ENGINEER SPECIFICATIONS

8.4” LCD Monitor

Model NO. : PCMTL-MV8-R

FOR CUSTOMER APPEOVAL

Date :

2012/01/10

Revision History

Revision No.	Date Released	Page	Description
1.0	2011/7/22	ALL	New Release
1.1	2011/9/21	7	Correct 1.5.1 Definition of Modes Remove Adapter & power cord
1.2	2012/01/10	10 11	Update 6.1 Main Dimensions 6.5 Front Appearance

Table of Contents

1. ELECTRICAL PERFORMANCE

All items must be performed under "standard test conditions" unless otherwise specified.

1.1 Standard Test Conditions

-Warm up time: 30 minutes

-AC supply voltage: 100 ~ 240 VAC universal

-Ambient temperature: 25 ℃+/- 5℃

-Humidity: 10 ~ 90 %

-Display mode : 800x600/ 60Hz

-Input signal (VGA): 0.7 Vpp

-External controls for picture position and size : Preset condition

-Video generator : Chroma 2135 or equivalent

1.2 LCD Panel General Specifications

-Model name : Au G084SN05-V8

-Screen diagonal : 8.4 inch

-Display Area : 170.4(H) x 127.8(V)mm

-Pixel Pitch: 0. 213(H) x 0.213 (V)

-Support Colors: 16.2M (RGB 6-bits+FRC) or 262K colors (RGB 6-bits)

-Number of Pixel : 800(R,G,Bx3)x600

-Pixel Arrangement: RGB vertical stripe

-Typical white luminance : 400 cd/m2 (Typ)

-Contrast Ratio : 600:1

-Viewing Angle : 80 (left) , 80(right) , 80(up) , 60(down)

-Signal Frequency : 30- 38KHz

-Frame rate: 60Hz max.

-Response Time: 30ms typ.(Tr + Tf)

-Specifications are subject to change in different panel used

1.3 Specifications of display

1.3.1 Software Version

- VITA's Standard

1.3.2 Resolution(max)

- D-Sub : 800 x 600 (60Hz)

1.3.3 Inrush Current (Adapter)- SSA-0651-1

- 100 A max. for 230Vac at max. load (cold start).

1.3.4 AC Input Range(Adapter)- SSA-0651-1

- 90 Vac to 264 Vac.

1.3.5 DC Output (Adapter)- SSA-0651-1

- Plug (+12V, GND) (OD 5.5ϕ x ID 2. 1ϕ x 9. 8 plug)

1.3.6 DC Input Jack (A/D Board)- 110-F8538-2E01

- PIN (+12V, GND) (5.5φ x 2. 0 x 9. 5 plug)

1.3.7 Pull-in Range of Synchronization

-Horizontal frequency: 30 KHz ~ 38 KHz

-Vertical frequency: 50 Hz ~ 60 Hz

1.3.8 Ambiance

- Operating temperature : 5 ~ 40 ℃

- Storage temperature : -10 ~ 60 ℃

- Humidity : 10 ~ 90%

1.3.9 Touch screen

1.4 Signal

1.4.1 Input

R.G.B(Analog)	Level:	0.7 Vpp
Sync Input	H.V. Separate Sync. TTL compatible	

S-Video(4-pin mini-DIN)	Level:	1.0 Vpp
Termination	75Ω	NTSC/PAL
Chroma Type	0.286Vp-p (Reference Burst)	

Composite Video	Level:	1.0 Vpp
Termination	75Ω	NTSC/PAL

1.4.2 Output

1.4.3 Connector

- D-sub15 (VGA)

Pin No	Signal	Pin No	Signal
1	Red Input	9	VGA +5V
2	Green Input	10	GND
3	Blue Input	11	NC
4	NC	12	SDA
5	GND	13	Horizontal Sync.
6	RED Return	14	Vertical Sync.
7	Green Return	15	SCL
8	Blue Return		

