Industrial Monitor Converter

(CGA/EGA/RGB to VGA**)**

Model: GBS-8219

Digital Systems Design

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Copyright Notice and Disclaimer

1. Important Information

Before using this product for the first time, please read the User Manual carefully as it contains all product-related warnings and important guidance for use.

Do not carry out any of the following:

- Unauthorized repairs or parts replacement.
- Non-standard usage.
  Inappropriate exposure, including but not limited to lightning, fire, exposure to rain, water, gas.
  Use of any form of power supply, outside the allowable voltage operating range.
- Removal or modification of the manufacturers warranty label.

Warning:

2. Features

The manufacturer is an industry leader in long-term maintenance and reconstruction of industrial monitors & display systems, especially those used in conjunction with CNC machinery. After many years of development and testing, and on the strength of previous products in the industrial CNC video field, the GBS-8219 was developed. The GBS 8219 accepts a wide range of Industrial video signals, RGB/CGA/VGA and allows them to be converted for use on modern VGA/SVGA display systems, such as LCD panels, which are far more widely available, and much cheaper and safer to use. The latest video conversion technology allows fully automated operation, without the need for additional device programming using PC interfaces – the 8219 is a fully standalone conversion system.

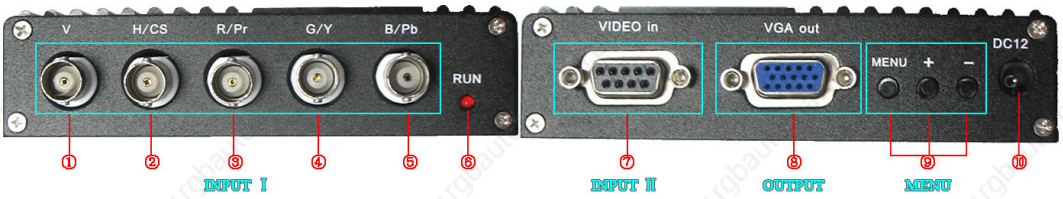
- Feature specifications

Input	**Signals**	MDA、CGA、EGA、RGB、RGB Sog、RGBS、RGBHV、YPbPr
	Interface	9pin、3pin、6pin、14pin、20pin、25pin
	Horizontal Frequency Rate(H)	12kHz to 40kHz Automatically recognized
Output	**Supports**	15pin VGA，Resolution:800*600/60HZ or custom-resolution
	Interface	D-Sub 15 PIN standard VGA port
Power	DC 12V 1.0A	

Note:

1. YPbPr = YUV
2. Input Horizontal Frequency Rate 12kHz to 40kHz automatically recognized.
3. Supports RGB and YPbPr
4. Supports Interlaced Scanning and Line by Line Scanning.
5. Supports Vertical Resolution from line200 to line 600 automatically recognized.
6. Supports variable Horizontal Resolution automatically recognized
7. Supports RGBHV (separate sync) ,RGBS (composite sync), automatically recognized
8. Output resolution: 800*600/60Hz standard VGA or custom-resolution.

3. Interface Specifications



Item	Spec.	Remarks
① V	To connect V Synch interface of the input device	Input Channel A
② H/CS	To connect H(CS) Synch interface of the input device	
③ R/Pr	Red signal input/ Pr signal input	
④ G/Y	Green signal input/ YPBPR -Y signal input	
⑤ B/Pb	Blue Signal input/YPBPR -Pb signal input	
⑥ RUN	Running Status Indicator	
⑦ VIDEO in	9-pin device input interface	Input Channel B
⑧ VGA out	Standard sub-15p VGA female interface	VGA Output
⑨ MENU	Use to adjust screen /programming	
⑩ DC12	Power input DC12V, 1A	

Note: Input Channel A and Input Channel B are selectable

4. Definition for I/O Interface

Table 4.1 Definition for Input Channel A:

PIN	Input Signal
P1	GND
P2	GND
P3	R(ed)
P4	G(reen)
P5	B(lue)
P6	Undefined(null)
P7	Undefined(null)
P8	H(CS) Synch Input
P9	V Synch Input

