VGA & USB, AUDIO, RS232, IR CAT5 Extender

ITEM NO.: VKM03 VGA & USB with Stereo Audio, RS232, and IR CAT5 Extender

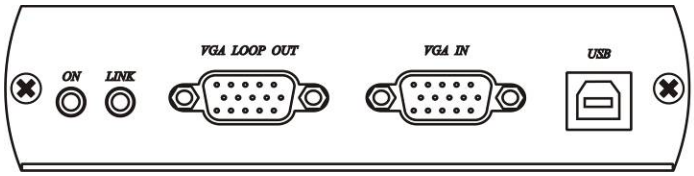
The VKM03 VGA, USB with Stereo Audio, RS232, and IR CAT5 extender design for extends all signals over one CAT5 up to 140 meters, with local VGA monitor output. It provides superior video quality up to 1920 x 1080 resolutions, and using cost effective Cat5e cable, instead of VGA, audio, RS232 cables, for an easy, neater and reliable installation. Using a standard Gigabit Ethernet LAN system and add a Gigabit switch could do multiple display. It is optimized for applications at digital signage, home network integration, and industrial control, hospital, education, security, and KVM extension.

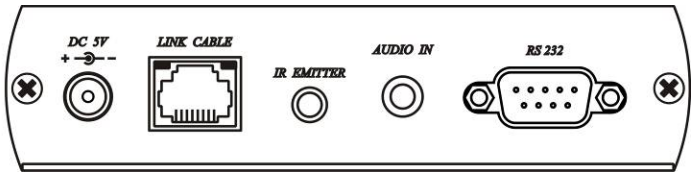
Features:

- Extend VGA, stereo audio, RS232, IR and USB signals over one CAT5E/CAT6 cable.
- USB port support USB 2.0, USB 1.0 & USB 1.1
- Full Duplex data communication.
- Transmitter unit built in VGA loop output.
- Receiver unit with 4 ports USB devices, to extend USB 2.0 peripheral devices, such as flash disk, hard disk, keyboard, mouse, etc.
- Supports up to 1920 x 1080.
- **Transmission range up to 140 meters over CAT5e, 180M over CAT6.**
- **Support point to point and point to multi-display connections via Gigabit network switch.**
- Plug and play for easy operation.
- Perfect for control remote machines and security monitoring systems, digital signage application.
- **Optional model: SR01 signal repeater for longer distance application.**

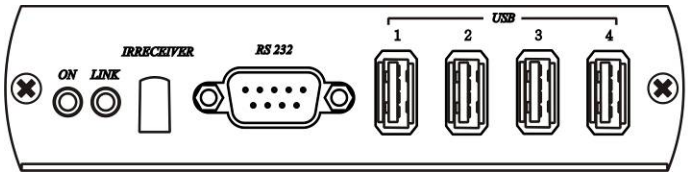
Panel View:

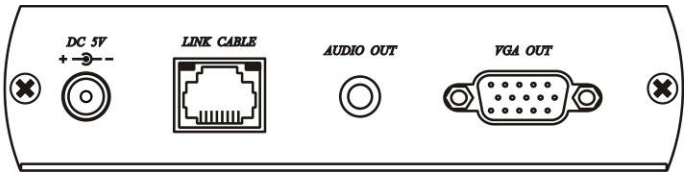
Transmitter





Receiver

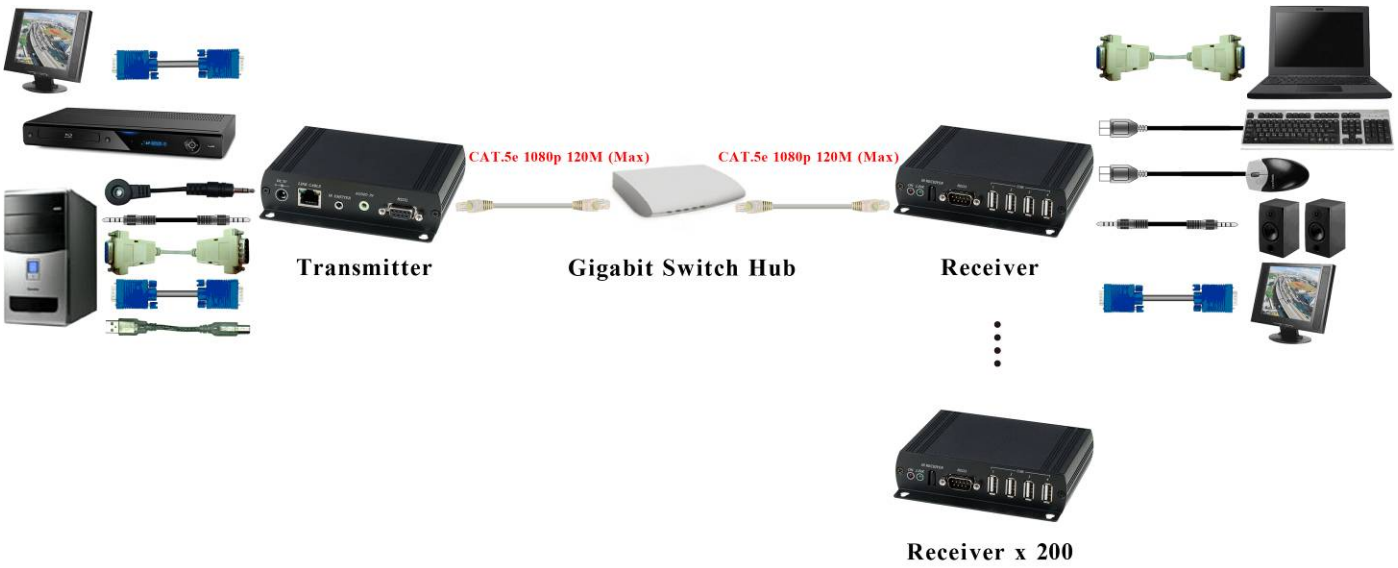




Installation View:

Point to Point Direct Connection:

Over Gigabit Ethernet switches: One to Multiple Connection



1 Input to Multiple outputs connections via a Gigabit network switch

Recommend installation using an independent Gigabit LAN; do not link with existing LAN to avoid a lot of video data transmission slow down your network system.

When using multiple transmitters and receivers via a Gigabit network switch, identically configure dip switches on the local and remote units to link them together.

In multiple connections keyboard and mouse are plug and play, for other USB devices just simply press and click the USB keyboard Pause/Break" KEY on a receiver for three times to get USB control; only one unit can have USB control over the source at any time.

Optional Model: SR01 Signal Repeater (order separately)

- Extend data signal for an additional 120meters.
- Application for VKM03 signals for extra long range transmission.
- Ability to cascade connection with multiple SR01 for long range transmission
- Built in LED status indication.
- External power required.
- Plug and play for easy installation.

Work with VKM03 CAT5 Extender:

LED Indication Status:

Power	On (power)
Link	Flash (under linking)
	On (linking)
RJ45	Green Flash (Data transmission)
	Orange On (linking)

Cable:

Link Cable use high quality Cat.5e UTP/STP/FTP or Cat.6 UTP cable

Ethernet Switch Hub Recommendation：

Recommend to use IGMP and Jumbo Frame over 8K Ethernet Switch Hub in order to achieve the best transmission quality

HOT KEY Function：

VKM03 could use Ethernet Switch Hub to do one to multiple application, Under multiple VKM03R for switching VKM03R external host USB flash drive port, make the external flash drive you want to use with an external USB keyboard, to click three times “Pause/Break” KEY, the system will redetect and connect USB devices.

Caution：

1. VKM03 do not recommend working with general LAN connection to avoid large video data transmission or multicast packets to slow down your other LAN devices.
2. IR receiving angle ±55degree, emitting angle 30degree，distance reach to 3-5 meters.

Web Setting Function：

There are three ways to get the IP address of receiver:

1. Connect monitor with receiver, **local IP** shows on right bottom screen when receiver booting or transmitter not connected(or no video input)
2. Install Internet explorer plug-in: Bonjour , click device name to enter web setting page to get the IP address(please refer Bonjour plug-in installation)

There are three ways to get the IP address of transmitter:

1. Connect monitor with receiver, connect receiver with transmitter and set in the same channel, **remote IP** shows on right bottom screen when receiver booting or no video input from transmitter
2. Install Internet explorer plug-in: Bonjour , click device name to enter web setting page to get the IP address(please refer Bonjour plug-in installation)

