

# MSP 221



## User Manual

- Manual #: RGB-RD-UM-M221 E001
- Revision: V1.1

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## MSP 221·User Manual

Thank you for choosing our products!

In order to allow you to learn how to use the EDID&HDCP Manager quickly, we bring you the detailed user Manual. You can read the introduction and directions before using the EDID&HDCP Manager, please read all the information we provide carefully to use our products correctly.

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## Operators Safety Summary

The general safety information in this summary is for operating personnel.

### **Do Not Remove Covers or Panels**

There are no user-serviceable parts within the unit. Removal of the top cover will expose dangerous voltages. To avoid personal injury, do not remove the top cover. Do not operate the unit without the cover installed.

### **Power Source**

This product is intended to operate from a power source that will not apply more than 230 volts rms between the supply conductors or between both supply conductor and ground. A protective ground connection by way of grounding conductor in the power cord is essential for safe operation.

### **Grounding the Product**

This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals. A protective-ground connection by way of the grounding conductor in the power cord is essential for safe operation.

### **Use the Proper Power Cord**

Use only the power cord and connector specified for your product. Use only a power cord that is in good condition. Refer cord and connector changes to qualified service personnel.

### **Use the Proper Fuse**

To avoid fire hazard, use only the fuse having identical type, voltage rating, and current rating characteristics. Refer fuse replacement to qualified service personnel.

### **Do Not Operate in Explosive**

### **Atmospheres**

To avoid explosion, do not operate this product in an explosive atmosphere.

## Terms in This Manual and Equipment Marking



### **WARNING**

Highlight an operating procedure, practice, condition, statement, etc, which, if not strictly observed, could result in injury or death of personnel.

Highlights an essential operating procedure, condition or statement.

**Note**



### **CAUTION**

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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## Amendment Records

The table below lists the changes to the EDID&HDCP Manager User Manual.

Format	Time	ECO#	Description	Principal
V1.0	2/14/2014	0000#	Release	Vira
V1.1	5/30/2018	0001#	Modify operation manual and communication software guideline.	Rainbow



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# 1. Brief Introduction

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This chapter is designed to introduce you to the MSP 221 User Manual.

Areas to be covered are:

- [Chapter Structure](#)
- [How to Use The Manual](#)
- [Terms and Definitions](#)
- [System Overview](#)
- [Application Questions](#)

# 1. Brief Introduction

## Chapter Structure

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### Chapter Structure

The following chapters provide instructions for all aspects of MSP 221 operations.

Chapter 1 [Brief Introduction](#)

Chapter 2 [Hardware Orientation](#)

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# 1. Brief Introduction

How to Use The Manual

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## How to Use the Manual

Followings are important tips for streamlining your use of this User Manual in its electronic “PDF” form.

### Navigation

Use Acrobat Reader’s “bookmarks” to navigate to the desired location. All chapter files have the same bookmark structure for instant navigation to any section. Please note:



- Extensive hyperlinks are provided within the chapters.
- Use Acrobat’s “**Go to Previous View**” and “**Return to next View**” buttons to trace your complete navigational path.



- Use the “**Previous Page**” and “**Next Page**” buttons to go to the previous or next page within a file.
  - Use Acrobat’s extensive search capabilities, such as the “**Find**” tool and “**Search Index**” tool to perform comprehensive searches as required.

### Table of Contents and Index

Use the Table of Contents bookmarks to navigate a desired topic. Click any item to instantly jump to that section of the guide. You can also use the **Index** to jump to specific topics within a chapter. Each page number in the **Index** is a hyperlink.

Should you have any questions regarding the installation or operation of MSP 221, please consult with the factory. Refer to Appendix B on page 34 for “Contact Information”.

# 1. Brief Introduction

How to Use The Manual

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## Term and Definitions

The following terms and definitions are used throughout this guide.

- **“ASCII”**: American Standard for Information Interchange. The standard code consisting of 7-bit coded characters (8 bits including parity check) used to exchange information between data processing systems, data communication systems, and associated equipment. The ASCII set contains control characters and graphic characters.
- **“Aspect ratio”**: The relationship of the horizontal dimension to the vertical dimension of an image. In viewing screens, standard TV is 4:3, or 1.33:1; HDTV is 16:9, or 1.78:1. Sometimes the “:1” is implicit, making TV = 1.33 and HDTV = 1.78.
- **“AV”**: Audio visual or audio video.
- A **“Background”** is an unscaled source, typically originating from a computer. A background source appears at the system’s lowest priority — visually in back of all other sources.
- **“Baudrate”**: Named of J.M.E. Baudot, the inventor of the Baudot telegraph code. The number of the electrical oscillations per second, called baud rate. Related to, but not the same as, transfer rate in bits per second (bps).
- **“Blackburst”**: The video waveform without the video elements. It includes the vertical sync, horizontal sync, and the chroma burst information. Blackburst is used to synchronize video equipment to align the video output. One signal is normally used to set up an entire video system or facility. Sometimes it is called House sync.
- **“BNC”**: Bayonet Neill-Concelman. A cable connector used extensively in television and named for its inventors. A cylindrical bayonet connector that operates with a twist-locking motion. To make the connection, align the two curved grooves in the collar of the male connector with the two projections on the outside of the female collar, push, and twist. This allows the connector to lock into place without tools.
- **“Brightness”**: Usually refers to the amount or intensity of video light produced on a screen without regard to color. Sometimes called “black level.”
- **“CAT 5”**: Category 5. Describes the network cabling standard that consists of four unshielded twisted pairs of copper wire terminated by RJ-45 connectors. CAT 5 cabling supports data rates up to 100 Mbps. CAT 5 is based on the EIA/TIA 568 Commercial Building Telecommunications Wiring Standard.
- **“Color bars”**: A standard test pattern of several basic colors (white,