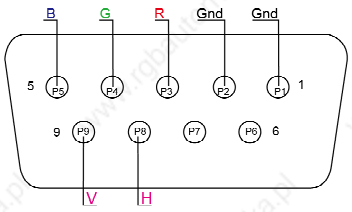
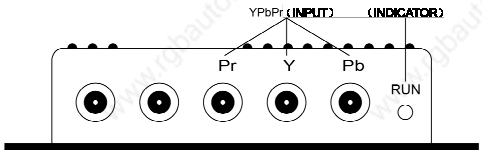
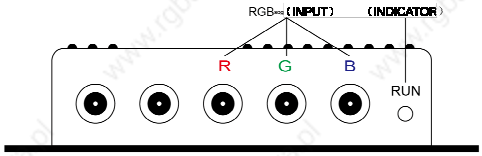
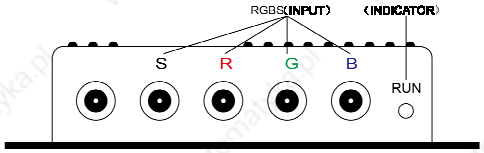
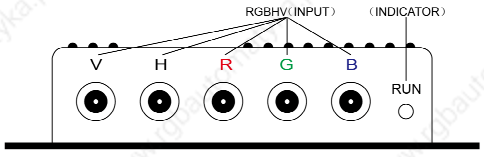


Fig 4.1 Channel A Input

Table 4.2 Definition for Input Channel B

BNC	Input Signal	Connection image
PbYPr	YPbPr input signal (Fig 4.2) Interface: three BNC slot, connected to the corresponding Pb, Y, Pr interface, then Y monochrome port.	 Fig 4.2 Analog 3BNC (YPBPR) Input.
RGB	RGB SOG input signal (Fig 4.3) Interface: three BNC slot, connected to the corresponding R, G, B slot, then G monochrome port.	 Figure 4.3 Analog 3BNC (RGB SOG) Input.
RGBS	RGBS CS Composite Sync (Fig 4.4) Interfaces: 4 BNC slot, connected to the corresponding R, G, B, S I, monochrome then G, S I	 Figure 4.4 Analog 4BNC (RGBS CS) Input.
RGBHV	RGBHV separate sync (Fig 4.5) Interface: 5 BNC port, connected to the corresponding R, G, B, H, V I, monochrome then G, H, V I	 Figure 4.5 Analog 5BNC (RGBHV) Input.

5. Operational OSD Menu

Item	Function
①MENU	-Press to enter the OSD menu -Press once to select andthen press again to exit the current line
② “+”	-Press it to move the cursor up -Press to increment the value
③ “-“	-Press to move the cursor down -Press it to decrement the value

6. Kit Accessories Contents

Table 6.1 Accessories list

Item	QTY	Remarks
User Manual	1	English
Power Adaptor	1	DC12V,1A
Half 9pin cable	1	
9 pin M-F cable	2	1 Male + 1 Female

Table 6.2 9-Pin cable pinout

Name	Wire color	Signal
A	Silver	Shield
B	Black	Ground(GND)
C	White	Vertical Synch(V)
D	Orange	Horizontal Synch(H)
E	Blue	Blue(B)
F	Green	Green(G)
G	Red	Red(R)
H	Brown	Undefined(null)

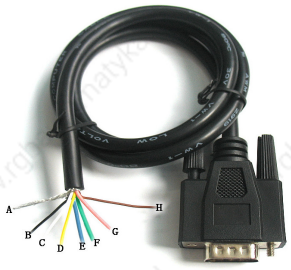


Figure 6.2 Half 9pin cable

7. Assembly and Configuration

- Connect all cables and connect the system power supply via the 12VDC jack connector.
- Power up the host system and ensure the video signals and plugs are correctly connected. If either the picture display or display colors are not correct, adjust the video source variables using the OSD menu adjustments. Change the OSD menu settings to those of the input video signal. (Available options are: YUV color, RGB (D) digital TTL signals, RGB (A) mode may signal).
- The system processor can automatically detect and identify the input signal. If you carry out the initial signal adjustment highlighted above, there should be no need to manually adjust the additional settings; if there is any image distortion to the output video picture, you may need to manually adjust the synchronization signal, and the signal source settings to get a high quality output video image.
- If the screen shows elongated or stretched images, or the picture is not correctly situated in the centre of the screen (eg: the bottom part of the converted image is missing off the bottom of the display), then try to adjust the scanning mode to Progressive Scan (Progressive); if the adjustment of the vertical position is at the maximum level, and the output image display is still only half of the display total size, then change the scanning mode to interlaced scan (Interlaced).
- Adjust the horizontal position, horizontal size, vertical position, and vertical size of the display.
- Select the correct input source impedance; the display should have a normal clear and sharp image picture. If the signal is saturated, please adjust the setting.
- If the image appears with small vertical waves or with a jitter effect, try to adjust the value or the input signal phase to correct the output image.
- Save all the parameters and exit the menu using the ‘Save and Exit’ Option

For any other setup problems or support issues, contact:

support@digitalsystemsdesign.co.uk

Or visit out website at:

www.digitalsystemsdesign.co.uk