- YC(S-Video) Input

Signal Type	S-Video
Connector Type	4-pin mini-DIN

- Composite Video Input

Signal Type	Composite Video
Connector Type	RCA jack

1.4.4 Supported Timing

	Panel pixel								
TIMING	**640x480**	**800x600**	**1024x768**	**1280x1024**	**1360x768**	**1440x900**	**1600x1200**	**1680x1050**	**1920x1080**
640x350	V	V	V	V	V	V	V	V	V
720x400	V	V	V	V	V	V	V	V	V
640x480	V	V	V	V	V	V	V	V	V
800x600		V	V	V	V	V	V	V	V
1024x768			V	V	V	V	V	V	V
1280x1024				V	X	X	V	X	X
1280x768 or 1360x768					X V	V STANDARD 1360x768	X X	V STANDARD 1360x768	V STANDARD 1360x768
1440x900						V	X	X	X
1600x1200							V	X	X
1680x1050								V	V
1920x1080									V

Supported timing is different by the panel used on the main board

V: supported timing

1.5 Display Power Management

1.5.1 Definition of Modes

There are three mode of operation for the PCMTL-MV8-R These are ON, STAND-BY/ SUSPEND and OFF

- ON (Green LED): Both Horizontal and Vertical syncs are present and the monitor is in normal operation.

- STAND-BY & SUSPEND(Amber LED) : Horizontal or Vertical or both sync is inactive per VESA DPMS and all parts not operational. The monitor is able to perform a quick start when both Horizontal and Vertical signals are active again.

- OFF(No LED) : When the monitor power button switches off.

1.5.2 Power Consumption (220 VAC)

- Normal operation: 12 W(max.)

- Stand-by/Suspend mode: < 8 W

- Off mode: < 1.5 W

(at the specified voltage and frequency)

2. PICTURE PERFORMANCE

-Implies "standard test conditions" unless otherwise specified.

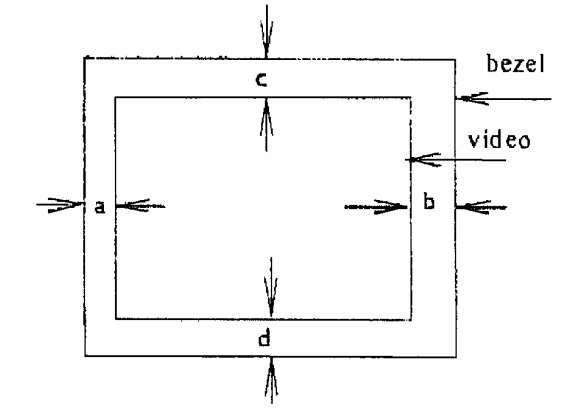
-Values were measured after 10 minutes warm-up period.

2.1 Normal Display Size

-H=170.4mm

-V=127.8mm

2.2 Picture Size and Position Offset



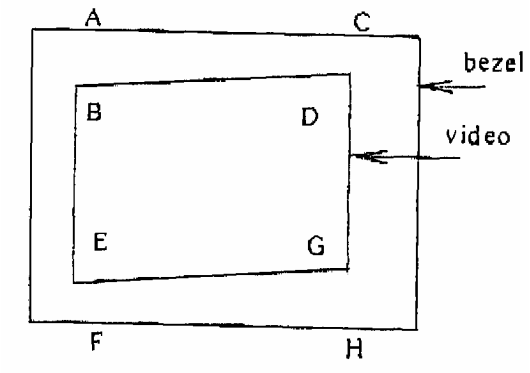
- H-size = 170.4mm

- V-size = 127.8mm

- H-offset = | a – b | < = 0. 5 mm

- V-offset = | c – d | < = 0. 5 mm

2.3 Tilt



- | AB-CD| = Tilt on top < =0. 5 mm

- | EF-GH| = Tilt on bottom < = 0. 5 mm

2.4 Display Quality

- A class

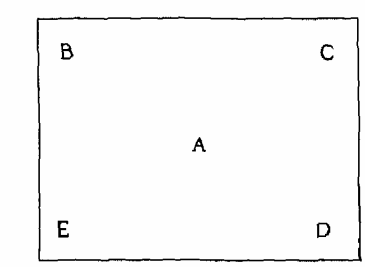
3. WHITE LUMINANCE

- Under standard test conditions

3.1 Brightness Level

- Input full white pattern. More than 350 cd/m^2 at center of screen with brightness and contrast at max.

3.2 Brightness Uniformity



170.4 x 127.8mm

-White uniformity of these 5 points is defined as below.

