KVM Extender User Manual

Ⅰ.Product Description：

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Factory：
ISO: 9001Certificate
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KL-151M / KL-153M not only didn't increase the cost of the system in the short-range transmission, but also simplified the engineering wiring and other operating procedures. Therefore, in the security of the VGA monitoring system, high-definition video network advertising system, multimedia network teaching, multimedia conferencing and other systems with twisted pair transmission has obvious advantages:

1．Long video transmission distance, high transmission quality. As using advanced processing technology in the twisted pair transceiver, an excellent compensation for the twisted pair on the video signal amplitude attenuation and attenuation between different frequencies, to maintain the original VGA image brightness and color and real-time, the farthest transmission distance to 300m, the image signal is basically no distortion.

2．Convenient for wiring and cable utilization is high. An unshielded twisted pair not only can transmit high-definition VGA image signal, but also can transmit USB keyboard and mouse signal. In addition, there are five types of unshielded twisted pair in the building , and one can transmit all the way, without any other wiring, even if the re-wiring, 5 cable is easier than fiber and coaxial cable   greatly simplified the difficult of engineering wiring and improved the cable utilization, while avoiding a variety of separate wiring problems caused by the signal, reducing the cost of the project.

3．High anti-interference ability. Twisted pair can effectively inhibit common mode interference, even in strong interference environment, twisted pair can also send excellent image signal, and the twisted pair will not interfere with each other.

4．High reliability, easy to use. The use of twisted-pair transmission of high-definition video and USB keyboard and mouse signals at the same time, the source access to the transmitter, in the remote display device to access a dedicated receiver. This twisted-pair transmission equipment is cheaper & easier to use, no professional knowledge, no too much operation, one installation with long-term stable work.
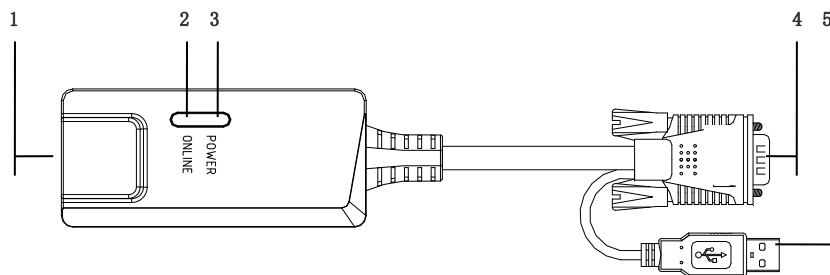
5．   Cheap & easy to draw. As the wide using of the general 5 categories, 5 categories and 6 types of shielded or unshielded twisted pair currently, the selection is very convenient & no limit. It's very easy to purchase around the world with cheaper price and bring the great convenience to project application.

Ⅱ.The scope of products:

LCD and plasma flat-panel display advertising project
Large screen LCD screen display projects
Large projection equipment demonstration system
Industrial automation control system
Large and medium audio and video conferencing systems
Medical care display system
Bank, securities, financial system
Security VGA area monitoring system
Multimedia network teaching system
Long distance KVM extender, switcher
Remote network server monitoring
Large and medium - sized central control system
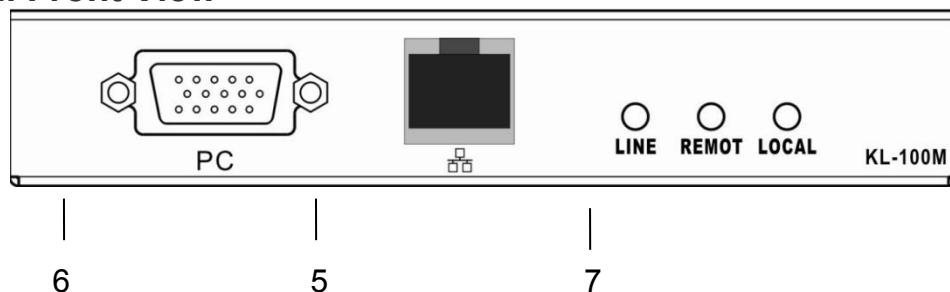Military exercise command system

