Gonbes ®

USER'S MANUAL

Industrial Monitor Converter

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

Model: GBS-8219

GONBES Technology Co.,Ltd
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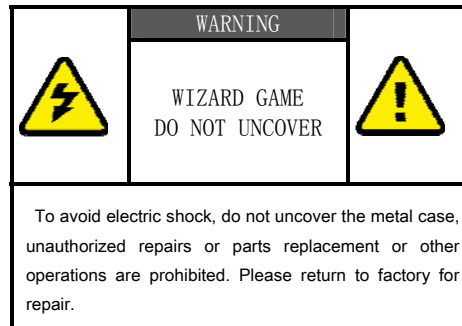
1. Important Info

Before start this product, please read the User's Manual carefully, it contains all product-related warnings and important issues.

Do not try the followings:
  - unauthorized repairs or parts replacement or other operations
  - inappropriate placement including but not limited to lightning, fire, exposure to rain, water, gas
  - switch to the power not in the voltage allowable range
  - remove the modified label or the warranty label

Cautions:

	WARNING	
⚡	WIZARD GAME DO NOT UNCOVER	⚠
To avoid electric shock, do not uncover the metal case, unauthorized repairs or parts replacement or other operations are prohibited. Please return to factory for repair.		

2. Features

GONBES Technology Co. , Ltd (GONBES) in the industrial equipment under long-term maintenance and reconstruction of the monitors& display systems on the lessons learned to gather requirements and feedback of many customers, after many years of development and testing, based on the strength in GBS 8218 launch of innovative industrial monitor converter - GBS 8219, it achieved Industrial video signal(RGB/CGA/VGA   to VGA) conversion fully automated operation, will give you the maintenance and replacement of industrial display to bring about affordable price and convenient.

- 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.Support RGB and YPbPr
4.Support Interlaced Scanning and Line by Line Scanning.
5.Support Vertical Resolution from line200 to line 600 automatically recognized.
6.Support variable Horizontal Resolution automatically recognized。
7.Support RGBHV (separate sync) ,RGBS (composite sync), automatically recognized
8.Output resolution: 800*600/60Hz standard VGA or custom-resolution.

3. Interface Specification
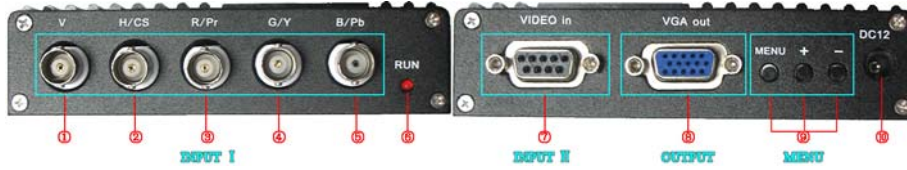
Item	Spec.	Remarks
① V	To connect V interface of the input device	
② H/CS	To connect H(CS) interface of the input device	
③ R/Pr	Red signal input/ Pr signal input	Input Channel Ⅰ
④ G/Y	Green signal input/ YPBPR -Y signal input	
⑤ B/Pb	Blue Signal input/YPBPR -Pb signal input	
⑥ RUN	Running Status Indicator	
⑦ VIDEO in	To connect 9-pin interface of the input device	Input Channel Ⅱ
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 Ⅰ, Input Channel , you can choose one of them

4. Definition for I/O interface

Table 4.1 Definition for Input Channel :