-(Min. brightness / Max. brightness) x 100% >= 80%

3.3 Color Temperature

-x= 0. 281 +/- 10%

-y= 0. 311 +/- 10%

-Test at 9300 ˚K Preset 383 cd/m^2

-x= 0. 313 +/- 10%

-y= 0. 329 +/- 10%

-Test at 6500 ˚K Preset 313cd/m^2

3.4 Focus

-Light output setup: Pattern: full white

Contrast: 50%

Brightness: 383 cd/m^2

-Test pattern: Chroma pattern 5

-Distance : 30cm away from screen

-Clear and vision able shape

4. APPROVALS

- ☐ **FCC** (Class B) FCC part 15 / CISPR22 / ICES-003
- ☐ **CE** (Class B) EN55022 EN61000 3-2,3-3 / CISPR 22 / AS/NZS CISPR 22 / EN55024
- ☐ **UL(CUS)** (UL60950-1 / CSA C22.2)
- ☑ **RoHS**

5. RELIABILITY

5.1 Mini. Operating hrs.

- Monitor mini. operating hrs. (except LCD panel life hrs.) is 30000 hrs.

5.2 MTBF

-Panel of lifetime is 50000 hrs. (Min.)

5.3 Ambiance

- Operating temperature: **5 ~ 40 ℃**

- Storage temperature: **-10 ~ 60 ℃**

- Humidity: **10 ~ 90%**

5.4 Vibration Test & Drop test

-VITA's standard

6. MECHANICAL SPECIFICATIONS

6.1 Main Dimensions (Unit: mm)

	Without Packing	With Packing (reference)
-Width:	251.9	365
-Height:	242.6	340
-Depth:	215.5	195

