



Solutions for Demanding Applications

VARTeCH
SYSTEMS INC.



32.0" NEMA 4 Fully Enclosed LCD

Model VT320VHB

User's Guide

Read these instructions completely before attempting to operate your new Enclosed LCD

Revision History

Date	Rev No	Summary	Page
07/15/12	01	First Issue	
10/18/12	02	Updated outline drawing to include DVI & S-Video	5
11/05/12	03	Corrected Resolution spec	4

Safety Instructions

- Read the Safety Instructions carefully and keep it for use later.
- The chassis metalwork of the module must be installed properly to the main earthing termination for Class 1 equipment.
- Care must be exercised in the application of the system to prevent overheating. Ensure that the ambient temperature around the system does not exceed 60°C and provide adequate means of ventilation to achieve this.
- When cleaning cut off the electrical supply at all times. Never use liquid or aerosol detergent, use a soft damp cloth instead.
- Never insert anything metallic into the enclosure. This may create an electric shock hazard or hazard from rotating fan blades.
- To avoid electric shock, never touch the inside of the system. There are no user adjustable components inside, only a qualified technician should open the enclosure's case.
- If the LCD does not operate normally – in particular, if there are any unusual sounds or smells coming from it – disconnect it immediately.
- Do not put pressure on the LCD panel screen because it is very fragile.
- Always handle the system with care when moving it.
- Take care that the system is disposed of correctly at the end of its life. If in doubt refer to your local ordinances or regulations for proper disposal.
- A socket-outlet shall be installed near the equipment and shall be easily accessible.

Cleaning the LCD monitor

To clean the LCD panel:

- Wipe the screen gently with a clean lens brush made of camel hair, or a soft, clean, lint free cloth. This is to remove dust and other particles without scratching the LCD panel.
- If it is still not clean, then wipe with a damp lint free cloth and blow on it to dry.
- Desirable cleaners are water, IPA (Isopropyl Alcohol) or Hexane.

Do not clean the panel with a Ketone type material (e.g. Acetone), or Ethyl alcohol, Toluene, Ethyl acid, Methyl chloride. These may permanently damage the polarizer due to chemical reaction.

Do not apply pressure to the LCD panel.

Standard Technical Specifications:

LCD Monitor:

Size / Type	32.0" WXGA TFT LCD
Native Resolution	1366 x 768
Contrast Ratio	4000:1
Viewing Angles	Horizontal: 89° Vertical: 89°
Pixel Pitch	0.51075(H) x 0.51075(V)mm
Brightness (typical)	Indoor - 850 cd/m ² Outdoor – 1400cd/m ² @ 80Klux
Response Time (typical)	8ms Typical, 16ms Max.
Colors Supported	16.7 million

Touch Screen:

Touch Screen	N/A
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Environmental:

Power Input	100-240 VAC 1.5A 50/60 Hz
Power Consumption	85 watts typical – 90 watts max.
Temperature	Operational: -4°F to 140°F -20°C to 60°C Storage: -13°F to 158°F -25°C to 70°C
Humidity	Operational: 0 to 90% RH NC Storage: 0 to 95% RH NC

Installation of Your Enclosed VESA Mount PC

Packaged with each carton will be:

- 1 – VT320VHB
- 1 - AC Power Cable
- 1 – DVI-D Cable
- 1 – S-Video Cable
- 1 – VGA Cable

1 - Users Guide (Printed or on CD)