# 1. Brief Introduction

## Terms and Definitions

- yellow, cyan, green, magenta, red, blue, and black) as a reference for system alignment and testing. In NTSC video, the most commonly
- Used color bars are the SMPTE standard color bars. In PAL video, the most commonly used color bars are eight full field bars. In the computer, the most commonly used color bars are two rows of reversed color bars.
  - **“Color burst”**: In color TV systems, a burst of sub carrier frequency located on the back porch of the composite video signal. This serves as a color synchronizing signal to establish a frequency and phase reference for the chroma signal. Color burst is 3.58 MHz for NTSC and 4.43 MHz for PAL.
  - **“Color temperature”**: The color quality, expressed in degrees Kelvin (K), of a light source. The higher the color temperature, the bluer the light. The lower the temperature, the redder the light. Benchmark color temperature for the A/V industry includes 5000°K, 6500°K, and 9000°K.
  - **“Contrast ratio”**: The ratio of the high light output level divided by the low light output level. In theory, the contrast ratio of the television system should be at least 100:1, if not 300:1. In reality, there are several limitations. In the CRT, light from adjacent elements contaminate the area of each element. Room ambient light will contaminate the light emitted from the CRT. Well-controlled viewing conditions should yield a practical contrast ratio of 30:1 to 50:1.
  - **“DVI”**: Digital Visual Interface. The digital video connectivity standard that was developed by DDWG (Digital Display Work Group). This connection standard offers two different connectors: one with 24 pins that handles digital video signals only, and one with 29 pins that handles both digital and analog video.
  - **“EDID”**: Extended Display Identification Data – EDID is a data structure used to communicate video display information, including native resolution and vertical interval refresh rate requirements, to a source device. The source device will then output the optimal video format for the display based on the provided EDID data, ensuring proper video image quality. This communication takes place over the DDC – Display Data Channel.
  - **“Ethernet”**: A Local Area Network (LAN) standard officially known as IEEE 802.3. Ethernet and other LAN technologies are used for interconnecting computers, printers, workstations, terminals, servers, etc. within the same building or campus. Ethernet operates over twisted pair and over coaxial cable at speeds starting at 10Mbps. For LAN interconnectivity, Ethernet is physical link and data link protocol reflecting the two lowest layers of the OSI Reference Model.
  - **“Frame”**: In interlaced video, a frame is one complete picture. A video

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## Terms and Definitions

frame is made up of two fields, or two sets of interlaced lines. In a film, a frame is one still picture of a series that makes up a motion picture.

- **“Gamma”**: The light output of a CRT is not linear with respect to the voltage input. The difference between what you should have and what is actually output is known as gamma.
- **“HDMI” - High – Definition Multimedia Interface**: An interface used primarily in consumer electronics for the transmission of uncompressed high definition video, up to 8 channels of audio, and control signals, over a single cable. HDMI is the de facto standard for HDTV displays, Blu-ray Disc players, and other HDTV electronics. Introduced in 2003, the HDMI specification has gone through several revisions.
- **“HDSDI”**: The high-definition version of SDI specified in SMPTE-292M. This signal standard transmits audio and video with 10 bit depth and 4:2:2 color quantization over a single coaxial cable with a data rate of 1.485 Gbit/second. Multiple video resolutions exist including progressive 1280x720 and interlaced 1920x1080 resolutions. Up to 32 audio signals are carried in the ancillary data.
- **“JPEG” (Joint photographic Expects Group)**: Commonly used method of loss compression for photographic images using a discreet cosine transfer function. The degree of compression can be adjusted, allowing a selectable tradeoff between storage size and image quality. JPEG typically achieves 10:1 compression with little perceptible loss in image quality. Produces blocking artifacts.
- **“MPEG”**: Motion Picture Expect Group. A standard committee under the auspices of the International Standards Organization working on algorithm standards that allows digital compression, storage and transmission of moving image information such as motion video, CD-quality audio, and control data at CD-ROM bandwidth. The MPEG algorithm provides inter-frame compression of video images and can have an effective compression rate of 100:1 to 200:1.
- **“NTSC”**: The color video standard used in North America and some other parts of the world created by the National Television Standards Committee in the 1950s. A color signal must be compatible with black-and-white TV sets. NTSC utilizes an interlaced video signals, 525 lines of resolution with a refresh rate of 60 fields per second (60 Hz). Each frame is comprised of two fields of 262.5 lines each, running at an effective rate of 30 frames per second.
- **“Operator”**: Refers to the person who uses the system.
- **“PAL”**: Phase Alternate Line. A television standard in which the phase of the color carrier is alternated from line to line. It takes four full pictures (8 fields) for the color-to-horizontal phase relationship to return to the reference point. This alternation helps cancel out phase

# 1. Brief Introduction

## Terms and Definitions

errors. For this reason, the hue control is not needed on a PAL TV set. PAL, in many transmission forms, is widely used in Western Europe, Australia, Africa, the Middle East, and Micronesia. PAL uses 625-line, 50-field (25 fps) composite color transmission system.

- **“PIP”**: Picture-in-Picture. A small picture within a larger picture created by scaling down one of the images to make it smaller. Each picture requires a separate video source such as a camera, VCR, or computer. Other forms of PIP displays include Picture-by-Picture (PBP) and Picture-with-Picture (PWP), which are commonly used with 16:9 aspect display devices. PBP and PWP image formats require a separate scaler for each video window.
- **“Polarity”**: The positive and negative orientation of a signal. Polarity usually refers to the direction or a level with respect to a reference (e.g. positive sync polarity means that sync occurs when the signal is going in the positive direction).
- **“RJ-45”**: Registered Jack-45. A connector similar to a telephone connector that holds up to eight wires used for connecting Ethernet devices.
- **“RS-232”**: An Electronic Industries Association (EIA) serial digital interface standard specifying the characteristics of the communication path between two devices using either DB-9 or DB-25 connectors. This standard is used for relatively short-range communication and does not specify balanced control lines. RS-232 is a serial control standard with a set number of conductors, data rate, word length, and type of connector to be used. The standard specifies component connection standards with regard to the computer interface. It is also called RS-232-C, which is the third version of the RS-232 standard, and is functionally identical to the CCITT V.24 standard.
- **“Saturation”**: Chroma, chroma gain. The intensity of the color, or the extent to which a given color in any image is free from white. The less white in a color, the truer the color or the greater its saturation. On a display device, the color control adjusts the saturation. Not to be confused with the brightness, saturation is the amount of pigment in a color, and not the intensity. Low saturation is like adding white to the color. For example, a low-saturated red looks pink.
- **“Scaling”**: A conversion of a video or computer graphic signal from a starting resolution to a new resolution. Scaling from one resolution to another is typically done to optimize the signal for input to an image processor, transmission path or to improve its quality when presented on a particular display.
- **“SDI”**: Serial Digital Interface. The standard based on a 270 Mbps transfer rate. This is a 10-bit, scrambled, polarity independent interface with common scrambling for both component ITU-R 601 and