6.2 Estimated Weight (reference)

-Net:	3.1 Kg
-Gross:	3.8 Kg

6.3 Tilt / Swivel Angle

- 90 +/- 2˚up
- 3 +/- 1˚down

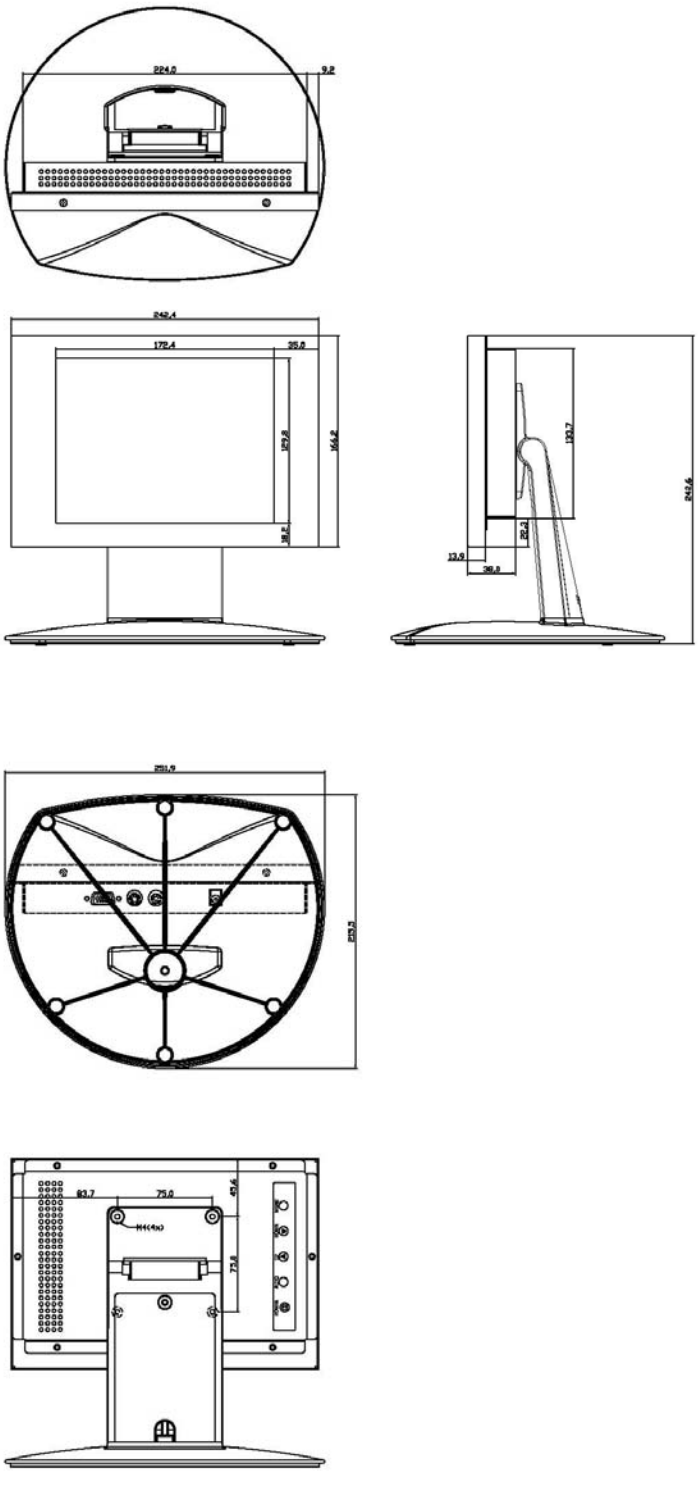
6.4 Plastic / Metal

- Metal

The material for the front panel and back cover is SECC

The material for the Stand is Aluminum.

6.5 Front Appearance



7. PLUG & PLAY

The Display Data Channel "DDC" function will allow the inform the host system about its identity and depending on the level of DDC used , communicate additional level of display capabilities.

DDC1: One uni-directional data

channel DDC2: One bi-directional data

channel PCMTL-MV8-R can support

DDC 1 / 2 B

8. External Control

8.1 Function Key Define

The [Power] key is power on/off.

The [Auto] key is Auto Tune and OSD Off.

The [Up] key is adjust the volume and move select.

The [Down] key is volume mute and move select.

The [Menu] key is OSD on and Enter.

8.2 OSD control

● **VGA OSD MENU CONTROL LEVEL STRUCTURE**

FIRST LEVEL	SECOND LEVE	THIRD LEVEL	FOURTH LEVEL
Video	Contrast		
	Brightness		
	Color Temperature	Cool (9300K)	
		Natural (7500K)	
		Warm (6500K)	
		User	
	User RGB	Red	
		Green	
		Blue	
	Advanced	Auto adjustment	
		H Position	
		V Position	
		Clock	

		Phase
Display(no function)	PIP Mode	
	PIP Position	
	PIP Source	
	Aspect Ratio	
Audio(optional)	Volume	
System Settings	Language	English
		繁體中文
		Francais
		Deutsch
		Italiano
	OSD Timer	5/….30/Off
	OSD Transparency	0/…./10
	Recall	

● AV OSD MENU CONTROL LEVEL STRUCTURE

FIRST LEVEL	SECOND LEVE	THIRD LEVEL	FOURTH LEVEL
Video	Contrast		
	Brightness		
	Color		
	Tint		
	Sharpness		
	Advanced	Video mode	Normal
			Cinema
			Vivid
			Nature
		Color Temperature	Cool
			Warm
			Natural
Display	PIP Mode (option)		
	PIP Position (option)		
	PIP Source (option)		
	Aspect Ratio (Full Screen / Cinema Scope / 4:3 / Pillar Box Expand)		
Audio (optional)	Volume		
System Settings	Language	English	
		繁體中文	
		Francais	
		Deutsch	

		Italiano
	OSD Timer	**5/….30/Off**
	OSD Transparency	**0/…./10**
	Recall all	

8.3 OSD Functions Adjustment

1. Press the knob "MENU/SELECT" to show the OSD menu. Then use the "△" and "▽" to select a function. Press the knob "AUTO/EXIT" to close the OSD menu.

2. With the knob "△" and "▽" , you can adjust the speaker volume on the monitor.

- **When you press the "▽", the speakers are mute. Press the "▽" and then the speakers are active.**
- **When you press the knob "△" , the speaker volume OSD is shown. You can increase or decrease the volume by pressing the "△" and "▽".**

3. You can hold the knob "AUTO/EXIT" for more than 1 second to adjust the image quality automatically(VGA only).

The OSD menu will close automatically.

8.4 OSD WARNING SIGNAL

The monitor will detect various display situation automatically.

When the monitor detects the problems,

the screen will automatically show the different warning signals to remind you.

8.5 ENTER SLEEPING MODE

This screen appears when there is no signal input.

Please check that the signal cable is properly connected to the graphics board or PC.

8.6 SYNC OVER RANGE

This screen appears when the input frequency from the monitor is out of monitor's scanning range.

8.7 ENTER SLEEPING MODE

This screen warns when the monitor is about to enter the sleep mode.

Please press and key on the keyboard or click the mouse for waking the monitor and computer.