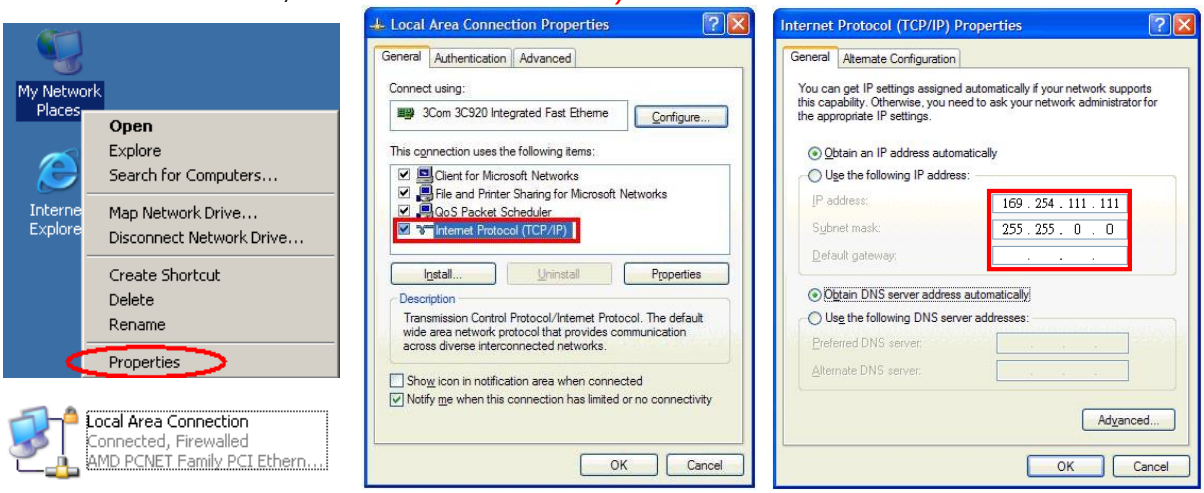
System default IP setting is Auto IP, it will assign 169.254.X.X (subnet mask 255.255.0.0) to transmitters and receivers, you could also set to DHCP or Static IP.
You computer must set in same subnet mask to enter the web setup page.

If you do not sure the IP address of transmitters/receivers you could reset the transmitters and receiver to default by press the LINK button to power on (Press and hold until Green and Blue LED Flash) to reset to default.

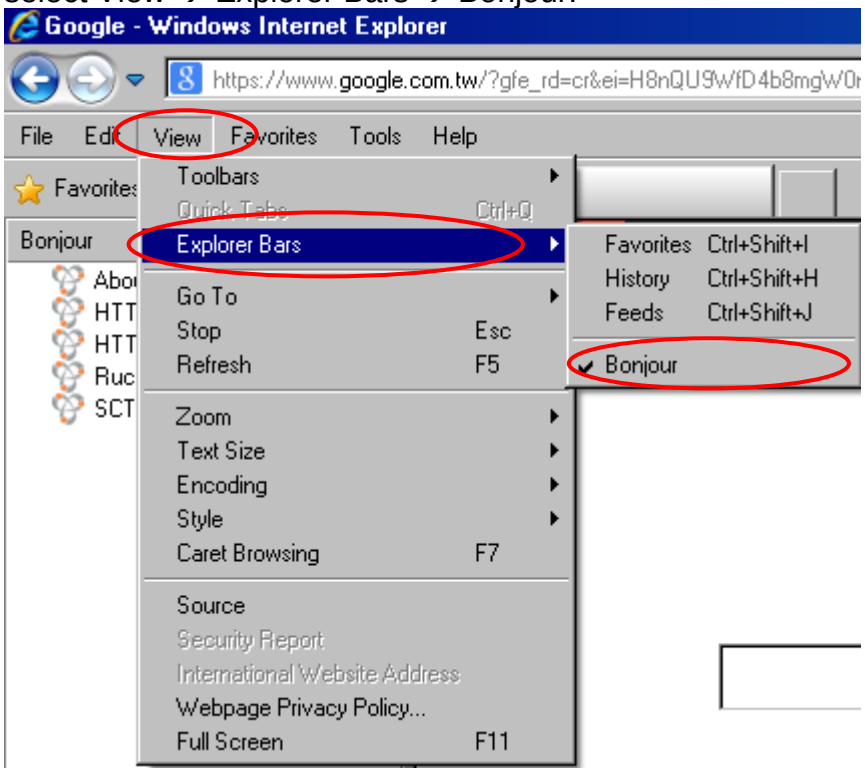
Bonjour plug-in installation:

1. Install BonjourSDKSetup.exe

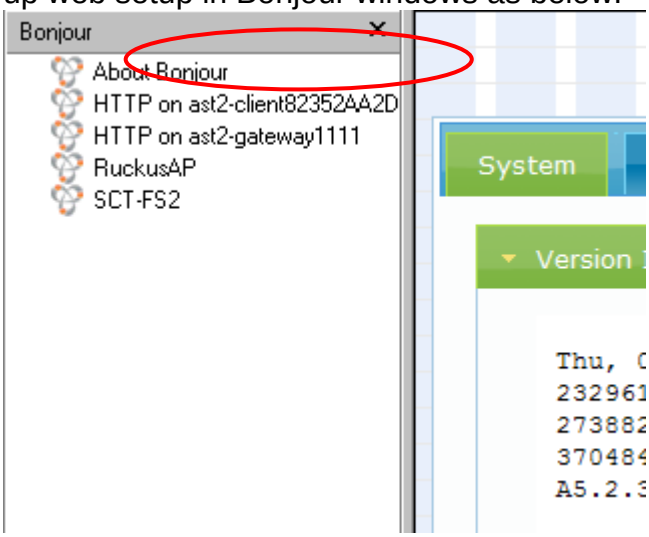
2. Right click on “My Network Place” → “Properties” then right click on “Local Area Connection” → “Properties” then double click on “Internet Protocol (TCP/IP)” to setting as below: (IP address 169.254.111.111, sub mask 255.255.0.0)



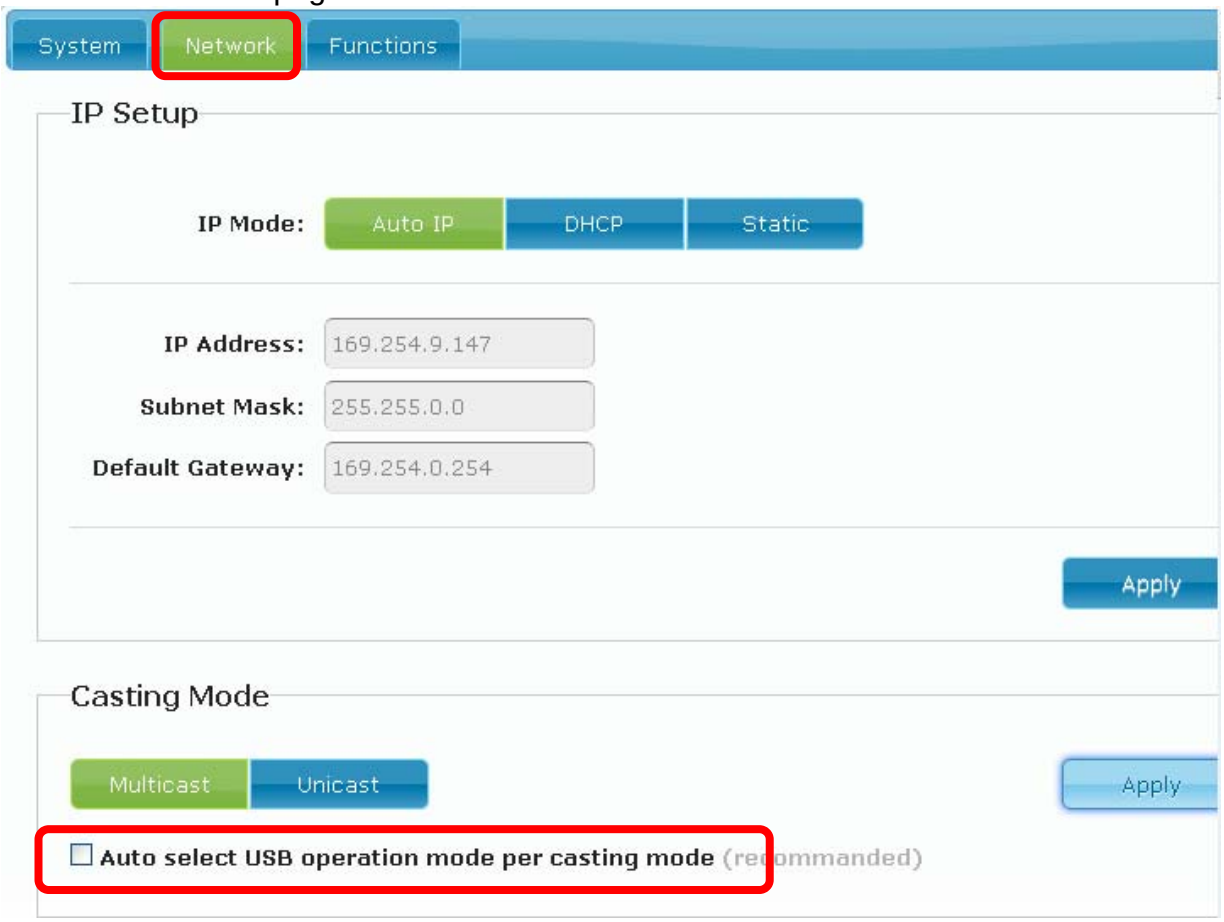
3. Use CAT5 cable to connect transmitter RJ45 port to PC LAN port, open IE browser then select View → Explorer Bars → Bonjour.