# 1. Brief Introduction

## Terms and Definitions

- composite digital video and four channels of (embedded) digital audio.
- **“Seamless Switching”**: A feature found on many Extron video switchers. This feature causes the switcher to wait until the vertical interval to switch. This avoids a glitch (temporary scrambling) which normally is seen when switching between sources.
  - **“SMPTE”**: Society of Motion Picture and Television Engineers. A global organization, based in the United States that sets standards for base band visual communications. This includes film as well as video and television standards.
  - **“S-Video”**: A composite video signal separated into the luma (“Y” is for luma, or black and white information; brightness) and the chroma (“C” is an abbreviation for chroma, or color information).
  - **“Sync”**: Synchronization. In video, sync is a means of controlling the timing of an event with respect to other events. This is accomplished with timing pulses to insure that each step in a process occurs at the correct time. For example, horizontal sync determines exactly when to begin each horizontal scan line. Vertical sync determines when the image is to be refreshed to start a new field or frame. There are many other types of sync in video system. (Also known as “sync signal” or “sync pulse.”)
  - **“TCP/IP”**: Transmission Control Protocol/Internet Protocol. The communication protocol of the Internet. Computers and devices with direct access to the Internet are provided with a copy of the TCP/IP program to allow them to send and receive information in an understandable form.
  - **“USB”**: Universal Serial Bus. USB was developed by seven PC and telecom industry leaders (Compaq, DEC, IBM, Intel, Microsoft, NEC, and Northern Telecom). The goal was easy plug-and-play expansion outside the box, requiring no additional circuit cards. Up to 127 external computer devices may be added through a USB hub, which may be conveniently located in a keyboard or monitor. USB devices can be attached or detached without removing computer power. The number of devices being designed for USB continues to grow, from keyboards, mice, and printers to scanners, digital cameras, and ZIP drives.
  - **“VESA”**: Video Electronics Standards Association. A nonprofit number organization dedicated to facilitating and promoting personal computer graphics through improved standards for the benefit of the end-user. [www.vesa.org](http://www.vesa.org)
  - **“VGA”**: Video Graphics Array. Introduced by IBM in 1987, VGA is an analog signal with TTL level separate horizontal and vertical sync. The video outputs to a 15-pin HD connector and has a horizontal scan frequency of 31.5 kHz and vertical frequency of 70 Hz (Mode 1, 2) and

# 1. Brief Introduction

## Terms and Definitions

60 Hz (Mode 3). The signal is non-interlaced in modes 1, 2, and 3 and interlaced when using the 8514/A card (35.5 kHz, 86 Hz) in mode 4. It has a pixel by line resolution of 640×480 with a color palette of 16 bits and 256,000 colors.

- **“YCrCb”**: Used to describe the color space for interlaced component video.
- **“YPbPr”**: Used to describe the color space for progressive-scan (non-interlaced) component video.

# 1. Brief Introduction

## System Overview

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### System Overview

MSP 221 is the EDID&HDCP Manager with high performance, high stability, high-definition. It supports 1 HDMI, 1 VGA input, and 1 DVI (compatible HDMI), 1 VGA output.

When input HDMI or VGA signal, MSP 221 will directly powered. It supports EDID automatic identification, and supports the function of read EDID file from the USB port, and EDID file copy input .

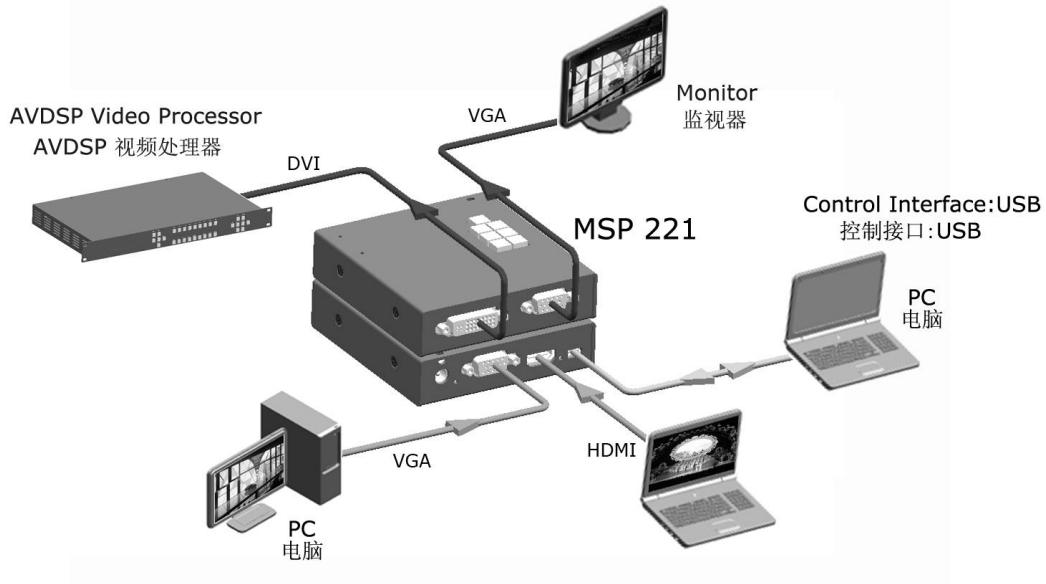
The EDID&HDCP Manager supports 2560×816 output resolution. Compact structure, and it is very simple to operate.

# 1. Brief Introduction

## Application Questions

### Application Questions

RGBlink offers solutions to demand technical problems. Any application questions, or required further information, please contact with our Customer Support Engineers. Refer to Appendix B for contact details.



## 2. Hardware Orientation

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### In This Chapter

This chapter provides detailed information about the MSP 221 hardware.

