CPPM-8U201

Rack Mount LCD Display

20.1” UXGA LCD

User’s Manual

Revision B

Warranty

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To obtain an RMA number, call us at 858-571-4330. We will need the following information:

Return company address and contact
Model name and model # from the label on the back of the display
Serial number from the label on the back of the display
Description of the failure

An RMA number will be issued. Mark the RMA number clearly on the outside of each box, include a failure report for each board and return the product(s) to our San Diego, CA facility:

Chassis Plans.
8295 Aero Place
Suite 200
San Diego, CA 92123
Attn: Repair Department

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E-mail: Support@chassisplans.com
Web: www.chassisplans.com

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Description

The CPPM-8U201 is a high performance rack mount 8U 20.1" TFT LCD display with native UXGA 1600 x 1200 resolution. The display offers 250nit brightness, 500:1 contrast, and 89 degree viewing angle for exceptional viewability. An anti-glare hard coating minimizes reflections making images that much clearer. The aspect ratio is 4:3 with a Pixel Pitch of only 0.255mm. It will display 16.7 million colors (True Color).

With only 3” of depth, the CPPM-8U201 is perfect for rack, wall, panel, or kiosk installations. It can be used in Industrial, Commercial, Military, or Broadcast applications. Its lightweight but rugged aluminum construction makes it perfect for mobile installations.

The CPPM-8U201 provides multiple signal input options including aRGB, DVI-D, NTSC, Pal S-Video and Composite Video. Picture-In-Picture is supported with OSD control of the source. An optional 3Watt dual channel audio amplifier is included with input and output jacks for connecting user provided speakers.

The display is offered with optional Capacitive and Resistive Touch Screens with either serial or USB output.

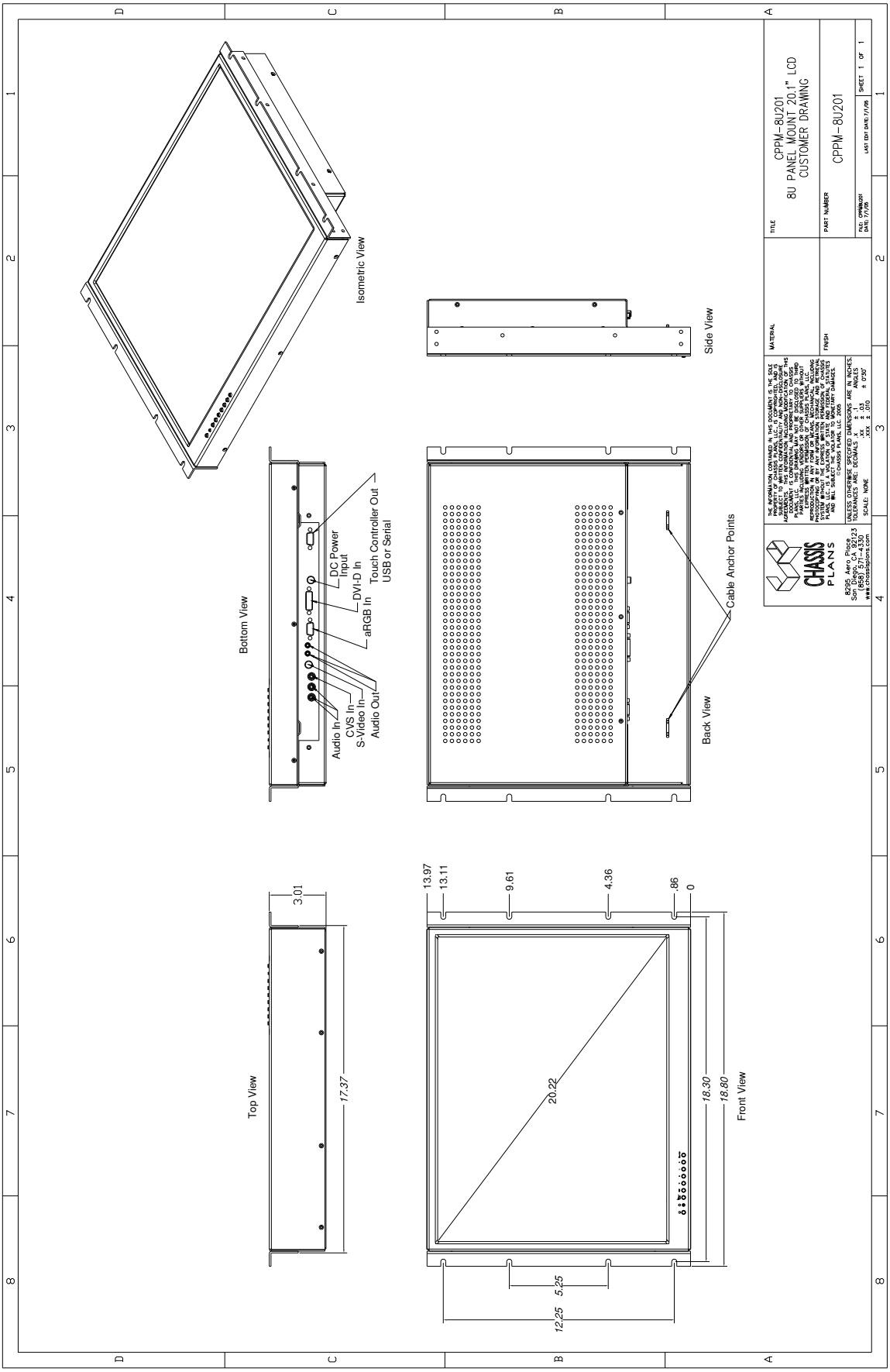
As with all Chassis Plans products, a wide variety of custom options are available including paint color, customer logo, touch screens, contrast filters, transmissive daylight modification, hard coated vandal shields.