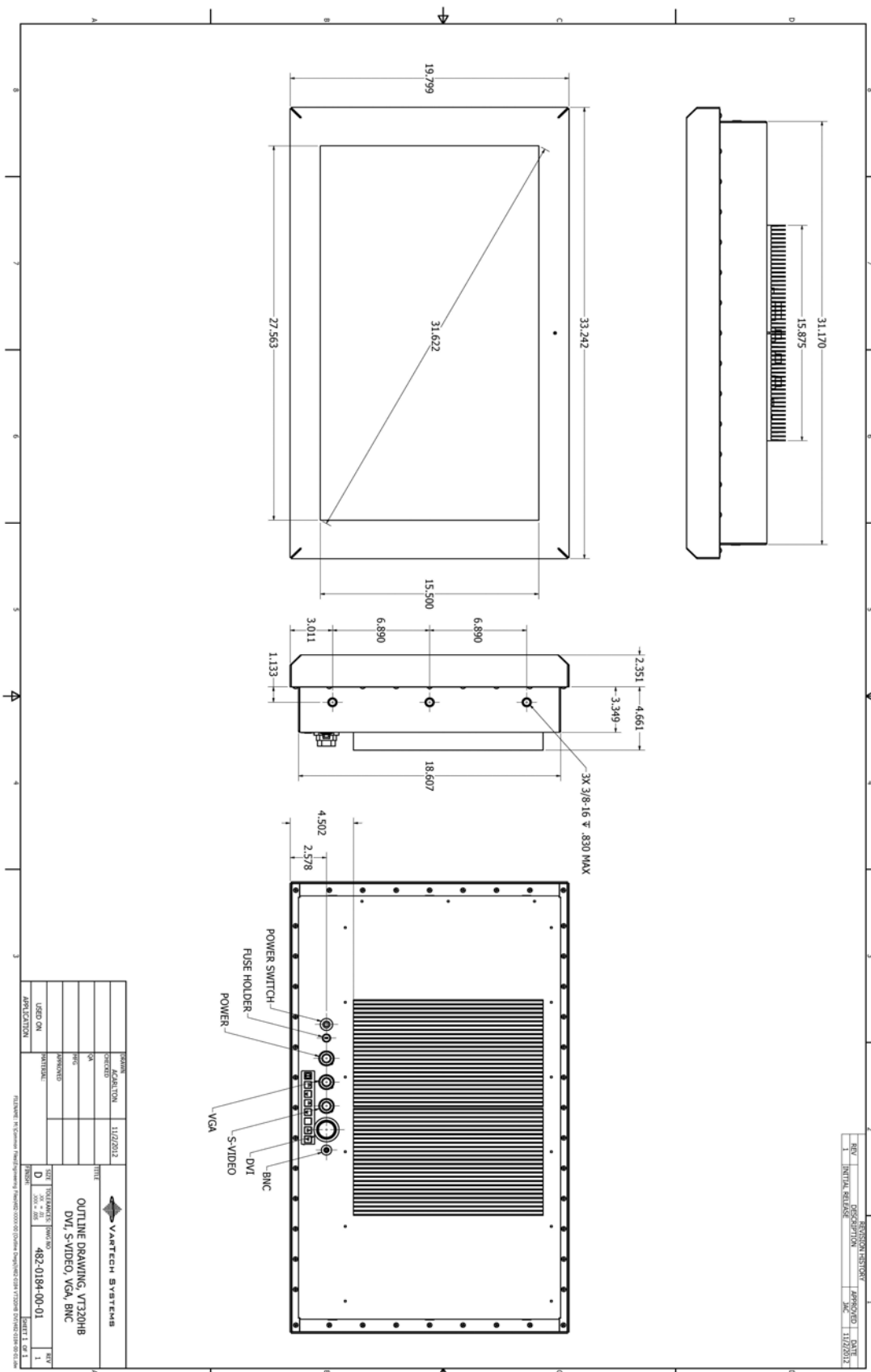
**BEFORE MAKING ANY CONNECTIONS OR APPLYING POWER,
FIRST READ THROUGH THE ENTIRE MANUAL**

Mounting Procedure

- 1- Secure the enclosure using 3/8-16 x .625" long screws.
- 2- Tighten all mounting hardware to a torque of 15 inch-pounds.

ATTENTION: Mounting hardware must be tightened to a torque of 15 inch-pounds to provide a proper panel mount and avoid potential damage. Vartech Systems assumes no responsibility for water or chemical damage to the monitor or other equipment within the enclosure due to improper installation.

- 3- Attach the power and system cables to the bottom side of the enclosure if you have not already done so.



Product Drawing: Detail -A-

Connections to the Enclosed LCD:

Power Connection (Power In)

The Enclosed LCD includes an AC line cord which is 6ft long.

VGA Port Connection

The Enclosed LCD is supplied with a circular to 15-pin D-Shell connector.

DVI-D Port Connection

The Enclosed LCD is supplied with a circular to DVI-I connector. The DVI connector is DVI-I but only supports DVI-D.

S-Video Port Connection

The Enclosed LCD is supplied with a circular to S-Video connector.

Composite Port Connection

The Enclosed LCD is supplied with a composite BNC connection.

LCD Monitor Warm-up Time















All LCD monitors need time to become thermally stable the first time you turn them on. Therefore, to achieve more accurate adjustments for parameters, allow the LCD monitor to warm (be on) for at least 20 minutes before making any screen adjustments.



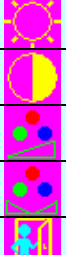



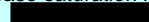

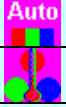




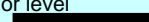



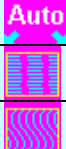
Maintenance











The Enclosed LCD is designed to provide optimum service and performance with minimal maintenance including the occasional external cleaning. For cleaning the Enclosed LCD enclosure follow the suggested guidelines.

