

## HE-1600

### Harsh Environment LCD Controller Board

**Key Features :**

- > VGA to UXGA resolutions
- > Dual S-Video and Dual Composite inputs
- > Harsh Environment Features
- > PAL, NTSC, SECAM support

The HE-1600 is a fully buffered, multi-sync interface controller providing direct analog and digital connection to a wide range of TFT LCD panels up to UXGA resolution. Key features include a flexible port architecture that provides inputs for DVI, dual VGA channels, Composite, S-Video and Component Video across both 4:3 and 16:9 format panels. The HE-1600 supports the Digital View serial protocol allowing all controller functions and parameters to be controlled via the built-in serial port.

#### Panel Connectivity

1680 x 1050	1600 x 1200	1440 x 900
1400 x 1050	1366 x 768	1280 x 1024
1280 x 800	1280 x 768	1024 x 768
800 x 600	640 x 480	

#### Input

<b>Analog RGB:</b>	60Hz at UXGA 75Hz at SXGA, WXGA, XGA, SVGA, VGA 1152 x 900 @66Hz 1152 x 900 @76Hz 1280 x 1024 @76Hz
	With auto detect of Digital Separate Sync, Sync-On-Green & Composite Sync. Auto detects VGA-UXGA, interlaced & non-interlaced.
<b>DVI-I</b>	60Hz at UXGA 75Hz at SXGA, WXGA, XGA, SVGA, VGA
<b>Video:</b>	NTSC/PAL/SECAM (Interlaced) Composite Video, S-video, Component Video (YCbCr)

#### Reliability

Calculated Mean Time Between Failures In excess of 100,000 hours.  
Warranty: 3 years.

#### Custom Engineering Services

Custom input timing, panel timing, splash screen, OSD Menu, conformal coatings, layouts etc