ENCLOSURE 20.1” UXGA 1600x1200 TFT LCD 8U (19.97”) x 3” deep Rugged all aluminum construction Designed to Satisfy Military, Industrial and Commercial Requirements Compact Enclosure for Limited Depth Installation **DISPLAY** Largest LCD Panel that can fit within the standard rack constraints in 1U. 20.1” Diagonal Active Matrix UXGA TFT LCD Features LG Technology 1600 x 1200 @ 60Hz Native Resolution 89 deg Viewing Angle 500:1 Contrast Ratio 250cd/m2 Brightness	**VIDEO CONTROLLER** Standard aRGB, DVI-D, S-Video and Composite Video Inputs OSD (On Screen Display) for Monitor Setup and Control Picture-in-Picture Audio Input and Output with Built-In Amplifier **OPTIONAL FEATURES / OPTIONS** Transflective LCD for Daylight Use Enhanced Backlighting Protective Glare Filters Customer Specified Paint Color Customer Logo

The CPPM-8U201 is offered with two different controllers depending on the input signal selection.

The ‘A’ (aRGB only) and ‘D’ (aRGB and DVI-D) inputs have slightly different front panel controls and the OSD is simplified as compared to the higher end ‘V’ (aRGB, DVI-D, Composite, S-Video) controller.

The following Outline Drawing shows common features, though some of the input signal connectors will be missing on the ‘A’ and ‘D’ controller versions that do not support Composite and S-Video inputs nor audio.



Outline Drawing

Part Number Matrix

CPPM-8U201-TS where ‘T’ designates the Touch Screen option and ‘S’ designates Input Signals.

Touch Screen Selection Options

‘T’	Touchscreen Type	Touchscreen Interface
1	Capacitive	Serial
2	Capacitive	USB
3	Resistive	Serial
4	Resistive	USB
14	No Touchscreen	

Video Signal Input Selection Options

‘S’	Video Input Signal Types
A	aRGB
D	aRGB, DVI-D
V	aRGB, DVI-D, S-Video, CVS

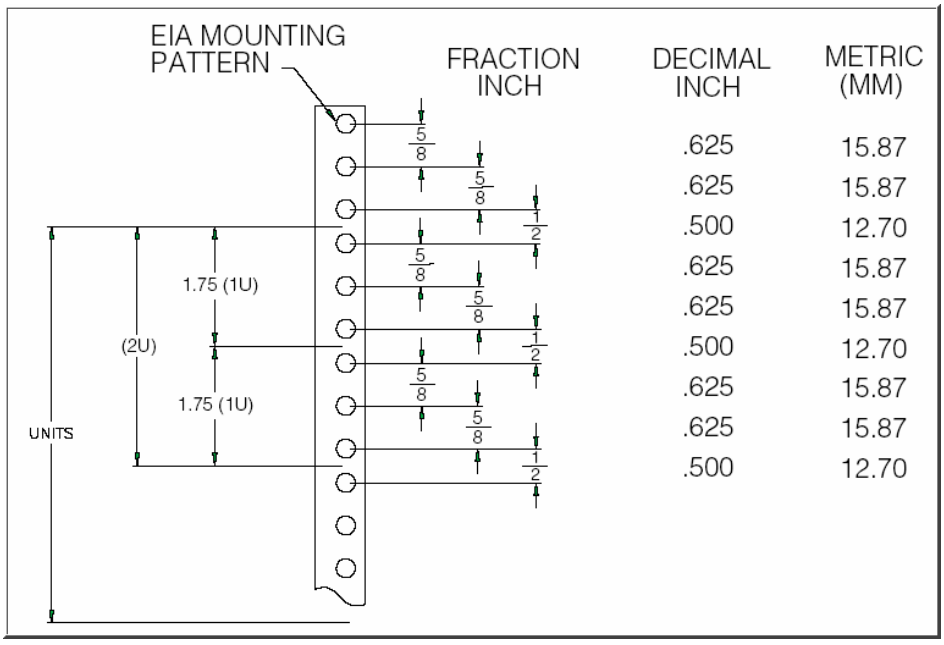
Note

The controllers inside the display are different for the ‘A’/’D’ inputs versus the ‘V’ inputs.
This manual includes sections for the ‘A’ and ‘D’ Controllers and the ‘V’ Controller.
Make sure you reference the proper section for adjusting your OSD.

Installation

To mount the CPPM-8U201 in a rack, it is first important you identify the correct holes to mount to. Please see the following illustration. Note that a 'U' starts between the holes that are ½" apart. One very common problem is trying to install into the wrong holes. Thus the bottom edge of the display would be placed between the holes ½" apart.

Because there are multiple styles of racks, we can't provide detailed instructions on mounting the equipment. However, there are general instructions at http://www.chassis-plans.com/PDF/Rack_Slide_Use.pdf for rack installation which should help.



Rack Mounting Hole Spacing

See the drawing above (page 2) for the distance between the rack mounting holes on the display.