The following topics are discussed:

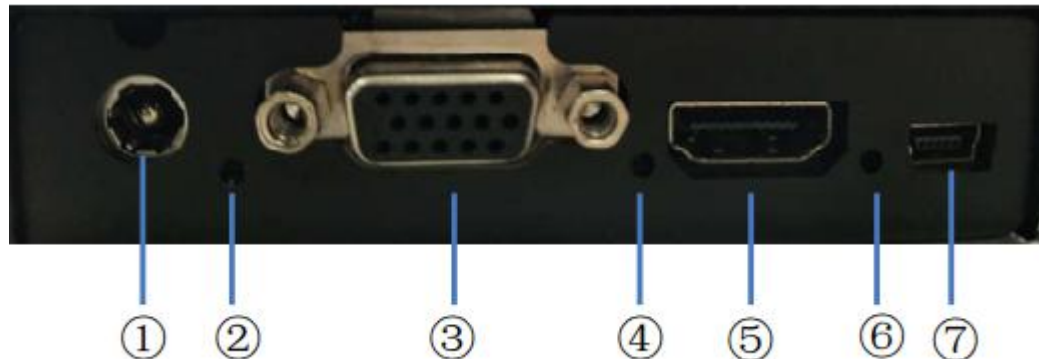
- [Input and Other Interface](#)
- [Output Interface](#)

## 2. Hardware Orientation

### Input and Other Interface

### Input and Other Interface

The figure below illustrates the professional interface of MSP 221.



#### ①: Power

This device uses the standard 12V/3A power supply.

#### ②④⑥: Indicator

Power indicator 2 lights when device has power supply.

Power indicator 4 lights when connect signal to HDMI input interface.

LED indicator 6 lights when connect USB to computer.

#### ③: VGA Input

VGA input interface, input the video signal from HD player, DVD player and computer, etc.

#### ⑤: HDMI Input

HDMI input interface, input the video signal from HD player, DVD player and computer, etc.

#### ⑦: USB Interface

USB interface, used to control the computer and upgrade.

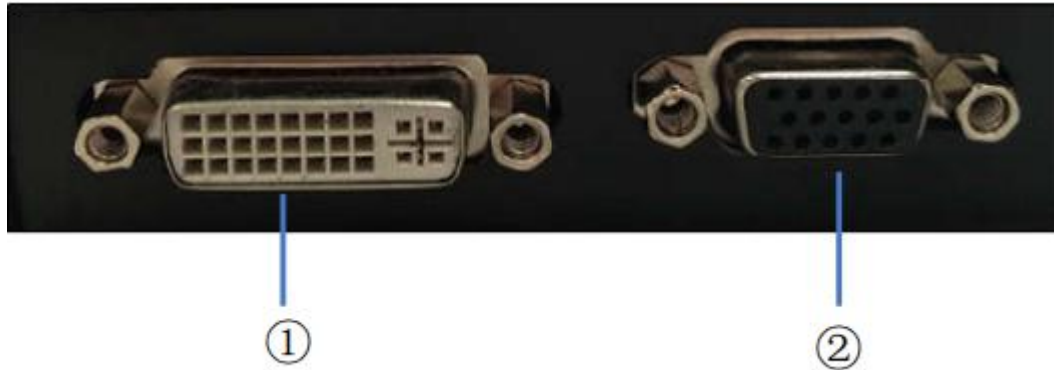
## 2. Hardware Orientation

### Output Interface

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### Output Interface

It includes 1 DVI output and 1 VGA output, shown as follows:



#### ①: DVI Output

DVI output interface, connect to the monitor or LED screen which has DVI interface.

(This DVI connect does not support hot-plugging)

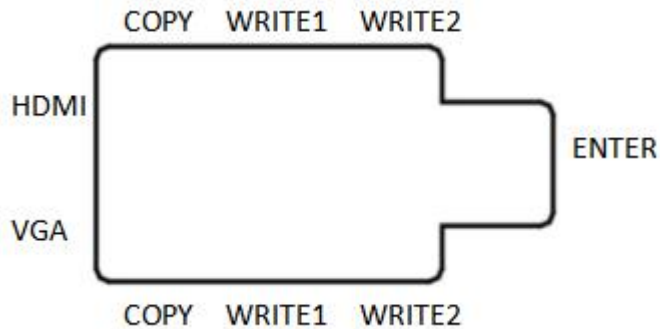
#### ②: VGA Output

VGA output interface, can be connected to monitor or projector which has VGA interface.

### 3. Operation Manual

## Program Area

Shown as follows:



## Operation Instruction

### Indicator

Connect MSP 221 with power, the 7 indicators light one by one, and then all lights are off.

### EDID Copy

With the ability of EDID copy, MSP 221 could copy EDID from other devices, More detail are as follows:

#### 1. Copy HDMI/DVI EDID

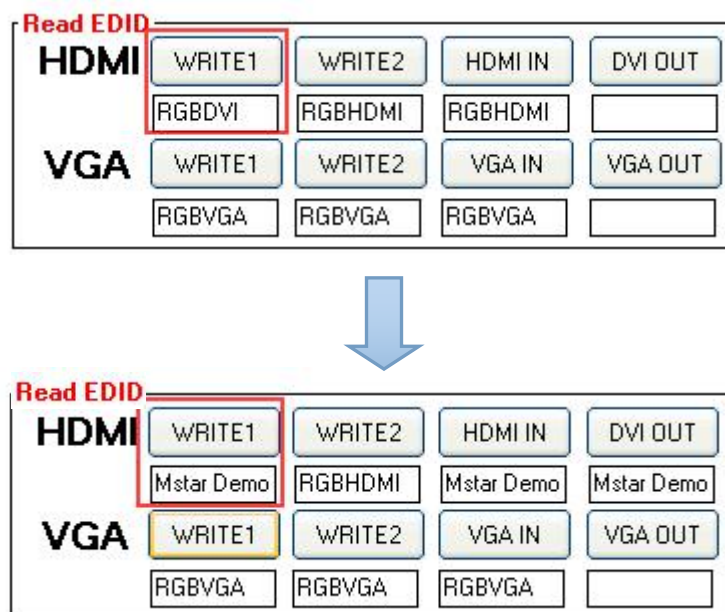
- (1) Take RMS 8424 as an example, users need to connect MSP 221 DVI output interface with RMS 8424 DVI input interface by a DVI cable when copying the EDID of RMS 8424 DVI interface (RMS 8424 default EDID is Mstar Demo).
- (2) After connection, press HDMI <COPY> and <ENTER> buttons in turn. The device will ring “beep” sound for three to four times. If the device only makes a loud “beep” sound, it means the EDID copy comes to fail and needs to be operated again.