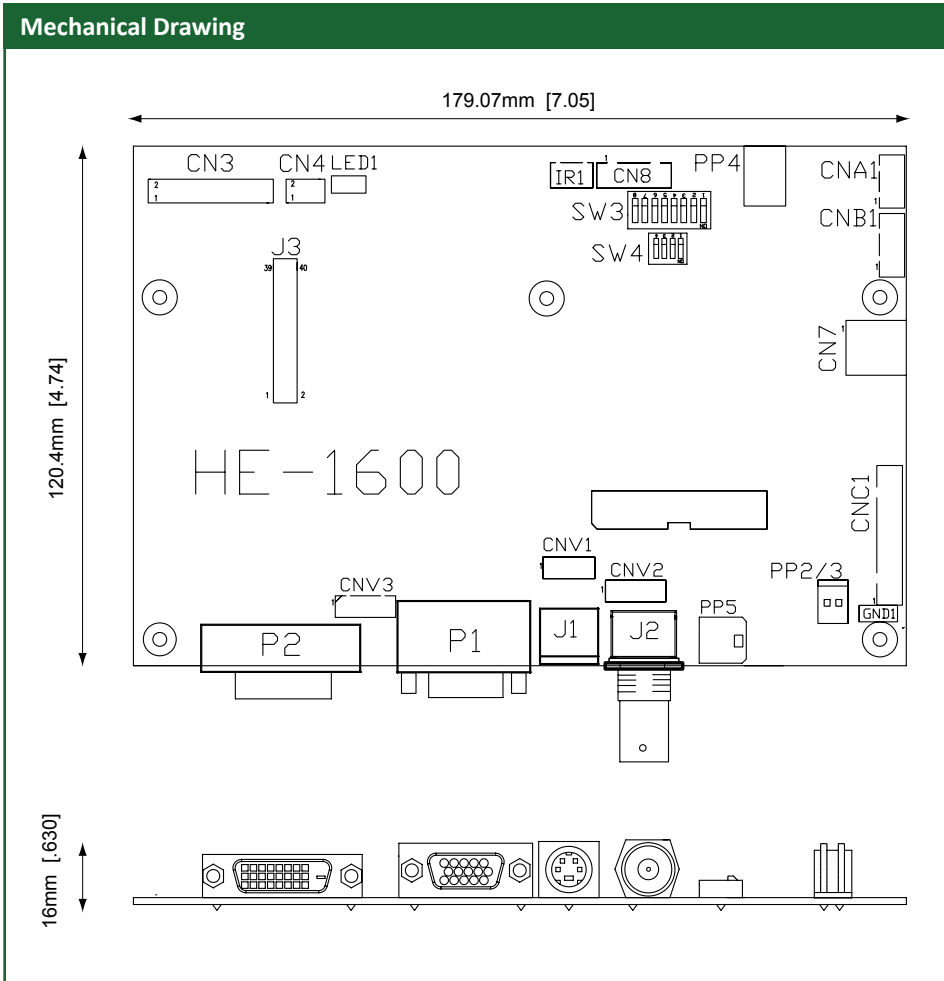
#### Features

<b>Colors :</b>	Up to 8-bit per color, 16.7 million colors.
<b>Functions :</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>	Auto configuration, Brightness, Contrast, Clock, Phase, Color temperature, Image position, Saturation, Hue, Gamma.
<b>Other Features :</b>	Auto picture setup, Auto color gain, Auto power, OSD timeout position and transparency, Programmable hot keys.
<b>Dimensions :</b>	179mm x 120.4mm (7" x 4.74")
<b>Form Factor :</b>	DV standard & mounting holes.
<b>Power Requirements :</b>	+12VDC ±25%, 10w (controller only)
<b>Panel Power :</b>	Supports 3.3V, 5V, 12V panels.
<b>Panel Signal :</b>	TTL (single pixel) & LVDS.
<b>Inverter Support :</b>	DPMS, Analog or PWM brightness control via serial port controll brightness
<b>Plug &amp; Play:</b>	DDC 1,2/b compatible
<b>Status Indicator :</b>	Dual color LED support.
<b>Operating Temperature:</b>	-40°C to +80°C**
<b>Storage Temperature:</b>	-40°C to 85°C
<b>Coating:</b>	Silicone resin conformal coating.  (MOD) DEF-STAN 59/47 Issue 4 & UL QMJU2 compliant

# HE-1600

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### Mechanical Drawing



### Connector Definitions

<b>CN3</b>	TTL Panel Signal
<b>CN4</b>	TTL Panel Signal
<b>CN7</b>	Audio board connector
<b>CN8</b>	RS-232 serial control
<b>CNA1</b>	Auxiliary power output
<b>CNB1</b>	Backlight inverter
<b>CNC1</b>	OSD Function controls
<b>CNV1</b>	Alternate Video-In
<b>CNV2</b>	Component Video-In
<b>CNV3</b>	ARGB 2 Input
<b>J1</b>	S-Video In
<b>J2</b>	Composite Video-In
<b>J3</b>	Panel Signal for LVDS Panel
<b>IR1</b>	Infra-Red Sensor Connector
<b>LED1</b>	Dual color LED connector
<b>P1</b>	VGA analog input
<b>P2</b>	DVI-I input
<b>PP4</b>	External Panel Power Input
<b>PP5</b>	Main Power Input ##
<b>PP2</b>	Power Input (alternative)

### Ordering Options

<b>HE-1600 Controller</b>	<b>P/N 4169901xx-3</b>
OSD Digital Button Board	Kit 60110-3
OSD Vertical Membrane	Kit 60121-3
OSD Horizontal Membrane	Kit 60125-3
Inverter Interface Board	P/N 416040010-3
Audio Amplifier	P/N 416940020-3
IR Remote Control	P/N 559000106-3

### 3D Drawings (SLDPRT)

Save time and effort for your system volumetric analysis design. Includes jpg file previews.

Please download at [www.digitalview.com/products/he-1600-lcd-controller](http://www.digitalview.com/products/he-1600-lcd-controller)

### Available Resources

- > Instruction Manual
  - > Revision Control Documentation\*\*
  - > Firmware Upgrade Manual\*\*
  - > Mechanical Drawing
- \*\* Available on Request

### Controller Solution Generator

A web based resource matching controllers & panels with connection diagrams for download. Please go to <http://www.digitalview.com/csg>