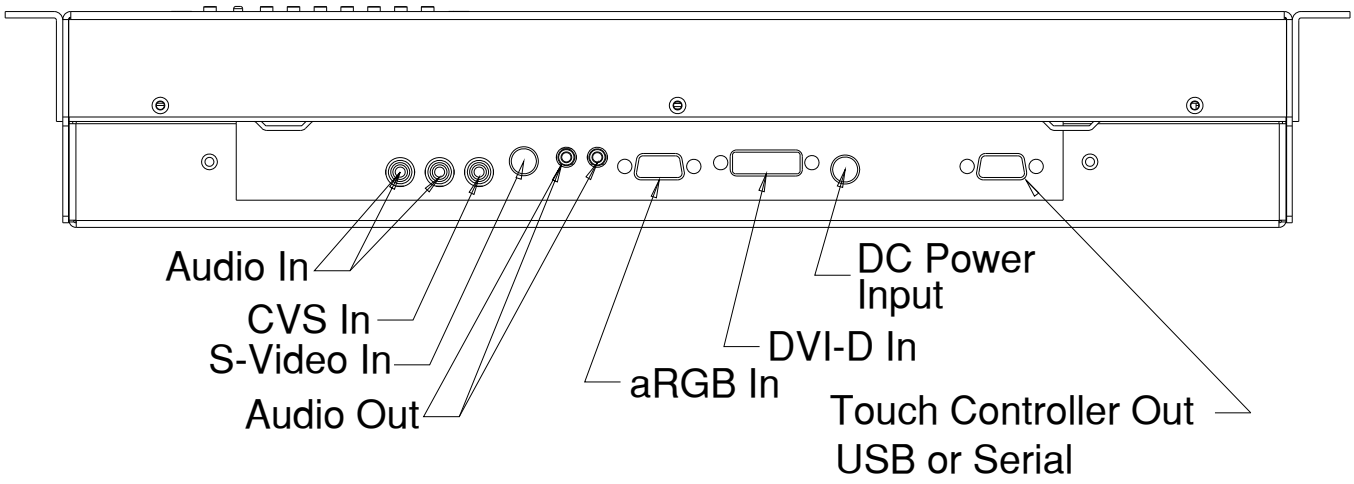
Connecting the Display

The CPPM-8U201 provides for analog, digital, composite and S-Video video inputs as well audio input and output.

Note Connector configuration is dependant on the particular model. Not all models will have all connectors.

Legend	Function	Connector
Audio L / Audio R	Audio Inputs for CVS and S-Video	RCA Plugs
CVI	Composite Video Input (CVS)	RCA Plug
S-Video	S-Video Input	4-Pin Mini Din
Audio Out L / R	Audio Output from Amplifier	3.5mm Mini Stereo Jack - Female
aRGB	aRGB Video Inputs	HD15
DVI-D	DVI-D Video Input	DVI-D Connector
15VDC	Power Input, 15VDC	4-Pin Power Plug Receptacle
Touchscreen	Touchscreen Output	DB9 or USB (depending on model)

Video and Audio Connections



Signal Connectors

The CPPM-8U201 provides a front panel Source selection button for selecting which input signal is to be displayed. In addition, Picture-In-Picture is supported where the S-Video or Composite video inputs can be displayed as a small window on top of the aRGB or DVI-D inputs.

An audio amplifier is provided with a computer input source and 2 RCA audio inputs for right and left channel. The audio channel can be selected via the OSD for the computer input or the RCA video input (PIP). There is no provision to output sound from one RCA input source to both speakers.

Picture-In-Picture (PIP)

The CPPM-8U201 with the 'V' controller supports PIP. The PIP window can be sized to Small (approx 1.4x2.0"), Medium (2.9x4.0") or Large (4.3x5.6"). There are 5 preset PIP window positions or the window can be moved to a user selected position through the OSD menus. The PIP window is used to put a smaller video feed window on top of a full computer display. The **PIP** button on the front panel can be used to select the video feed to display and the size.

The PIP source can only be S-Video or Composite input on top of either aRGB or DVI-D. The display will not use either the aRGB or DVI-D as a PIP source. Setting the primary input to either Composite or S-Video disables the PIP function.

The PIP window turns off when the monitor enters sleep mode, is turned off with the front Power control or is stowed flat into the rack. To re-establish the PIP window, press the PIP button on the front panel and select the desired input source and size using the + or – buttons.

Note The default PIP source is TV. Whenever PIP is disabled by turning off the monitor or entering sleep mode, the PIP input source will revert back to TV. After pressing **PIP** on the front panel, push either the ▲ or ▼ buttons to change to the PIP input selection Quick Menu and then **+** or ─ to change to the desired input source.

'A' and 'D' Controller

Description

The 'A' controller provides for only aRGB input while the 'D' controller provides for both aRGB and Digital DVI-D input. The OSD menus are different than those for the 'V' controller which provides for aRGB, Digital, Composite and S-Video inputs. Users with the 'V' controller should see the next section.

Front Panel Controls

The On Screen Display (OSD) is adjusted as follows:

1. Press the **Menu** Button located on the front of the monitor.
2. Use the buttons described below to maneuver around the Menu.
3. Select the desired OSD Menu from the Menu Screen Shots below to make the desired adjustment(s).
4. Press the **Auto/Exit** button to exit out of the OSD Menu when complete or wait for the OSD window to automatically close as set by the OSD Time Out setting.

- **Power:** Turns the Unit On and Off

LED: Green-Normal Operation

Green	Normal Operation
Red	Power On but no input signal
Amber	Power On and either syncing to new input source or input source is out of range
Off	No power or display turned off

- **Menu/Select:** Enters the OSD menu and sub menus (Press once to enter main menu, press again to enter a sub menu) and accepts a display parameter change.
- **Auto/Exit:** With no OSD showing, automatically adjusts the display parameters for Clock and Phase in aRGB mode. When the OSD is displayed, exits the current menu.
- **Left/Decrease:** Moves a control bar to the left or the cursor down when selecting a menu.
- **Right/Increase:** Moves a control bar to the right or the cursor up when selecting a menu.
- **Source:** Alternates between the two video input sources - aRGB (VGA) and DVI-D.