- (3) Copied EDID will be saved in HDMI <WRITE1>. User can check it through AVMSPP software as well as HDMI EDID copy.



Attention: The factory default EDID of HDMI <WRITE1> is RGBDVI, and the factory default EDID of HDMI <WRITE2> is RGBHDMI. The HDMI/DVI EDID copied in local version can only be saved in HDMI <WRITE1>.



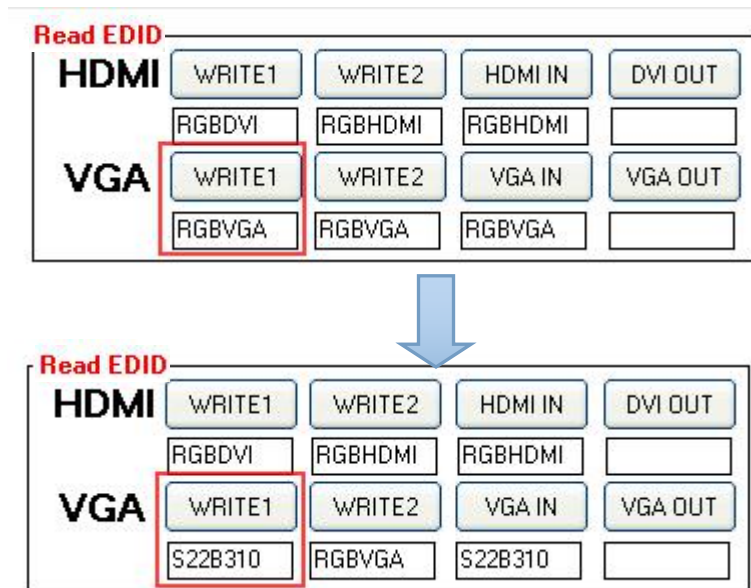
### 1. Copy VGA EDID

- (1) Take Samsung S22B310 LCD display as an example, users could connect MSP 221 VGA output interface with VGA interface of Samsung display by a VGA cable when copying the VGA EDID of Samsung S22B310 display.
- (2) After connection, press VGA <COPY> and <ENTER> buttons in turn. The device will ring “beep” sound for three to four times. If the device only makes a loud “beep” sound, it means the EDID copy comes to fail and needs to be operated again.



- (3) Copied EDID will be saved in VGA <WRITE1>. User can check it through AVMSPP software as well as HDMI EDID copy.

Attention: Both VGA <WRITE1> and VGA <WRITE2> default EDID are RGBVGA. The VGA EDID copied in local version can only be saved in VGA <WRITE1>.



## Write EDID

Users can write EDID by MSP 221 when writing specific EDID or EDID missing. More detail are as follows:

### 1. Write HDMI <WRITE1> EDID

The default EDID of HDMI <WRITE1> is RGBDVI. Users could press HDMI <WRITE1> and <ENTER> buttons in turn to realize the EDID writing of RGBDVI. More custom EDID writing refers to AVMSPP software (see below).

Attention: make sure the input interface of writing device has connected with the DVI output interface of MSP 221.

### 2. Write HDMI <WRITE2> EDID

The default EDID of HDMI <WRITE2> is RGBHDMI. Users could press HDMI <WRITE2> and <ENTER> buttons in turn to realize the EDID writing of RGBHDMI.

The EDID writing of local version can be saved in <WRITE1>. The custom EDID can be saved in <WRITE2> through AVMSPP software (see below).

### 3. Write VGA <WRITE1> EDID

The default EDID of VGA <WRITE1> is RGBVGA. Users could press VGA <WRITE1> and <ENTER> buttons in turn to realize the EDID writing of RGBVGA.

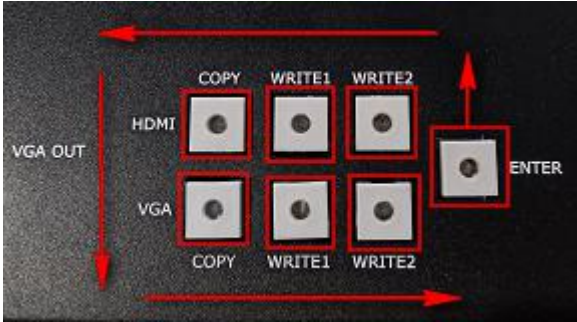
More custom EDID writing refers to AVMSPP software (see below).

### 4. Write VGA <WRITE2> EDID

The default EDID of VGA <WRITE2> is RGBVGA. The way to write VGA <WRITE2> EDID is the same as VGA <WRITE1>. More custom EDID writing refers to AVMSPP software (see below).

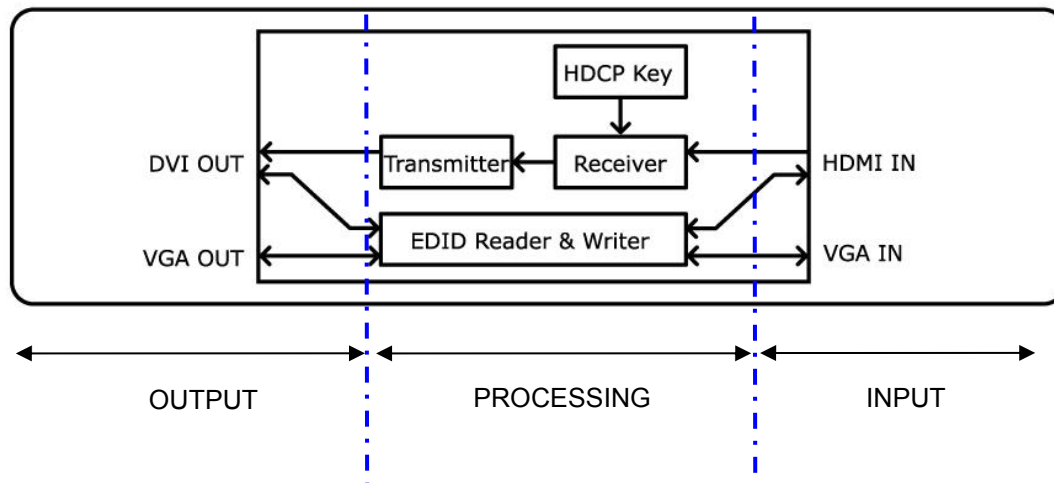
## EDID Reset

Users could press ENTER+WRITE2+WRITE1+COPY+HDMI+VGA+COPY+WRITE1+WRITE2 in anticlockwise to reset EDID.