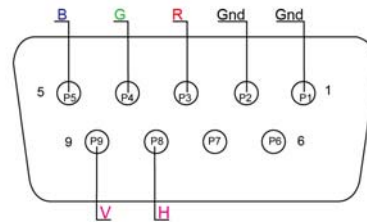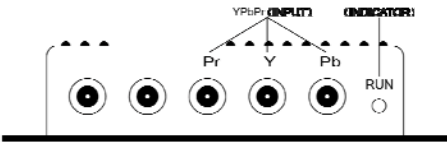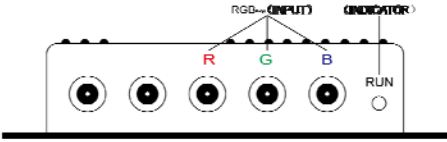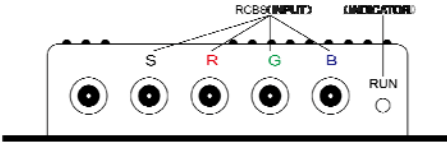| PIN	Input Signal
p1(GND)	Connect to the ground
p2(GND)	Connect to the ground
P3(R)	connect R(ed) interface of the input device
P4(G)	connect G(reen) interface of the input device
P5(B)	connect B(lue) interface of the input device
P6	Undefined(null)
P7	Undefined(null)
P8(H)	connect H(CS) interface of the input device
P9(V)	connect V interface of the input device
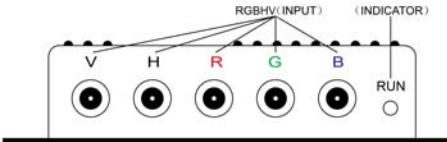
Figure 4.1 Definition for Input Channel

Table 4.2 Definition for Input Channel Ⅰ

BNC	Input Signal	Connection image
Pb、Y、Pr	YPbPr input signal (right image) Interface: three BNC slot, connected to the corresponding Pb, Y, Pr interface, then Y monochrome port.	Figure 4.2 Analog 3BNC (YPBPR) Input.
R、G、B	RGB Sog input signal (right image) Interface: three BNC slot, connected to the corresponding R, G, B slot, then G monochrome port.	Figure 4.3 Analog 3BNC (RGB Sog) Input.
R、G、B、S	RGBS CS Composite Sync (right image) 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.
R、G、B、H、V	RGBHV separate sync (right image) 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. Operation Menu

Item	Spec.
①MENU	-press it to enter into OSD menu -click it once to select and click again to exit the current line
② " + "	-click it to move the cursor up -click it to add the value
③ " - "	-click it to move the cursor down -click it to deduct the value

一般设定（Setting）　高级设定（Advance）
水平位置（H_Position）　+38
水平大小（Width）　-16
垂直位置（V_Position）　+25
垂直大小（Higth）　+05
相位调节（Phase）　00
视频源类型（Style）　RGB（A）
同步信号（Sync）　SEPARATE（HV）
输入阻抗（Resistance）　750 Ω
扫描方式（Scanning）　Interlaced
退出&保存（Exit&Save）

视频源信息（Info）HS 00.00KHz VS 000.0Hz
GBS8219 v1.0 091230 www.gonbes.com

6. Accessories& Details

Table 6.1 Accessories list

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

Table 6.2 Details of half 9Pin cable

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

Figure 6.2 Half 9pin cable

7. Assembly and debugging

Step 1: access signals, if not display or display color is not correct, adjust the video source type items, adjusted to the input video signal with the same type, color, only the normal display. (Available options are: YUV color, RGB (D) digital TTL signals, RGB (A) mode may signal)

Step 2:The system can automatically identify the signal. If you adjust the first step, the image color display is no need to manually adjust the normal; if there distortions in the image, you need to manually adjust the synchronization signal and the signal source to adjust to the same types of synchronization, you can normally display.

Step 3: If the screen shows elongated, and the overflow to the bottom of the screen, put the adjusted scanning: Progressive Scan (Progressive); if the adjustment of the vertical position to a maximum, the image display is still only half of the display, put the adjust the scanning mode: interlaced scan (Interlaced).

Step 4: Adjust the horizontal position, horizontal size, vertical position, vertical size of the items, adjusted to the satisfaction of the location.

Step 5: input impedance, select the input source impedance than with select 750 in Europe, relatively light, if you choose all 750 European white side, you should choose for the 75 euro.

Step 6: the phase adjustment, if the image appears small waves up and down type jitter, can adjust the consistency with the input signal phase.

Step 7: Save and Exit: Save all the parameters and exit the menu.