Quick Menu's
A Quick Menu pops up by touching a single button.

Display Auto Adjust
Pressing **Auto/Exit** will perform a auto display adjustment when in aRGB mode. This automatically adjusts the Phase and Clock for the best displayed image.

Front Panel Controls

To save your changes, press the front panel Menu/Select button or Auto/Exit. Alternatively, changes are saved if no buttons are pressed and the OSD times out returning back to the display.

There is a Factory Reset function under the Misc Adjustments Menu (bottom left ETC symbol) should you completely screw things up and want to start over. Select the **RECALL** function in the Miscellaneous menu.

Note – Pressing **Source** with the OSD displayed will over-ride the OSD and change the input source. When a valid signal is detected, the front panel LED will turn green.

Note – Pressing **Source** with the 'A' input (aRGB only) will change the internal source to Digital. However, a digital input is not available and nothing will be displayed.

'A' and 'D' OSD

The CPPM-8U201 provides for On Screen Display (OSD) of the controls to adjust the display parameters such as brightness, contrast, etc. The display controller stores the settings in non-volatile memory so they are saved even when power is turned off or removed.

To enter the OSD, press the front panel **Menu/Select** button. Then use the **Left/Decrease** and **Right/Increase** buttons to scan between each of the menu choices. When the desired menu item is selected, again press **Menu/Select** to either bring up the control bar or the underlying sub menu.

If a control bar is brought up, use the **Right/Increase** or **Left/Decrease** buttons to change the level. Press **Menu/Select** to accept the change or simply press **Auto/Exit** to accept the change and exit that menu.

If a sub menu is brought up, use the **Left/Decrease** and **Right/Increase** buttons to navigate the sub menu and again use **Menu/Select** to change to the next menu or control.

Repeatedly pressing **Auto/Exit** will eventually exit the OSD or you can wait the number of seconds the OSD Timer is set for to automatically exit the OSD.

Note in the Main Menu, the current resolution, horizontal and vertical frequencies are displayed. The bottom of the Main Menu shows the controller firm ware revision.

OSD Main Menu

The main OSD menu is shown below.

Brightness Underlying bar control to adjust the display brightness

Contrast Underlying bar control to adjust the contrast or distinction of the display.

Color Control Underlying menu to control the color balance of the display (aRGB only)

User	Underlying sub menu to control Red, Green and Blue
Bluish	Select to make the display 'colder'
Reddish	Select to make the display 'warmer'

Position Underlying menus to control horizontal and vertical position of the display (aRGB only)

H Position	Underlying bar control to change the overall horizontal position of the image.
V Position	Underlying bar control to change the overall vertical position of the image.

Clock Phase Underlying menu to control the clock rate and phase of the dot clock

Phase	Underlying bar control to change the overall horizontal position of the image.
Clock	Underlying bar control to change the overall vertical position of the image.

Miscellaneous Underlying menus to control the display parameters versus image parameters

Recall	Select to Recall the factory Default Settings
OSD Time	Underlying menu to select the OSD timeout setting
OSD Position	Underlying menus to move the OSD display horizontally and vertically
Auto Color	Select to automatically adjust the display color (aRGB only)
Auto Adjust	Select to automatically adjust display timing parameters for best fit to frequency, resolution, etc. Same effect as pressing front panel Auto/Exit button. (aRGB only)

Language Underlying menu to control select the OSD language

Input Select Underlying menu selects aRGB versus Digital input source. Same as Source button on front panel.

Note Two menus are grayed out between Language and Input Select as those features are not enabled on this display.

'V' Controller

Description

The 'V' controller applies to high end displays with aRGB, Digital DVI-D, Composite and S-Video inputs. The 'A' controller provides for only aRGB input while the 'D' controller provides for both aRGB and Digital DVI-D input. Users with the 'A' and 'D' controller should see the previous section for OSD menus.

Front Panel Controls

The On Screen Display (OSD) is adjusted as follows:

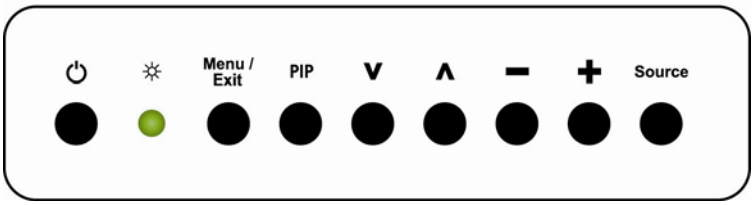
1. Press the **Menu** Button located on the front of the monitor.
2. Use the buttons described below to maneuver around the Menu.
3. Select the desired OSD Menu from the Menu Screen Shots below to make the desired adjustment(s).
4. Press the **Menu** Button to exit out of the OSD Menu when complete or wait for the OSD window to automatically close as set by the OSD Time Out setting.

- **Power:** Turns the Unit On and Off

LED: Green-Normal Operation

- **Menu/Exit:** Enters and Exits the menu and sub menus (Press once to enter main menu, press again to enter a sub menu, press again to exit.
- **PIP:** Brings up the Picture-In-Picture Function Menu without having to enter the Menu Key.
- **(▼) Arrow Down:** Moves you Down in the displayed menu
- **(▲) Arrow Up:** Moves you Up in the displayed menu
- **(–) Minus Sign:** Decreases a Function Level (Moves you Left in the displayed menu).
- **(+) Plus Sign:** Increases Function Level (Moves you Right in the displayed menu).
- **Source:** Scrolls through the different video sources. Includes aRGB (VGA), DVI-D, CVBS (Composite), SVHS (S-Video), TV (not available).