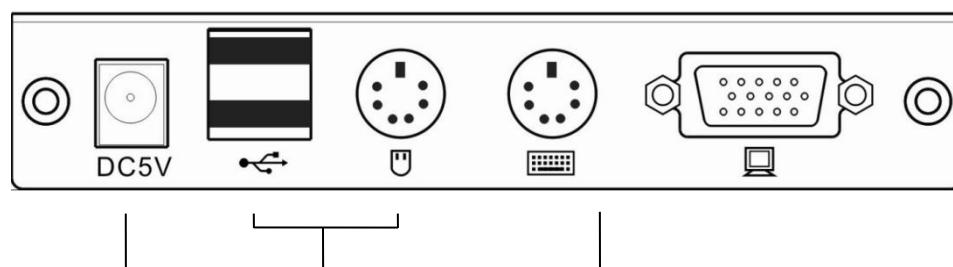## III. Product view description:
Sender：KT-150

1. RJ45 sending port: Connect one end of the CAT5 cable to this port and the other end to the RJ45 receiving port of KL-151M/KL-153M.
2. Online LED: the indicator light is on when connected to the receiving port.
3. Power LED: Light up when getting power from computer.
4. VGA port: Insert the VGA port into the HDB-15 port of the computer.
5. Mouse & keyboard connector: Connect to the USB port of the computer.
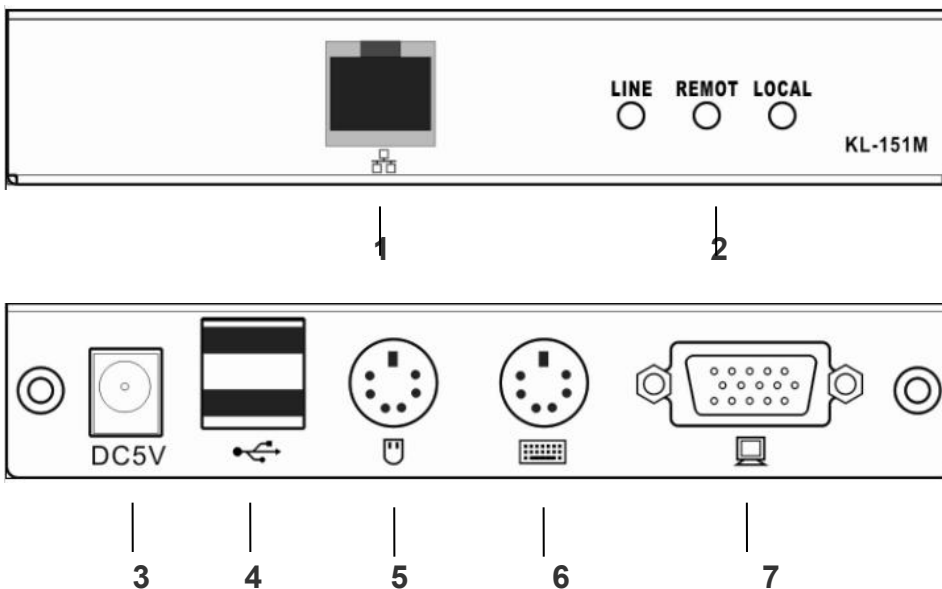
Sender：KL-100M

KL-100M Front View

KL-100M Rear View
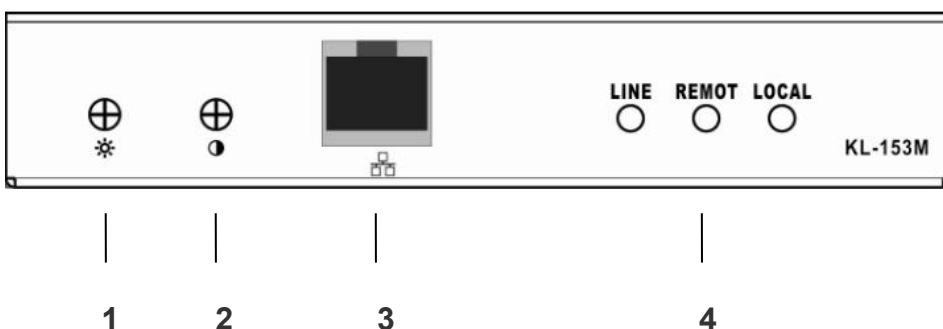
| 1 | 2 | 3 | 4 |

1. Power port: power adapter (standard configuration).
2. USB control terminal: local USB keyboard and mouse
3. PS/2 console: local PS/2 mouse and keyboard.
4. Controlled PC port: Use (standard) KVM cable to connect to the controlled PC.
5. RJ45 port: used to connect the receiver KL-151M or KL-153M   of the KVM extender.
6. VGA port: local display.
7. Indicator light: LINE indicates the connection status, RMOT indicates the connection status of the remote device, and LOCAL indicates the local connection status.