General – NEVER use abrasive cleaners or solvent-based cleaners!! Use a clean soft cloth. The Enclosed LCD should only be opened and serviced by a qualified technician. Keep the area around the Enclosed VESA Mount PC clear and free of excessive dirt or other contaminants.

Controls	Analog VR type	Digital type
On/Off – turns controller board power on	VR toggle switch	On/Off button
Brightness – controls backlight brightness	Rotary VR	Brightness +/- buttons
Menu – turns OSD menu On or Off (it will auto time off) (Function with signal input only)	Menu button	Menu button
Select – Select function / Confirm (under OSD menu on state)	SEL DN	SEL DN
Move up to select individual RGB color level OSD page (under OSD menu on state)	SEL UP	SEL UP
+ – increase the setting / moves the selector to the next function (under OSD menu on state)	+	+
- - decrease the setting / moves the selector to the previous function (under OSD menu on state)	-	-
Load factory default	Press and hold SEL DN button to power on the controller	Press and hold SEL DN button to power on the controller
Lock OSD menu (Function with signal input only)	Press and hold MENU button for 15 seconds to enable / disable lock of the OSD menu	Press and hold MENU button for 15 seconds to enable / disable lock of the OSD menu
Switch to next input source (under OSD menu off state)	+	+

Selection page			
		Select input source ▶	
			Select input source to Analog RGB
			Select input source to DVI
			Select input source to S-Video 1
			Select input source to Composite 1
			Select input source to S-Video 2 (No function now)
			Select input source to Composite 2 (No function now)
		Auto Source Seek	ON – Auto source select always enable OFF – Disable auto source select function
		Video system selection* ▶	
			Select Auto video system detection
			Select PAL video system
			Select PAL M video system
			Select NTSC video system
			Select NTSC 4.43 video system
			Select SECAM video system

	Wide screen mode information display#	Select the input mode (1280 / 1360 / 1366 / 1368) to recognize and display the correct input signal information display on the OSD menu. 1280 : 1280x768 1360 : 1360x768 1366 : 1366x768 1368 : 1368x768		
		Exit	Exit the OSD menu and save the settings	
Brightness and Contrast				
	Brightness	Increase/decrease brightness level. Press – or + (-  +) Total : 256 steps		
	Contrast	Increase/decrease panel contrast level. Press – or + (-  +) Total : 192 steps		
	Saturation*	Increase/decrease hue level. Press – or + (-  +) Total : 256 steps		
	Hue*	Increase/decrease saturation level Press – or + (-  +) Total : 128 steps		
		Exit	Exit the OSD menu and save the settings	
Color				
	Auto	Auto RGB Calibration#	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No (See appendix IV)	
		Color Temperature ▶	(Adjust the warmness of the image displayed. The higher temperature the coolest image looks like. The lower temperature the warmest image looks like.)	
			Adjust red color level Press – or + (-  +) Total : 128 steps	
Adjust green color level Press – or + (-  +) Total : 128 steps				
Adjust blue color level Press – or + (-  +) Total : 128 steps				
			Press SEL UP/DN button to select item	
	4200k		Set the color temperature to 4200K	
	5000k		Set the color temperature to 5000K	
	6500k		Set the color temperature to 6500K	
	7500k		Set the color temperature to 7500K	
	9300k		Set the color temperature to 9300K	
		Gamma adjustment ▶		Adjust Gamma settings (0.4 / 0.6 / 1.0 / 1.6 / 2.2)
		0.4		Select Gamma to 0.4
		0.6		Select Gamma to 0.6
		1.0		Select Gamma to 1.0
		1.6		Select Gamma to 1.6
2.2			Select Gamma to 2.2	
	Exit		Exit the OSD menu and save the settings	
Position#				
	Autosetup	Auto adjust the positions, phase, frequency <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
	Frequency	Adjust the image horizontal size		
	Phase	Fine tune the data sampling position (adjust image quality)		

	Image Horizontal Position	Use +/- to move the image horizontally Press – or + (- <input type="text"/> +)
	Image Vertical Position	Use +/- to move the image vertically Press – or + (- <input type="text"/> +)
	Exit	Exit the OSD menu
Utilities		
	OSD setting ▶	
		OSD Timeout : 0 / 10 / 20 / 30 / 40 / 50 / 60 seconds (Always on when set to 0) Press – or + (- <input type="text"/> +)
		OSD menu horizontal position Press – or + (- <input type="text"/> +)
		OSD menu vertical position Press – or + (- <input type="text"/> +)
	Load Factory Default	Initialize the setting stored in non-volatile memory
	Sharpness	Adjust sharpness level Press – or + (- <input type="text"/> +) Total : 49 steps
	Exit	Exit the OSD menu
Exit the OSD menu		

For Additional Assistance
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