

## HSP-4096

### 4K Ultra-HD LCD Controller with Failover Messaging or Media

The HSP-4096 for commercial monitors & displays supporting LCD panels up to 4096 x 2160 resolution. Extended temperature range and conformal coating. Ideal for digital signage and industrial video displays.

#### Key Features:

- » Up to 4096 x 2160 video input / Up to 4096 x 2160 LCD panels
- » HDMI 2.0, HDMI 1.4, DVI-I
- » V-by-One panel connection @60Hz
- » Full frame memory buffer for enhanced image control
- » Conformal coating, acrylic resin type
- » RS-232, I2C for commands & control
- » Part Number: 41761001x-3

#### Panel Connectivity

<b>V-by-One (8 channel):</b>	up to 4096 x 2160 @60Hz
<b>Panel resolutions:</b>	4096 x 2160, 3840 x 2160, 2560 x 1440/1600 1920 x 1200, 1920 x 1080

#### Input

<b>HDMI 2.0:</b> (x2 connector)	60Hz up to 4096 x 2160 75Hz up to 1600 x 1200
<b>HDMI 1.4:</b> (x1 header)	30Hz up to 4096 x 2160 60Hz up to 2560 x 1600 75Hz up to 1600 x 1200
<b>DVI-I Single Link:</b> (x1 header)	60Hz up to 1920 x 1200 75Hz up to 1600 x 1200

#### Reliability

<b>Calculated MTBF:</b>	In excess of 100,000 hours
<b>Warranty:</b>	3 years

#### Features

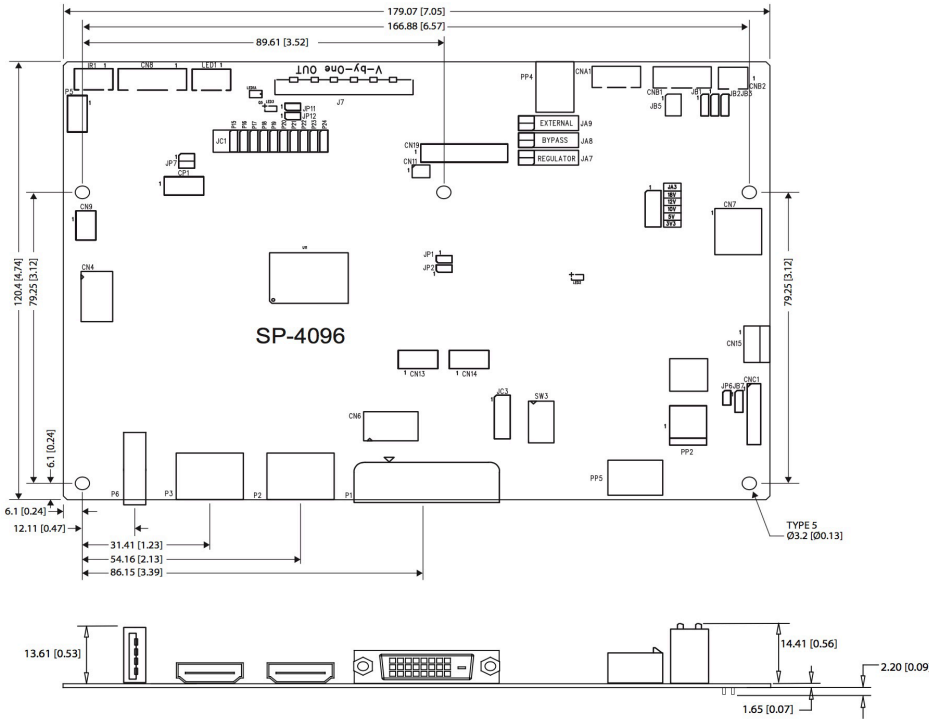
<b>Colors:</b>	Up to 10 bit per color, ie 1.06 billion colors
<b>Function Display:</b>	On Screen Display (OSD) menu
<b>Function Controls:</b>	External buttons, Infra-Red controls, Serial Port control
<b>Image Scaling:</b>	Up / Down scaling to fit input to panel resolution
<b>Image Control:</b>	Brightness, Contrast, Color Temperature, Gamma, Image position, Saturation, Hue, Sharpness
<b>Input Failover:</b>	Auto-play a message or media file if input source fails, with auto-restore.
<b>Other Features:</b>	System information, Scaling to fill screen and fill to aspect ratio, Programmable hotkeys, Factory reset, Ambient light sensor support, DDC-CI support
<b>Communication:</b>	RS-232, I2C
<b>Conformal Coating:</b>	HumiSeal IB73, acrylic, spray application
<b>Input Power:</b>	+12VDC / +24VDC ±5%, 10W (controller only)
<b>Panel Power:</b>	Supports 3.3V, 5V, 10V, 12V & 18V panels
<b>Operating temp:</b>	-20°C to 80°C
<b>Backlight Support:</b>	DPMS Enable pin (3.3V or 5V), PWM
<b>Plug &amp; Play:</b>	DDC 1,2/b compatible
<b>Status Indicator:</b>	Dual color LED support
<b>Audio:</b>	Digital Audio SPDIF, stereo line-out, optional DV audio board add-on