4. Double click on “HTTP on ast-gateway(VKM03T)” or “HTTP on ast-client (VKM03R)”, it will pop up web setup in Bonjour windows as below:

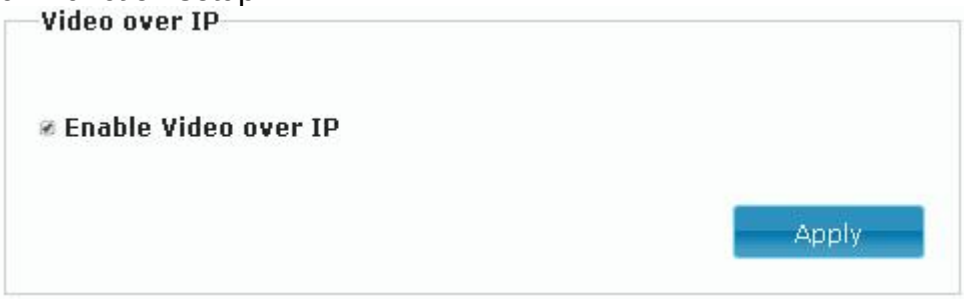


5. Select Network page



- IP Mode : Auto IP、DHCP、Static three modes, select one of them and press “Apply” to finish setting.
- Casting Mode : Multicast(one to multiple) and Unicast(one to one) two modes ,select and press “Apply” to finish setting (If setup at Multicast, pick Auto select USB operation mode per casting mode)