## 4. Back Panel Description

### Functional Description Block Diagram



### Input and Output Resolution

Following is the input and output resolution list:

VGA	800 × 600 @60Hz	1024 × 768 @60Hz
1024 × 768 @75Hz	1024 × 768 @85Hz	1280 × 768 @60Hz
1280 × 800 @60Hz	1280 × 1024 @60Hz	1360 × 768 @60Hz
1366 × 768 @60Hz	1400 × 1050 @60Hz	1440 × 900 @60Hz
1600 × 1200 @60Hz	1680 × 1050 @60Hz	1920 × 1080 @50Hz
1920 × 1080 @60Hz	1920 × 1200 @60Hz	
DVI	800 × 600 @60Hz	1024 × 768 @60Hz
1024 × 768 @75Hz	1024 × 768 @85Hz	1280 × 768 @60Hz
1280 × 800 @60Hz	1280 × 1024 @60Hz	1360 × 768 @60Hz
1366 × 768 @60Hz	1400 × 1050 @60Hz	1440 × 900 @60Hz
1600 × 1200 @60Hz	1680 × 1050 @60Hz	1920 × 1080 @50Hz
1920 × 1080 @60Hz	1920 × 1200 @60Hz	2048 × 1152 @60Hz
2560 × 812 @60Hz	2560 × 816 @60Hz	

## 5. Communication Software Guideline

AVMSP series mini converter is equipped with user-friendly communication control software. User can read and write EDID and so on.

### Running Software

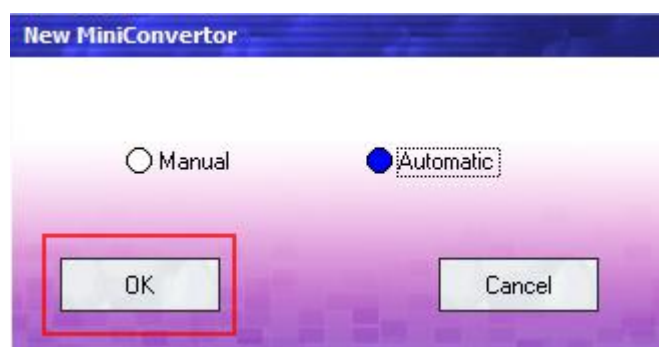
#### Environment Requirements:

Operating system: Windows 7 professional version 32bit and above

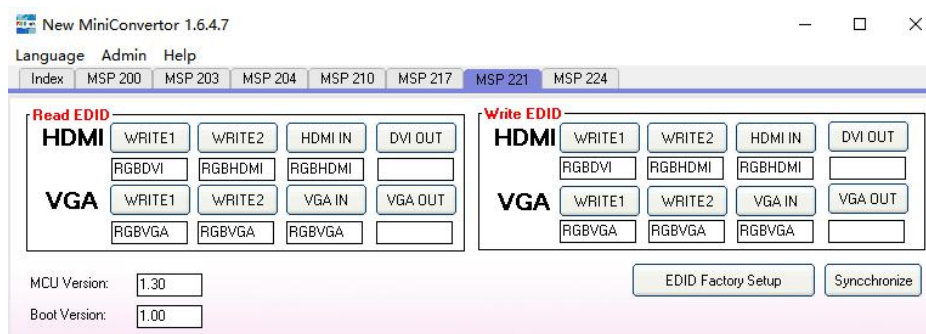
#### Install software and login in:

1. Power on MSP 221 ,then connect MSP 221 with PC by USB cable. Double-click

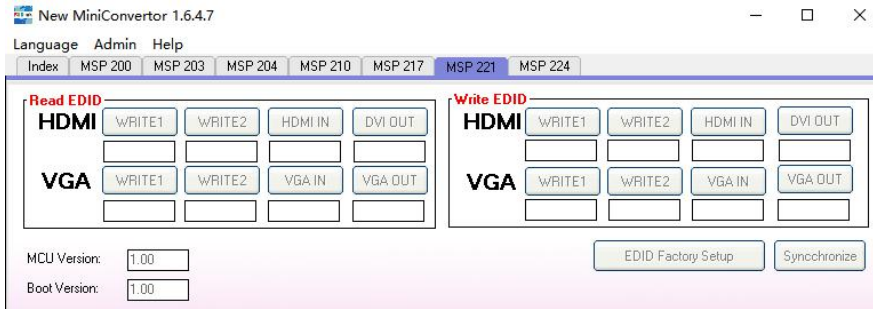
 icon to open AVMSP software. Interface is shown as follows:



2. Select “Manual” or “Automatic” option, then click “OK” to login in. We recommend to use “Automatic” to login in for more convenient. If communicated successfully, after login in, EDID can be shown on EDID boxes:



If fail, nothing can be shown on EDID boxes:



In this situation, user can check it according to the following steps:

- (1) First ensure the device is power on, then MSP 221 and PC are connected, and the USB indicator is light. If not, the USB cable need to be changed.
- (2) Check if the computer operating system is Windows 7 professional version or above. If not, change a computer with Windows 7 professional version or above.

## Read EDID



HDMI WRITE1: Read EDID of HDMI WRITE1.

HDMI WRITE2: Read EDID of HDMI WRITE2.

HDMI IN: Read EDID of HDMI IN.

DVI OUT: Read EDID of HDMI OUT.

VGA WRITE1: Read EDID of VGA WRITE1.

VGA WRITE2: Read EDID of VGA WRITE2.

VGA IN: Read EDID of VGA IN.

VGA OUT: Read EDID of VGA OUT.

Note: If read successfully, the box will show EDID directly. If fail, the box will show nothing. Also maybe there is no EDID in device.

## Write EDID

**Write EDID**

<b>HDMI</b>	WRITE1	WRITE2	HDMI IN	DVI OUT
	RGBDVI	RGBHDMI	RGBHDMI	
<b>VGA</b>	WRITE1	WRITE2	VGA IN	VGA OUT
	RGBVGA	RGBVGA	RGBVGA	

VGA WRITE1: Write EDID to VGA WRITE1.

VGA WRITE2: Write EDID to VGA WRITE2.

HDMI WRITE1: Write EDID to HDMI WRITE1.