Diagram 1: *OSD Keypad located on front of monitor*



Quick Menu's

A Quick Menu pops up by touching a single button. For example by touching the minus button you bring up the Volume's Quick Menu and subsequently can adjust the Monitor Volume level without have to go through the Main Menu, then scrolling to the Volume Tab, moving to the Volume Level and then making the adjustment.

Picture in picture Quick Menu.	**Volume Quick Menu**
PIP: Brings up the PIP Menu **(V)** Down Arrow: Toggles between PIP source and PIP On/Off/Size **(-)** Minus Sign: Moves your selection of Source or Size Backward **(+)** Plus Sign: Moves your selection of Source or Size Forward	**(+)** Brings up the Menu and increases volume level **(-)** Brings up the Menu and decreases the volume level
	Display Auto Adjust Pressing **(+)** and **(-)** simultaneously will perform a auto display adjustment when in aRGB mode.

Front Panel Controls

To save your changes, press the front panel Menu/Exit button. Alternatively, changes are saved if no buttons are pressed and the OSD times out returning back to the display.

There is a Factory Reset function under the Misc Adjustments Menu should you completely screw things up and want to start over. See the right most Misc tab, More Options sub menu, Factory Reset.

Note – Pressing **Source** with the OSD displayed will over-ride the OSD and change the input source. Source scans, in order, aRGB, DVI-D, TV, CVBS, SVHS. It is normal for the display to hang in the SVHS mode while trying to change the source as the controller scans available SVHS modes. When a valid signal is detected, a small window above the source indicator will display the resolution, frequency, and controller mode.

Sleep Mode

The display will enter sleep mode (turn off) if there is no input signal to the selected input mode. The delay to enter Sleep Mode when the signal is not valid is approximately 6 seconds. When in sleep mode, the Power LED will flash green. Pressing the **Power** button or **Source** button will exit the Sleep Mode and the display will scan the selected input port for a signal. If no signal is present, the display will once again enter Sleep Mode. Note that having a signal present on another port will not prevent the display from going into Sleep Mode if no signal is present on the selected port. The display will only scan the selected port and does not auto-scroll through the other ports.

Note that you can bring up the OSD menu when the display is brought out of Sleep Mode port but the OSD will disappear when the display again enters Sleep Mode after not finding a signal.

Entering Sleep Mode will disable the PIP and revert to a TV PIP default. Use the front panel PIP to select the PIP source and size to again display the PIP window. Alternatively, use the OSD to enable PIP.

'V' OSD

The CPPM-8U201 provides for On Screen Display (OSD) of the controls to adjust the display parameters such as brightness, contrast, etc. The menus are context sensitive in that there are adjustments specifically for each Source Input type (analog aRGB, digital DVI-D, S-Video and Composite). This allows you to tune the display for each type of input without having to retune when changing the Source selection. The display controller stores the settings in non-volatile memory so they are saved even when power is turned off or removed.

In the following menus, there are many common features and selections between each type of input. However, some adjustments may not pertain to a particular input signal type so those adjustments are not shown.

Note

The display controller provides a TV function which is not utilized in theCPPM-8U201. While the TV menu selections are available in the OSD, none of the TV functions work. Adverse display behavior may be observed if the TV settings are changed and it is advised they be left set to the default setting.

OSD Menu Organization

While different adjustments are available for each of the different input types, the menus are similarly organized and the adjustments have the same effect.

Display Brightness (Fine and Course), Contrast, Phase, Frequency, H Position, V Position

PIP Brightness, Contrast, Sharpness, Color, Tint, PIP Source, PIP Size, PIP More Settings (sub menu)

PIP More Settings – H Position, V Position, PIP Position Preset

OSD OSD Background, OSD Time Out, OSD Position Preset, OSD H Position, OSD V Position, OSD Language, Controller Firmware Revision

Audio Volume, Treble, Bass, Balance, Audio Preset, Mute, Sound Swap

Misc. Auto Adjustment, Source, Sleep Time, Sleep Time Remaining Indicator, Room Lighting, Freeze Frame, Zoom Settings (sub menu), More Options (sub menu)

Zoom Settings – Zoom, Zoom H Pan, Zoom V Pan
More Options – Color Temp, Sharpness Filter, Scale Mode, Factory Reset

Note An additional TV tab will display on the right if TV is selected for the Main Source or PIP Source. It is recommended that TV not be selected or used for any adjustment.

A typical menu appears as follows:

Display Menu

Adjustment	Applicability			
	aRGB	DVI-D	CVHS	CVBS
Brightness – Fine	●	●	●	●
Brightness – Course	●	●	●	●
Contrast	●	●	●	●
Phase	●			
Frequency	●			
H Position	●			
V Position	●			
Sharpness			●	●
Color			●	●
Tint			●	●

Brightness Top is Fine Adjustment and bottom is Course Adjustment. Adjusts the brightness of the screen. Image brightness (ADC for analog signals, PW for digital).

Contrast Adjusts distinction (Image noise clearness). Image contrast (ADC for analog, PW for digital).

Phase Adjusts the phase signal sample. Use it to fine tune to eliminate noise or overlapping lines.

Frequency Adjusts horizontal size of the screen by increasing or decreasing number of picture elements.

H Position Shifts displayed image left or right.

V Position Shifts displayed image down or up.

Sharpness Adjusts the sharpness of the picture.