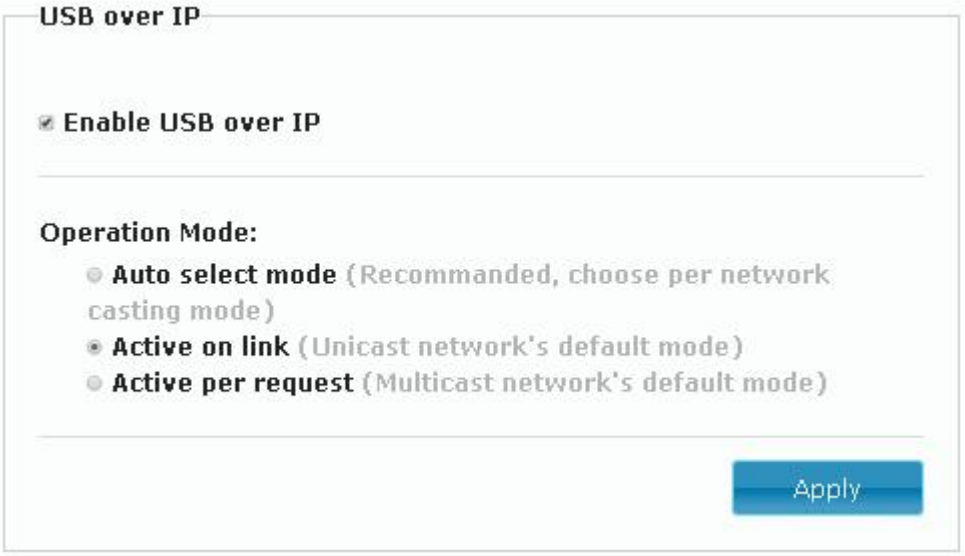
6. Function setup



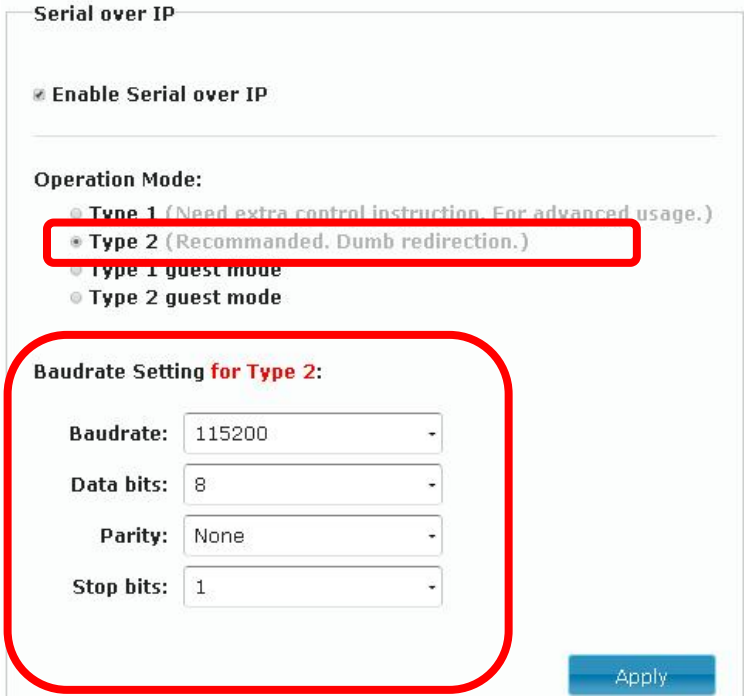
VKM03T Video over IP: This function setup the video signals send from network, select and enter “Apply” finish setting

VKM03R Video over IP : This function setup the video signals send from network, select Copy EDID from this Video Output and enter “Apply” finish setting (pick up this item will auto copy VKM03R TV EDID).

In multiple connections the EDID will copy from the last connected receiver.



USB over IP Setup: This function setup the USB signals send from network.
In Unicast (one to one) mode: Operation Mode selects “Active per request” and enters “Apply” to finish setting.
In Multicast (one to multiple) mode: Operation Mode select “Auto select mode” and enter “Apply” to finish setting.



Serial over IP: This function setup Serial (RS232) signal sends from network
[Baudrate Default：115200]

- Operation Mode selects “Type 2 (Recommended. Dumb redirection.)” And enter Apply to finish setting.
- Baud rate Setting for Type 2 : It could change Baud rate as below : 300, 600, 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 115200, 230400

RJ45 Define:

Link Cable (TIA/EIA-568-B)

1. Orange-white Data 1 +
2. Orange Data 1 -
3. Green-white Data 2 +
4. Blue Data 3 +
5. Blue-white Data 3 -
6. Green Data 2 -
7. Brown-white Data 4 +
8. Brown Data 4 -

Package Include:

VKM03T Transmitter x 1
VKM03R Receiver x 1
3.5mm Audio cable 80cm x 1
VGA cable 90 cm x 1
IR emitter cable x 1
DC 5V 2Amp power adapter x 2

Specification:

ITEM NO.	VKM03T	VKM03R
Support Resolution	Up to 1920 x 1080 @ 85 Hz	
Transmission Distance	CAT5e: 140M, CAT6: 180M (Max)	
Video Input Signals	RGB Analog (75Ω, 0.7Vp-p) Sync Signal H/V Separated (TTL)	
VGA Connector	DB15 Female x 2	DB15 Female x 1
USB Connector	USB B-Type x 1	USB A-Type x 4
RS232 Connector	DB9(Female) x 1	DB9(Male) x 1
Audio Connector	3.5 mm Phone Jack x1	
IR Connector	3.5 mm Phone Jack x1	Built-in
Link Connector	RJ45 x 1	
Power Supply	DC 5V 2 Amp	
Power Consumption	1.1Amp	
Temperature	Operation: 0 to 55℃, Storage: -20 TO 85℃, Humidity: up to 95%	
Dimensions mm	125 x 120.5 x 30	
Weight g	335	330

RoHS CE FC

Rev. D