Receiver：KL-151M

LINE REMOT LOCAL

KL-151M

1

2

DC5V   ←·→   🖱   ⌨   🖥

3   4   5   6   7

1. RJ45: Connect to the RJ45 port of the sending end (KL-100M)
2. LED lights: LINE indicates the connection status, RMOT indicates the connection status of the remote device, and LOCAL indicates the local connection status
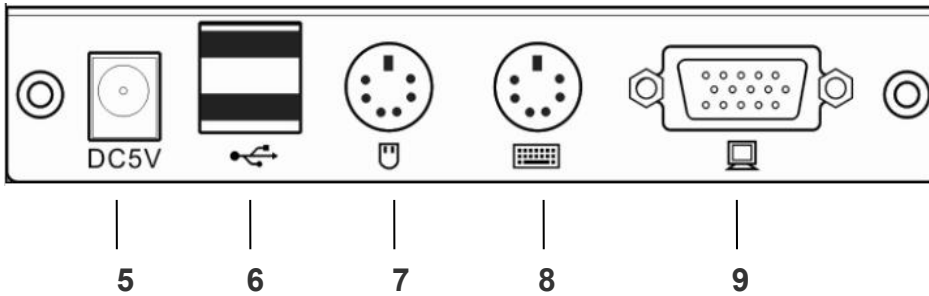3. Power interface: DC power interface
4. USB interface: USB keyboard and mouse ports at the receiving end
5. PS/2 mouse interface: PS/2 mouse on the receiving end
6. PS/2 keyboard interface: PS/2 keyboard at the receiving end
7. VGA interface: receiving end display interface