HDMI WRITE2: Write EDID to HDMI WRITE2.

VGA IN: Write EDID to VGA IN.

HDMI IN: Write EDID to HDMI IN.

Note: If write successfully, the box will show: set OK. If fail, the box will show: set fail. Maybe there is no EDID in device.

## Version

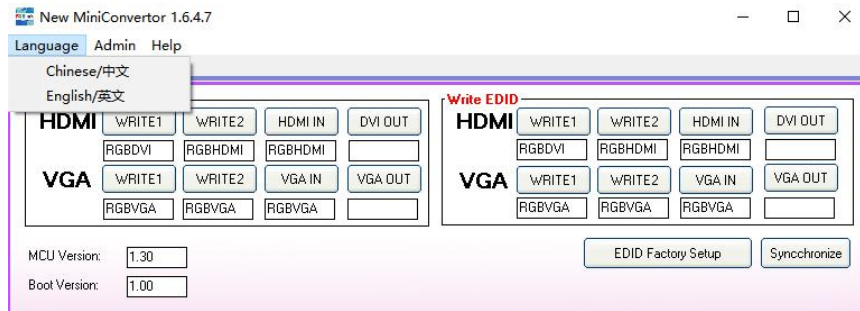
Show the current device version information:

MCU Version:	1.30
Boot Version:	1.00

## [Video Processor] Options

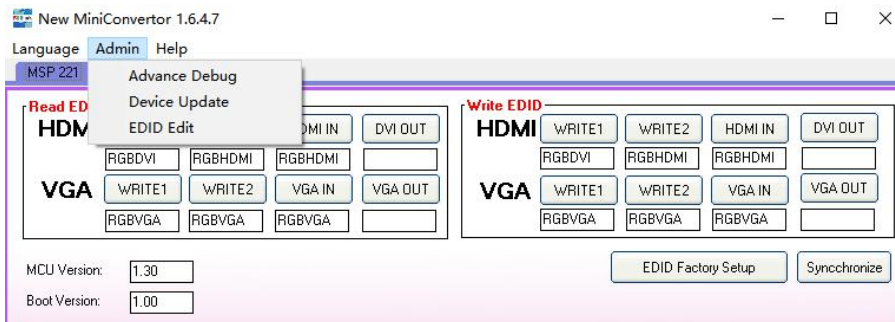
### Language

This software supports both Chinese and English, User can switch the language by “Language” option.



## Admin

Including “Advance Debug”, “Device Update” and “EDID Edit”.



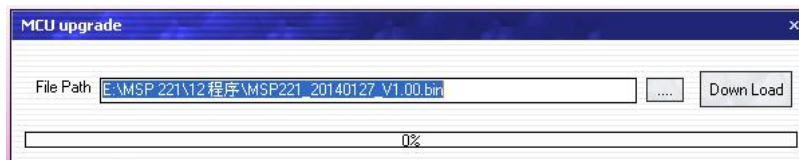
**Advance Debug:** User should input the password in the “Admin Password” dialog for advance debug.



Note:

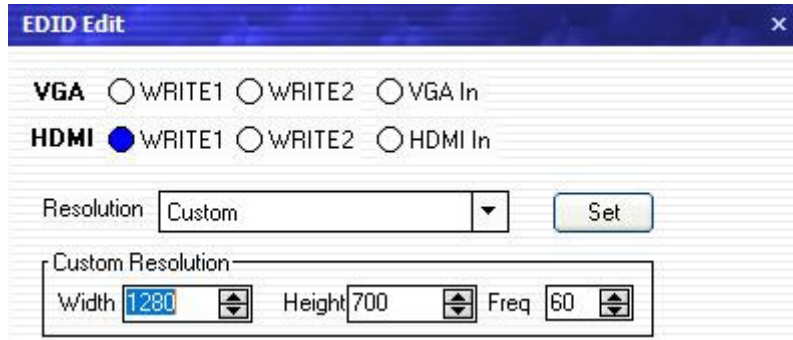
Advance is only done by engineer. If need, please connect us for password.

**Device Update:**

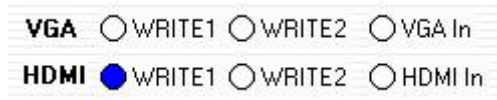


**EDID Edit:**

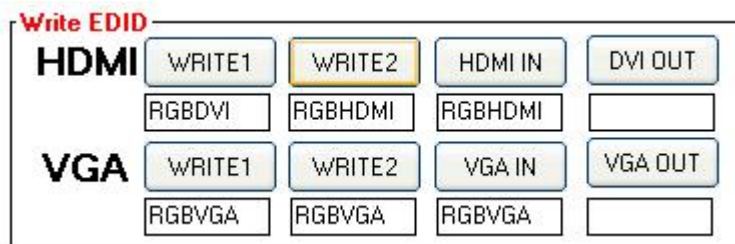




In EDID Edit box, the 6 EDID options is one-to-one correspondence to the EDID options in Write EDID area, that is:

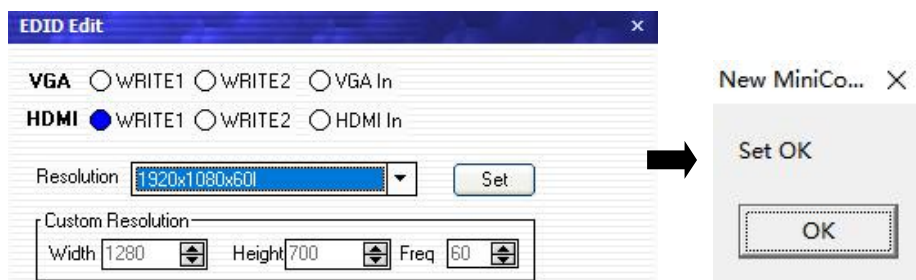


one-to-one correspondence



There are 2 modes for Write EDID, Stand and Custom, user can choose it in resolution part.