**Custom Splash-screen:** The HSP-4096 supports custom splash- screen when powering on. This requires custom firmware.

**Firmware upgrade:** The HSP-4096 firmware version can be upgraded via the USB port. Contact Digital View or distribution partner for details.

# HSP-4096 4K, Ultra-HD LCD Controller

## Mechanical Drawing



## Connector Definitions

- CN4** On board internal connector for HDMI (HDMI3)
- CN6** On board internal connector for DVI
- CN7** Audio board connector
- CN8** RS-232 serial control
- CN9** Ambient light sensor connector
- CN11** SPDIF Audio output
- CN13** Audio Line in
- CN14** Audio line out
- CN15** Power connector for IE-2000
- CN19** Additional panel power output
- CNA1** Auxiliary power output
- CNB1** Backlight inverter
- CNB2** Backlight status input connector
- CNC1** OSD control
- CP1** Reserved
- IR1** Infra-red sensor connector
- J7** V-by-One panel signal output
- LED1** Power LED connector
- P1** DVI-I (single link)
- P2** HDMI 2.0 (HDMI1)
- P3** HDMI 2.0 (HDMI2)
- P5** USB1
- P6** USB2
- PP2** Power input (alternative)
- PP4** External panel power input
- PP5** 12V/24VDC input power
- SW3** Panel timing selection

## Ordering Options

<b>HSP-4096</b>	<b>P/N: 4176001xx-3</b>
Inverter interface board	[subject to panel model]
IR remote control	P/N: 559000106-3
OSD digital button board	Kit 67110-3
OSD membrane kit - Vertical	Kit 67134-3
OSD membrane kit - Horizontal	Kit 67135-3
AVD-1000, composite add-on	Kit 71300-3
HD-3000, 3G-SDI adaptor	P/N: 4160160XX-3
Audio Add-on board	P/N: 4169400XX-3

## Drawings

- » 2D (jpg)
- » 3D (SLDPRT)

### Download at:

<http://www.digitalview.com/products/hsp-4096-lcd-controller>

## Available Resources

- » Instruction manual
  - » Revision control documentation
  - » Firmware upgrade manual\*\*
  - » Mechanical drawing
  - » Custom engineering: Splash screen, OSD menu, coatings, & more...
- \*\* Available on request

### Controller Solution Generator

<http://www.digitalview.com/csg>

### USA

18440 Technology Drive, Morgan Hill, CA 95037, USA  
t: +1 (408) 782-7773

### EUROPE

The Lake House, Knebworth Park, Herts, SG3 6PY, UK  
t: +44 (0) 20-7631-2150

### ASIA

705-708 Texwood Plaza, 6 How Ming St, Kwun Tong, Hong Kong  
t: (852) 2861-3615



The QR code above links to the product page on the website