Receiver：KL-153M

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LINE REMOT LOCAL

KL-153M

1   2   3   4
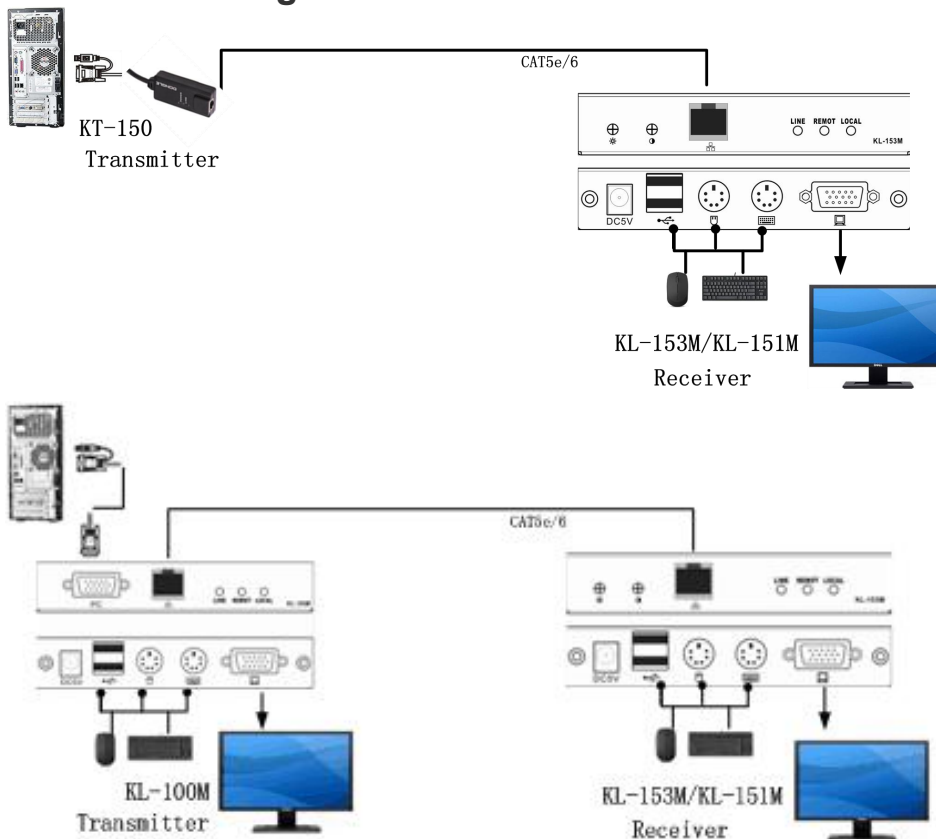
5   6   7   8   9

1. Brightness adjustment: video brightness
2. Contrast adjustment: video contrast
3. RJ45 port: connect to the RJ45 port of the sender (KL-100M)
4. LED light: Status indicator LED light: LINE means connection status, RMOT meter
Shows the status of connecting to the remote device, LOCAL represents the status of
the local connection
5. Power interface: DC power interface
6. USB interface: USB keyboard and mouse ports at the receiving end
7. PS/2 mouse interface: PS/2 mouse at the receiving end
8. PS/2 keyboard interface: PS/2 keyboard at the receiving end
9. VGA interface: receiving end display interface

Function hot-key definition:
The hot key for gain adjustment trigger is double-click ALT
1: Double click Alt+E+↑/↓arrow: VCTRL EQ gain adjustment
2: Double-click Alt +V+↑/↓Arrow: VGAIN_CTL red, green and blue channel adjustment
3: Double click Alt +R+↑/↓arrow: red channel signal compensation adjustment
4: Double-click Alt +G+↑/↓arrow: Green channel signal compensation adjustment
5: Double-click Alt +B+↑/↓arrow: blue channel signal compensation adjustment
6: F12 hot-key for switching between far and near ends

Connection diagram:

IV. Specifications:

Model No.		KL-151M	KL-153M
Connector	Keyboard& Mouse	PS/2,USB	PS/2,USB
	Display	1 x HDB-15 Female(Blue)	1 x HDB-15 Female(Blue)
	CAT5	RJ45	RJ45
	Video adjustment	No	Adjustable knob, hot key adjustment
Video	Signal Type	VGA signal	VGA signal
	Minimum input level	0.5Vp-p	0.5Vp-p
	Maximum input level	1.0Vp-p	1.0Vp-p
	I/O impedance	75Ω	75Ω
	Best resolution	1280*1024	1920*1080
	Line frequency	30-100KHz	30-100KHz
	Field frequency	60Hz	60Hz
Spec	Distance	MAX 100M	MAX 300M
	power supply	DC5V 2000mA	DC5V 2000mA
	Storage temperature	-20˚C~60˚C	-20˚C~60˚C
	Operation temperature	0˚C~50˚C	0˚C~50˚C
	Size	125mm*74mm*23mm	125mm*74mm*23mm
	Weight	580g	600g
Color		Black	
Case		Metal	

Model No.		KL-100M	KT-150
Switch between remote and local keyboard and mouse functions		F12 hotkey switch	N/A
Console	Keyboard	1 x PS/2, 1 x USBFemale	1 x USBFemale
	Mouse	1 x PS/2, 1 x USBFemale	
	Diaplay	1 x HDB-15 Female(Blue)	1 x HDB-15 Female(Blue)
Sender		1 x RJ-45	
Status Indicator		3	2

Video Resolution	1920 x 1080	
Standard power supply	DC5V 2000mA	N/A
Operating temperature	0˚C~50˚C	
Storage temperature	-20˚C~60˚C	
Case	Metal	Plastics
Weight	580g	110g
Size(length x width x height)	125mm*74mm*23mm	

V.Frequently Asked Questions Maintenance and Handling

1）If the signal is not output, please check :

A：Whether the power cord is plugged into the device

B：Whether the cable is damaged

C：Whether there is an input signal

2）If the POWER lamp is off, please check that the power supply is normal.

3）Theoutputimageisdisturbedanditispossiblethattheinput/outputdevice is not grounded.

4）If the output image is blurred, adjust the signal matching knob and check if there is a problem with the cable.

VI. List of various types of cable signal transmission

Cable	Distance（meter）	Resolution（60Hz）
CAT5/5e-CAT6	0-50	KL-151M(1920*1080)
	0-100	KL-151M(1280*1024)
	0-300	KL-153M(1920*1080)