Color Adjusts the display color saturation of the screen. (Video only, TV not available).

Tint Used to adjust the display hue adjustment of the screen. (Video only, TV not available).

PIP Menu

Adjustment	Applicability			
	aRGB	DVI-D	CVHS	CVBS
Brightness	●	●		
Contrast	●	●		
Sharpness	●	●		
Color	●	●		
Tint	●	●		
PIP Source	●	●		
PIP Size	●	●		
PIP More Settings (sub menu)	●	●		

Brightness Adjusts the brightness of the PIP display.
Contrast Adjust distinction (Image noise clearness).
Sharpness Adjusts the sharpness of the PIP display**.**
Color Adjusts the display color saturation of the PIP display. (Video only, TV not available).
Tint Used to adjust the display hue adjustment of the screen. (Video only, TV not available).
PIP Source S-Video (SVHS) or Composite (CVS) (TV not available)
PIP Size Small, Medium, Large, and Off.
PIP More Settings See Below.

PIP More Setting Sub Menu

Adjustment	Applicability			
	aRGB	DVI-D	CVHS	CVBS
H Position	●	●		
V Position	●	●		
PIP Position Preset	●	●		

H Position Move the PIP from Left Edge (0) to Right Edge (100)
V Position Move the PIP from Bottom Edge (0) to Top Edge (100)
PIP Position Preset Top Left, Top Right, Middle of Screen, Bottom Left, Bottom Right.

Note The PIP menus are not available (tab not shown) when the primary input source is set to CVHS or CVBS.

OSD Menu

Adjustment	Applicability			
	aRGB	DVI-D	CVHS	CVBS
OSD Background	●	●	●	●
OSD Time Out	●	●	●	●
OSD Position Preset	●	●	●	●
OSD H Position	●	●	●	●
OSD V Position	●	●	●	●
OSD Language	●	●	●	●
Version 29A 1.00	●	●	●	●

OSD Background Opaque or Translucent
OSD Time Out Sets the time (5 to 60 seconds) the OSD will be displayed without any user input.
OSD Position Preset Top Left, Top Right, Middle of Screen, Bottom Left, Bottom Right
OSD H Position Move OSD from Left Edge (0) to Right Edge (100)
OSD V Position Move OSD from Bottom Edge (0) to Top Edge (100)
OSD Language English, French, Italian, German, two Asian languages
Version 29A 1.00 LCD Controller Firmware Revision

Audio Menu

Adjustment	Applicability			
	aRGB	DVI-D	CVHS	CVBS
Volume	●	●	●	●
Treble	●	●	●	●
Bass	●	●	●	●
Balance	●	●	●	●
Audio Preset	●	●	●	●
Mute	●	●	●	●
Sound Swap	●	●		

Volume Adjusts the audio output level.
Treble Adjusts the midrange tone of the audio output.
Bass Adjusts the base tone of the audio output.
Balance Adjusts audio output to Right or Left bias.
Audio Presets Select preset Treble and Base settings (User, Movie, News and Standard).
Mute Silence audio output. Off allows sound output. On mutes the sound (sound off)
Sound Swap Change audio input source from Main PC Audio in to PIP.

Audio Notes:

1. Treble and Bass will be 'grayed out' and not adjustable when Audio Preset is set to Movie, News or Standard.
2. Sound Swap is not available when CVHS or CVBS are selected as the input because PIP is disabled in that configuration.
3. A video signal must be present at CVHS or CVBS for the video sound input to function. Connecting an audio source to the either the Audio Left or Audio Right without a corresponding video input will not work.
4. Pressing the front panel **+** or **–** control will raise or lower the volume without invoking the OSD. There is no front panel Mute control.

Misc Menu

Adjustment	Applicability			
	aRGB	DVI-D	CVHS	CVBS
Auto Adjustment	●			
Source	●	●	●	●
Sleep Time	●	●	●	●
Room Lighting	●	●	●	●
Freeze Frame	●	●	●	●
Zoom Settings (sub menu)	●	●	●	●
More Options (sub menu)	●	●		

Auto Adjust Automatically adjusts the screen resolution and sync to the incoming signal. (aRGB Source Only)
Source Selects the video input signal source (aRGB, DVI-D, S-Video, and Composite Video).
Sleep Time Adjust (5 to 120 minutes) to set a desired time for monitor to go to sleep.
Sleep Time remaining Indicates remaining time until monitor goes to sleep (Grayed out until sleep timer is activated.
Room Lighting Bright, Normal, Movie changes the display brightness slightly with Movie being lowest.
Freeze Frame Retains the image on the monitor, including PIP.
Zoom Settings Menu See Below
More Options Menu See Below

Misc. Zoom Sub Menu

Adjustment	Applicability			
	aRGB	DVI-D	CVHS	CVBS
Zoom	●	●	●	●
Zoom H Pan	●	●	●	●
Zoom V Pan	●	●	●	●

Zoom Zooms into the center of the displayed image, including PIP. If the PIP is not located at the center of the display, it will be zoomed off the edge and will no longer be visible. The maximum zoom factor is approximately 16:1.
Zoom H Pan Pans the zoomed image left or right.
Zoom V Pan Pans the zoomed image up or down.

Notes:
1. Zoom H Pan and Zoom V Pan will be grayed out if Zoom is set to 0.

Misc. More Options Sub Menu

Adjustment	Applicability			
	aRGB	DVI-D	CVHS	CVBS
Color Temp	●	●	●	●
Red Temp	●	●	●	●
Green Temp	●	●	●	●
Blue Temp	●	●	●	●
Sharpness Filter	●	●	●	●
Scale Mode	●	●	●	●
Factory Reset	●	●	●	●

Color temp Adjust the Red/Green/Blue bias for Color Temperature (5500K, 7500K, 9300K and User). Default value is set at 7300K.