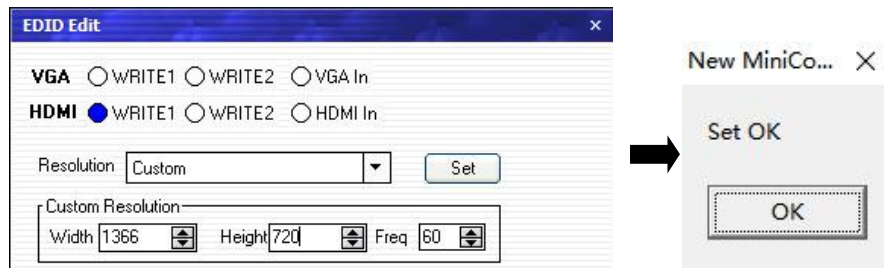
Standard, shown as follows:



Operations are as follows:

1. Choose the EDID that need to edit in EDID Edit box.
2. Choose the resolution in Resolution part, then click "Set".
3. If write successfully, the box will show "Set OK", or it will show "Set fail". "Write fail" may due to no EDID in device.

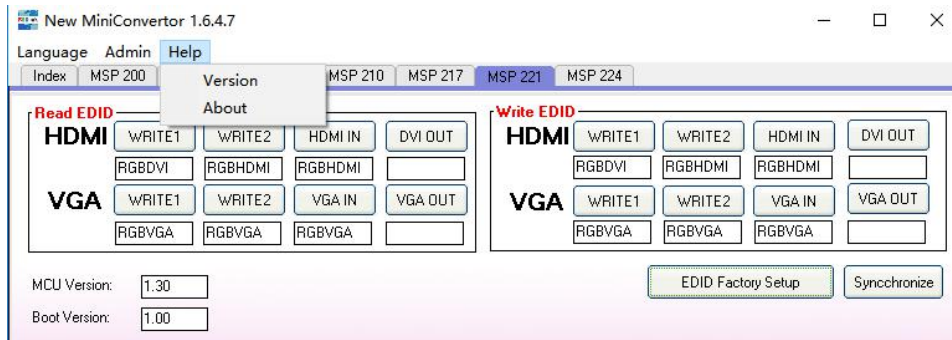
Custom, shown as follows:



Operations are as follows:

1. Choose the EDID that need to edit in EDID Edit box.
2. Choose Custom in Resolution part.
3. Input Width, Height and Freq in Custom Resolution part, then click "Set".
4. If write successfully, the box will show "Set OK", or it will show "Set fail". "Set fail" may due to no EDID in device.

## Help



**Version:** Show the content of software update.

**About:** Show software version and company information.



## A. Specification

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<b>HDMI Input</b>	
Number of inputs	1
Connector	HDMI standard type A interface
Input resolution (Supported Standards)	VESA 800*600@60Hz, 1024*768@60Hz, 1024*768@75Hz, 1024*768@85Hz, 1280*768@60Hz, 1280*800@60Hz, 1280*1024@60Hz, 1360*768@60Hz, 1366*768@60Hz, 1400*1050@60Hz, 1440*900@60Hz, 1600*1200@60Hz, 1680*1050@60Hz, 1920*1080@50Hz, 1920*1080@60Hz, 1920*1200@60Hz, 2048*1152@60Hz, 2560*812@60Hz, 2560*812@60Hz
Embedded Audio Channels	Choose 1 in 2
Standard	HDMI 1.3
<b>VGA Input</b>	
Number of inputs	1
Connector	DB15 interface
Input resolution (Supported Standards)	VESA 800*600@60Hz, 1024*768@60Hz, 1024*768@75Hz, 1024*768@85Hz, 1280*768@60Hz, 1280*800@60Hz, 1280*1024@60Hz, 1360*768@60Hz, 1366*768@60Hz, 1400*1050@60Hz, 1440*900@60Hz, 1600*1200@60Hz, 1680*1050@60Hz, 1920*1080@50Hz, 1920*1080@60Hz, 1920*1200@60Hz
Embedded Audio Channels	Choose 1 in 2
Standard	VESA
<b>DVI Output</b>	
Number of outputs	1
Connector	Standard DVI-I Socket
Signal Level	TMDS pw, 165MHz bandwidth
Input resolution (Supported Standards)	VESA 800*600@60Hz, 1024*768@60Hz, 1024*768@75Hz, 1024*768@85Hz, 1280*768@60Hz, 1280*800@60Hz, 1280*1024@60Hz, 1360*768@60Hz, 1366*768@60Hz, 1400*1050@60Hz, 1440*900@60Hz, 1600*1200@60Hz, 1680*1050@60Hz, 1920*1080@50Hz, 1920*1080@60Hz, 1920*1200@60Hz, 2048*1152@60Hz, 2560*812@60Hz, 2560*812@60Hz
<b>VGA Output</b>	
Number of outputs	1

Connector	Standard DB15 Socket
Output resolution ( Supported Standards )	VESA 800*600@60Hz, 1024*768@60Hz, 1024*768@75Hz, 1024*768@85Hz, 1280*768@60Hz, 1280*800@60Hz, 1280*1024@60Hz, 1360*768@60Hz, 1366*768@60Hz, 1400*1050@60Hz, 1440*900@60Hz, 1600*1200@60Hz, 1680*1050@60Hz, 1920*1080@50Hz, 1920*1080@60Hz, 1920*1200@60Hz
Signal Level	R, G, B、 Hsync, Vsync: 0 to1Vpp±3dB (0.7V Video+0.3v Sync ) 75 ohm black level: 300mV Sync-tip: 0V
<b>Extras</b>	
Assignment control	USB
Power Supply	+12V standard 3.5" interface power module
Working Environment	0°C~45°C
Stored Environment	10% to 90%
Size	98mmX92mmX22mm
Product Warranty	3 years parts and labor warranty

## B. Contact Information

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### Warranty:

All video products are designed and tested to the highest quality standard and backed by full 3 years parts and labor warranty. Warranties are effective upon delivery date to customer and are non-transferable. RGBlink warranties are only valid to the original purchase/owner. Warranty related repairs include parts and labor, but do not include faults resulting from user negligence, special modification, lightning strikes, abuse(drop/crush), and/or other unusual damages.

The customer shall pay shipping charges when unit is returned for repair.

**Headquarter:** S601~608 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen, Fujian Province, P.R.C.

- **Tel:** +86-592-5771197
- **Fax:** +86-592-5771202
- **Customer Hotline:** 4008-592-315
- **Websites:**
  - ~ <http://www.rgblink.com>
  - ~ <http://www.rgblink.cn>
- **E-mail:** [support@rgblink.com](mailto:support@rgblink.com)