

## HSP-1920

### LCD Controller for LCD Panels up to 1920x1200 Resolution

The Harsh Environment version of the SP-1920 LCD controller. The HSP-1920 includes H.264 media failover support. In addition the Composite input support is ideal for legacy and analog video applications.

#### Key Features:

- » LCD support: 1920x1200, 10-Bit
- » Panel connectivity: LVDS
- » Inputs: HDMI x2, DVI, VGA, Component, Composite x2
- » Integrated H.264 media player / failover
- » Separate power in for high power panels
- » RS-232 control, IR remote control
- » Part number: 4176001xx-3.

#### LCD Panel Support

<b>Connectivity:</b>	LVDS (Single/Dual channel), up to 1920 x 1080, 1920 x 1200 @60Hz
<b>Panel power:</b>	Supports 3.3V, 5V, 10V, 12V & 18V panels
<b>Panel compatibility:</b>	All major brands
<b>Resolutions &amp; timing:</b>	Supports common panel resolutions and timings from 640 x 480 up to 1920 x 1200 selected by dip switch. Customization available for other LCD panel resolutions.

#### Input / Sources

<b>HDMI 1.4:</b> 1xconnector, 1xheader	60Hz up to 1920x1200 75Hz up to 1600x1200
<b>DVI-D (single-link 1.0):</b> 1xconnector	60Hz up to 1920x1200 75Hz up to 1600x1200 CVT modes
<b>Analog RGB ('VGA'):</b> 1xconnector	60Hz up to 1920x1200 75Hz up to 1600x1200 Auto detect of Digital Separate Sync, Sync-On-Green & Composite Sync. Auto detects VGA~WUXGA, interlaced & non-interlaced
<b>Composite:</b> 1xBNC, 1xheader	PAL, NTSC
<b>Component:</b> 1xheader	PAL, NTSC 480p, 576p, 720p, 1080i, 1080p
<b>EDID (coming soon):</b>	The EDID preferred timing data is automatically set by reference to the LCD panel resolution settings (VESA data). Custom EDID data programming is available as an OEM option.

#### Features

<b>Colors:</b>	Up to 10 bit per color, ie 1billion colors
<b>Function Display:</b>	On Screen Display (OSD) menu
<b>Function Controls:</b>	External buttons, IR remote, Serial Port commands
<b>Image Scaling:</b>	Up/Down scaling to fit input to panel resolution
<b>Image Control:</b>	Backlight brightness, Contrast, Color Temperature, Image positioning, Saturation, Hue, Sharpness, Black level.
<b>Other Features:</b>	Input source select, Auto source seek, Auto picture setup, Auto color gain, Manual clock & phase, OSD timeout, OSD menu transparency, Image orientation, System Information, Aspect ratio. Load factory defaults. Input source failover functions.
<b>Conformal Coating:</b>	HumiSeal IB73, acrylic, spray application
<b>Power:</b>	+12VDC / +24VDC ±5%, 2.5W (controller only)
<b>Inverter Support:</b>	PWM, D/A DPMS Enable pin (3.3V or 5V)
<b>Plug &amp; Play:</b>	DDC 1,2/b compatible
<b>Status Indicator:</b>	Dual color LED support
<b>Dimensions:</b>	179mm x 120.4mm (7" x 4.8")
<b>Operating Temp:</b>	-20°C to +80°C