User color You can adjust red, green and blue setting for user Color Temperature (grayed out unless Color Temp set to User).

Sharpness Filter Adjust the picture Sharpness (Normal, Sharp, Sharpest, Soft, and Softest).

Scale Mode Adjust the output image size from the image scalar to be larger, smaller or same as the display device.

Fill All – fill screen.
Fill Aspect – fill screen but maintain aspect ratio.
One To One – display image in original size (no scaling).
Zoom – convert letterboxed video to full screen.
Anamorphic – Squeezes a 16:9 image into a 4:3 space. Available only for video inputs.
Video Game Zoom – Zooms display in slightly to remove game borders. Available only for video inputs.
Factory Reset – Resets all settings back to factor settings including OSD Language to English. Press **(+)** to reset.

Video Controller Details

Features

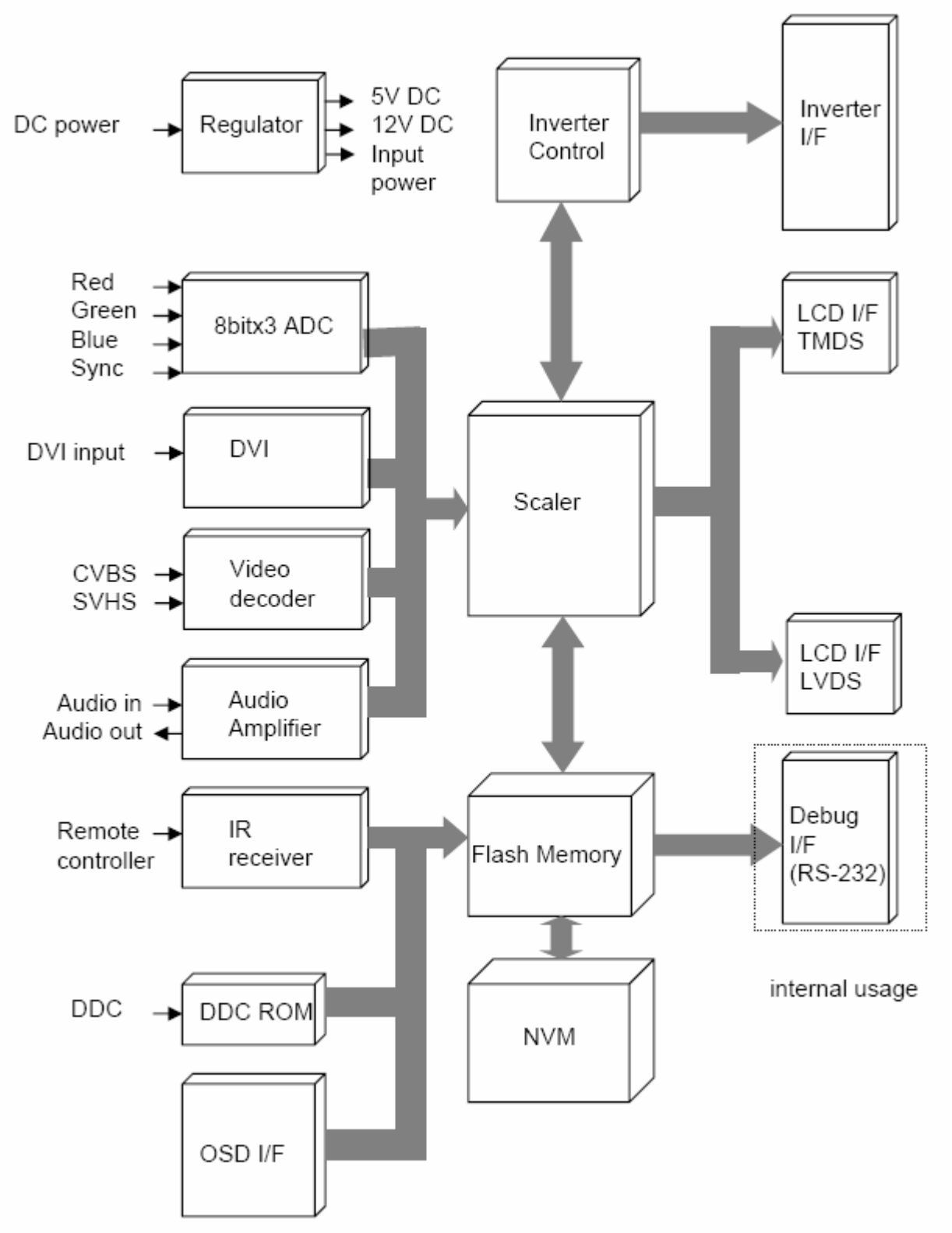
- State of the art high performance picture quality design
- Analog RGB / DVI / CVBS (x1) & SVHS (x1) with NTSC, PAL, SECAM /Audio input (x3) / TV / Remote control / Speaker out (x1)
- Optional input combination, e.g., PC Monitor only, PC Monitor with TV
- Full CRT multi-sync monitor compatibility
- Multi-sync capability up to UXGA resolution @ 75Hz, compatible standard DOS, VGA, SVGA, XGA and SXGA VESA timing
- Expand DOS, VGA, SVGA ,XGA and SXGA to full screen display
- True color (16.7M) data processing and display driving
- Single control operated & transparent On-Screen-Display (hereafter 'OSD') user interface
- Full control of all relevant display and interface parameters via OSD
- Multi language support
- VESA DDC1/2B compliant
- Compatible with VESA DPMS power saving modes
- +12VDC single power: 48watts AC/DC power adapter recommended.
- Operating temperature: 0 to 50°C
- The 3watt x 2 ch. @ 7 ohms audio capability with treble, bass, volume and mute control through either OSD or remote controller.
- OSD & Power switch board
- Optional TV tuner : NTSC, PAL and SECAM
- LCD Voltage select on Board : 5.0V, Adapter V, 12V

General Description

The DIT201001C Controller is an advanced TFT LCD Monitor Control Board. This design enables a full conventional CRT monitor and/or video & audio replacement with a large size Active Matrix LCD module. It is suitable for video resolution up to UXGA @ 75Hz in all video modes, the full display area of the module is used.

