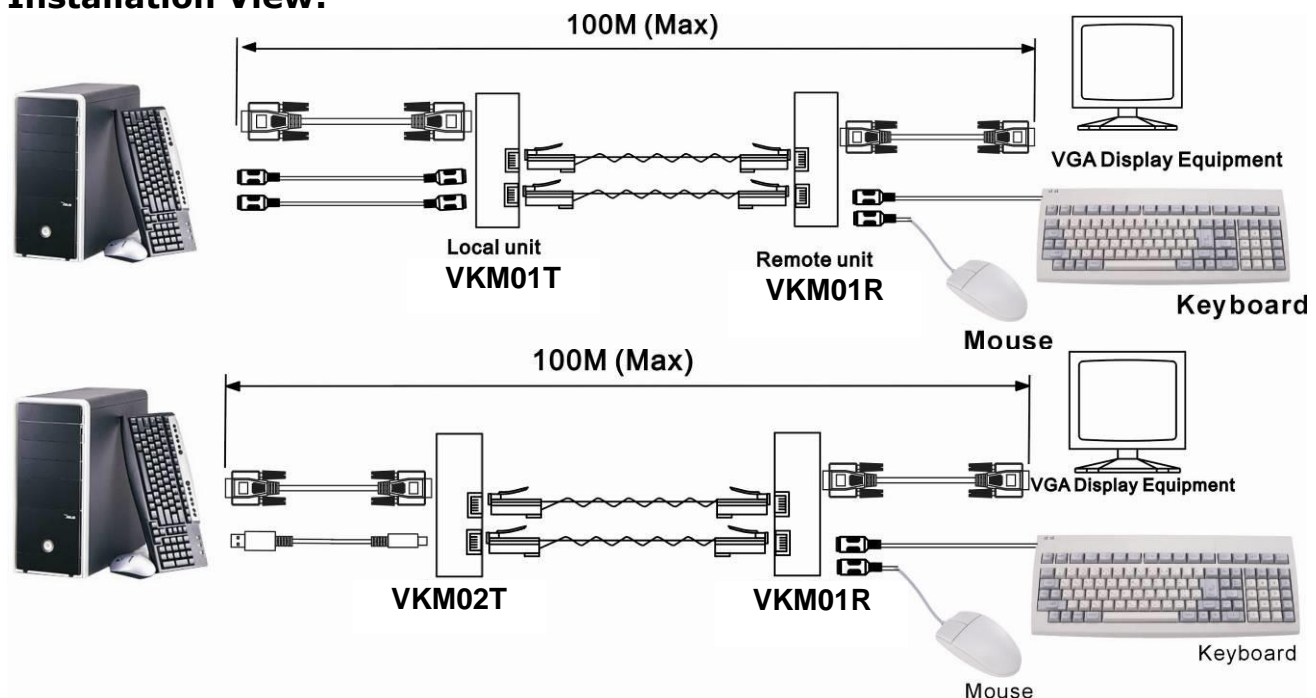

VKM02:   VKM02T (Local unit)   VKM01R (Remote unit)

Installation View:

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
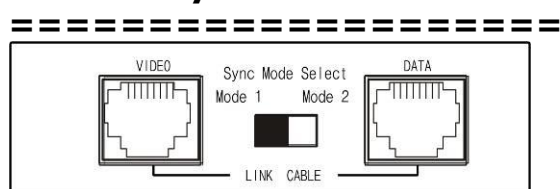
Video Link Cable		Data Link Cable	
1. Orange-white	Video Red +	1. Orange-white	Keyboard Clock
2. Orange	Video Red -	2. Orange	Keyboard Data
3. Green-white	H-Sync	3. Green-white	Power 1
4. Blue	Video Green +	4. Blue	Ground 1
5. Blue-white	Video Green -	5. Blue-white	Power 2
6. Green	V-Sync	6. Green	Ground 2
7. Brown-white	Video Blue +	7. Brown-white	Mouse Clock
8. Brown	Video Blue –	8. Brown	Mouse Data

Switch Setting:

VKM01T Sync Mode Select
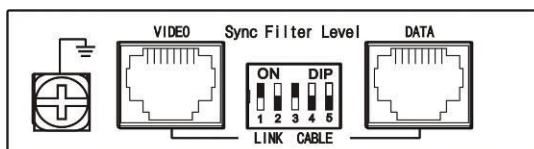
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← **Mode 1**
→ **Mode 2**

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 VKM01R. Then please use STP (shielding twisted pair) cable.**

DIP Switch Setting:

VKM01R Sync Filter Level

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

1 2 3 4 5

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.
5. If the keyboard mouse work abnormal, please reverse the cable of keyboard mouse.

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.

Specification:

ITEM NO.	VKM01(VKM01T)	VKM01(VKM01R)
Input Signals	Video : 1.1V P-P	
	Horizon & 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	
Impedance	75 ohms (DB15), 100 ohms (RJ45)	
Setting Switch	2 Stage Slide Switch	5 Stage Dip Switch
Transmission Distance	Up to 100 meters depend on image resolution	
Input / Output	DB15 x 1, PS/2 x 2	
Link connection	RJ45 x 2	
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 mm	108 x 72.2 x 27	
Weight g	115	

ITEM NO.	VKM02(VKM02T)	VKM02(VKM01R)
Input Signals	Video : 1.1V P-P	
	Horizon & 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	
Impedance	75 ohms (DB15), 100 ohms (RJ45)	
Setting Switch	2 Stage Slide Switch	5 Stage Dip Switch
Transmission Distance	Up to 100 meters depend on image resolution	
Input / Output	DB15 x 1, USB Type B x 1	DB15 x 1, PS/2 x 2
Link Connection	RJ45 x 2	
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 mm	108 x 72.2 x 27	
Weight g	105	115

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Rev. B