**Custom Splash-screen:** The HSP-1920 supports a custom splash-screen when powering on. This custom firmware option.

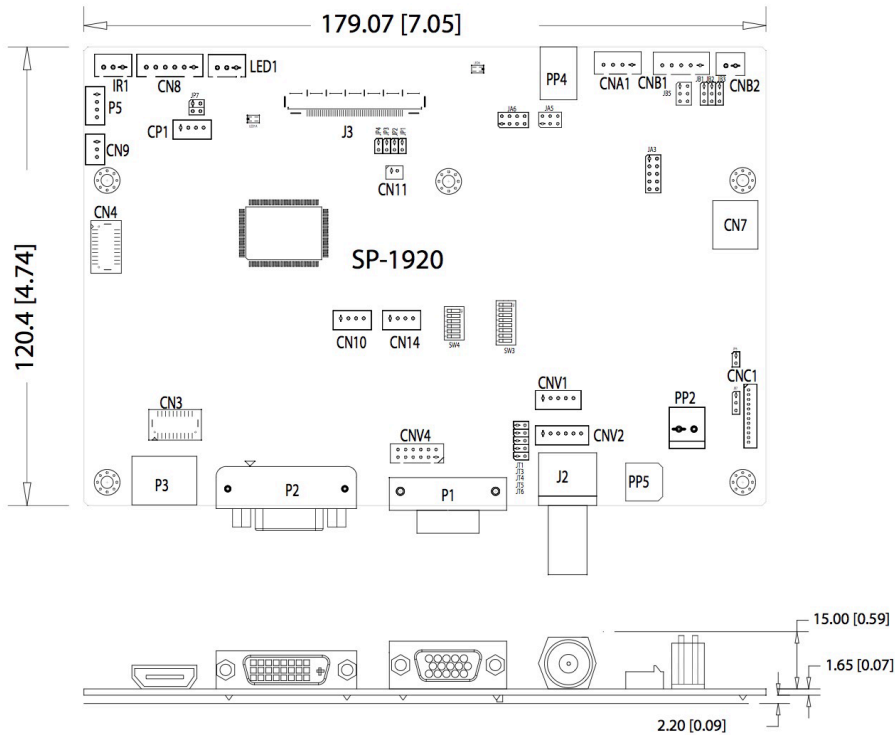
**Firmware Update:** The firmware version of the HSP-1920 can be updated using a USB flash key.

#### Reliability

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

# HSP-1920 LCD Controller for Commercial Monitors

## Mechanical Drawing



## Connector Definitions

<b>CN3</b>	Alternate HDMI 1 input connector
<b>CN4</b>	HDMI 2 input connector
<b>CN7</b>	Audio board connector
<b>CN8</b>	RS-232 serial control
<b>CN9</b>	Ambient Light sensor connector
<b>CN10</b>	Analog (Stereo) audio in
<b>CN11</b>	SPDIF audio output connector
<b>CN14</b>	Analog (Stereo) audio out
<b>CNA1</b>	Auxiliary power input
<b>CNB1</b>	Backlight inverter
<b>CNB2</b>	Backlight status input connector
<b>CNC1</b>	OSD controls
<b>CNV1</b>	Alternate Composite 1 and 2 input connector
<b>CNV2</b>	HD/SD Component video input connector
<b>CNV4</b>	Alternate VGA input connector
<b>CP1</b>	Reserved for factory use for programming
<b>IR1</b>	Infra-Red Sensor connector
<b>J2</b>	Composite video 1 in
<b>J3</b>	Panel signal for LVDS panel
<b>LED1</b>	Dual Color LED connector
<b>P1</b>	VGA analog input
<b>P2</b>	DVI-D input
<b>P3</b>	HDMI 1 connector
<b>P5</b>	USB input connector
<b>PP2</b>	Power input (alternate)
<b>PP4</b>	External panel power input
<b>PP5</b>	Power input

## Ordering Options

<b>HSP-1920</b>	<b>P/N: 4176001xx-3</b>
OSD digital button board	Kit 67110-3
OSD membrane kit - Vertical	Kit 67135-3
OSD membrane kit - Horizontal	Kit 67134-3
Inverter interface	P/N 416040010-3
IR remote control	P/N 559000106-3
Audio Add-on board	P/N 416940020-3

## Drawings (pending)

- » 2D (dwg)
- » 3D (SLDPRT and IGS)

### Download at:

<http://www.digitalview.com/products/hsp-1920-lcd-controller>

## Resources (pending)

- » Instruction manual
  - » Revision control documentation
  - » Firmware upgrade manual\*\*
  - » Mechanical drawings
  - » 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, 7/F Texwood Plaza, Kwun Tong, Hong Kong  
t: (852) 2861-3615