The DIT201001C Controller is designed to act as a full monitor and/or video & audio interface. Besides the main functionality of an analog and digital video interface, also CVBS (x1), SVHS (x1) and stereo audio amplifier with 4 inputs.

Controller Block Diagram



Video Mode Support

The CPPM-8U201 monitor can support any video mode within the following input constraints:

- Signal sample frequency with the input ≤ 80kHz
- Horizontal sync frequency between 30KHz and 60KHz.

The modes are detected when presented to the input and previous alignments for setup are automatically recalled. A true multi-sync monitor emulation is implemented.

The factory preset supported modes include:

Mode	Resolution	Refresh rate	H-freq.	Pixel freq.	Remarks
VGA	640 x 350	70Hz	31.47KHz	25.175MHz	VESA Standard
VGA	720 x 400	59.940HZ	31.469KHZ	25.175MHZ	IBM VGA 3H
VGA	640 x 480	60Hz	31.5KHz	25.175MHz	Industry Standard
VGA	640 x 480	72Hz	37.9KHz	31.500MHz	VESA Standard
VGA	640 x 480	75HZ	37.5KHZ	31.500MHZ	VESA Standard
SVGA	800 x 600	60Hz	37.9KHz	40.000MHz	VESA Guidelines
SVGA	800 x 600	72Hz	48.1KHz	50.000MHz	VESA Standard
SVGA	800 x 600	75HZ	46.9KHZ	49.500MHZ	VESA Standard
XGA	1024 x 768	60Hz	48.4KHz	65.000MHz	VESA Guidelines
XGA	1024 x 768	70Hz	56.5KHz	75.000MHz	VESA Standard
XGA	1024 x 768	75HZ	60KHZ	78.750MHZ	VESA Standard
SXGA	1280 x 1024	60Hz	64KHZ	108.000 MHZ	VESA Standard
SXGA	1280 x 1024	75HZ	80KHZ	135.000 MHZ	VESA Standard
UXGA	1600 x 1200	60HZ	75HZ	162.000 MHZ	VESA Standard

Notes:

1. All mentioned modes are non-interlaced. The maximum and minimum frame rates are determined the by the TFT LCD.
2. Factory preset modes are overwritten by additional user alignments for automatic recall. At all times it remains possible to recall the initial factory presets.

Video Mode Support

SPECIFICATIONS

ENCLOSURE

8U x 19" (wide) x 3" (deep) (Not including connectors)
Weight: 30lbs
Color: Powder coated black, light texture (Custom colors and logos available)

DISPLAY

LG.Phillips LM201U04 20.1" TFT LCD w/ antiglare hard coating
Display area: 408mm x 306mm
Display Colors: 16.7 Million
Response Time: 16mS
Viewing Angle: 89/89/89/89 deg
Contrast Ratio: 500:1 typical
Brightness: 250cd/m2 typical
Pixel Pitch: 0.255mm x 0.255mm
Power Management: EPA Energy Star, VESA DPMS

DISPLAY RESOLUTION

Max Resolution:
D-Sub: Analog UXGA 1600 x 1200 @ 75Hz
DVI: UXGA 1600 x 1200 @ 60Hz
Recommended Resolution: DVI UXGA 1600 x 1200 @ 60Hz
19 Display Modes VGA to UXGA
Horizontal Frequency: 15-80KHz Automatic
Vertical Frequency: 60-75Hz Automatic

On Screen Display

Contrast
Brightness
Autosetting
Clock / Phase
Horizontal & Vertical Position / Expansion / OSD
Text & Graph Mode Selection
Color Temp
Recall
Audio Function
PIP Source

Regulations

FCC-A, CE
Optional UL, CSA, TUV

Connectors:

aRGB:	15-pin high density DB15
DVI-D:	DVI-D 23-pin female
Composite:	BNC
S-Video In:	4-Pin Mini Din
Audio In:	RCA (x2)
Audio Out	3.5mm Stereo Jack, Female (x2)
DC Power In:	2-Pin Power Plug
Touch Screen:	DB9 or USB (depending on model)

Power Consumption

Normal: 60W (front LED Green)
Power Input: 100-240VAC, 50/60Hz 1.2A
Power Cord: Wall-outlet type or PC-outlet type

The power supply is a Sunny model STD-1504 or equivalent "brick" measuring 2.5"(W) x 1.2"(H) x 4.3"(L). The output is 15VDC at 4.0A. The DC cord length is approximately 36".

Environmental

Operating conditions:

Temperature:	0 to 50 deg C
Humidity:	10% to 90% non-Condensing
Altitude:	12,000 feet

Storage conditions:

Temperature:	-25 to 60 deg C
Humidity:	5% to 95% non-Condensing
Altitude:	40,000 feet

Shipping

Weight: 39lbs
Shipping Box - 40" x 23" x 6"