

## SP-1600

### Multi Purpose LCD Controller Board

#### Key Features :

- > PAL, NTSC, SECAM Support
- > Small Form Factor
- > VGA to SXGA Resolutions
- > Dual S-Video & Composite Inputs

The SP-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. Supporting a wide range of 4:3 and 16:9 format panels, the SP-1600 provides exceptional video performance via a new generation video controller coupled with guaranteed high-reliability.

#### Panel Connectivity

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

#### Input

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

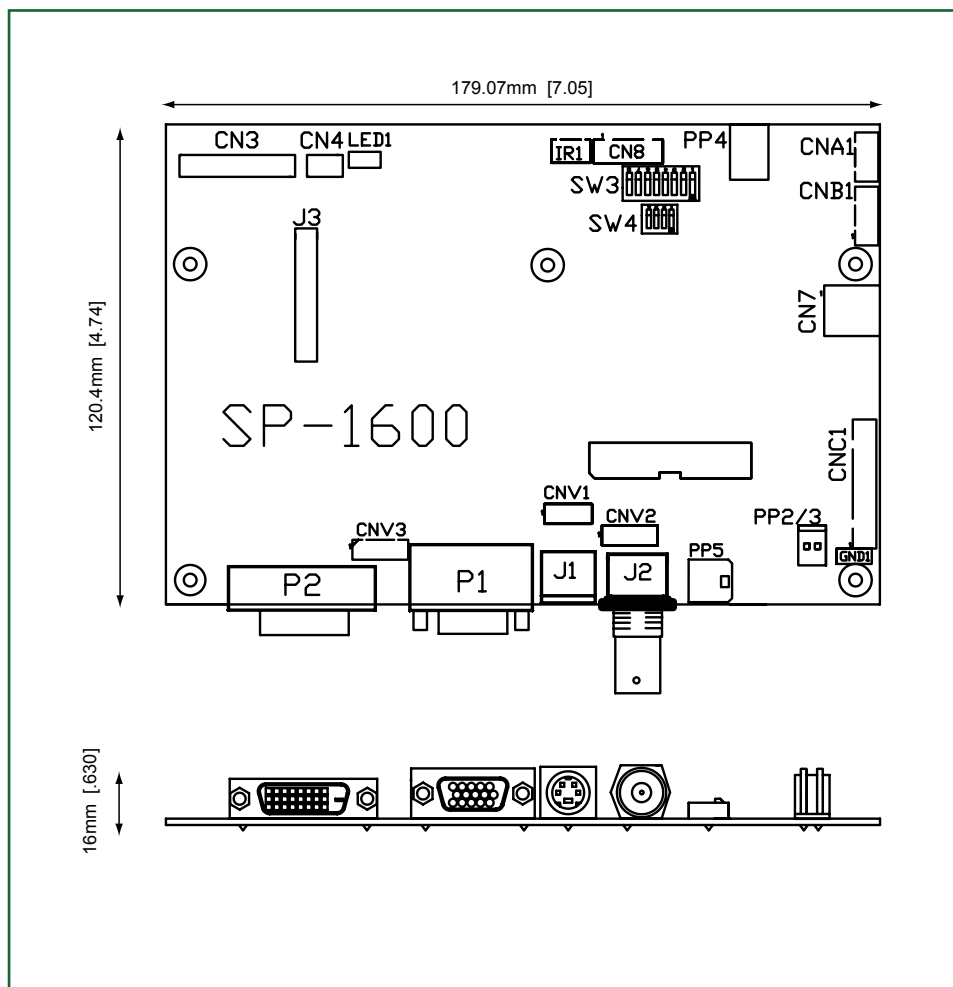
#### Features

<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>	Brightness, Contrast, Saturation, Hue, Frequency, Phase, Color temperature, Image position, Hue, Gamma.
<b>Other Features :</b>	Auto Picture Setup, Auto Color Gain, Auto Power, OSD Timeout Position and Transparency, Hot Keys, Auto Source Seek.
<b>Dimensions:</b>	179mm x 120.4mm (7" x 4.74")
<b>Form Factor:</b>	DV Standard & Mounting Holes
<b>Power Requirements :</b>	12V / 24VDC $\pm 5\%$ , 10w (controller only)
<b>Panel Power :</b>	Supports 3.3V, 5V, 12V & 18V panels.
<b>Panel Signal :</b>	TTL (Single Pixel) & LVDS
<b>Inverter Support :</b>	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.



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#### Connector Definitions

CN3	TTL Panel Signal
CN4	TTL Panel Signal
CN7	Audio Board Connector
CN8	Serial control (for firmware programming or serial control use only)
CNA1	Auxiliary Power Output
CNB1	Backlight Inverter
CNC1	OSD Function Controls
CNV1	Alternate Video-In
CNV2	Component Video-In
CNV3	ARGB 2 Input
J1	S-Video In
J2	Composite Video-In
J3	Panel Signal for LVDS Panel
IR1	Infra-Red Sensor Connector
LED1	Dual color LED connector
P1	VGA analog input
P2	DVI-I input
PP2/3	Power Input (Alternative)
PP4	External Panel Power Input
PP5	Main Power Input

#### Mechanical Details

**Dimensions:**  
107.4mm x 91.4mm (4.23" x 3.60")

**Form Factor:**  
DV standard & mounting holes

#### Ordering Options / Accessories

SP-1600 (Board Only)	P/N 4169900xx-3
OSD Digital Button Board Kit	Kit 60110-3
OSD Vertical Membrane Kit	Kit 60121-3
OSD Horizontal Membrane Kit	Kit 60125-3
Inverter Interface board	P/N 416040010-3
Power-Input Cable	P/N 426013800-3
RS-232 cable	P/N 426090200-3

#### Available Resources

Instruction Manual  
Revision control documentation\*\*  
Schematic diagrams (Subject to NDA)  
Mechanical Drawings  
Serial Port Programming Manual\*\*  
MTBF Analysis\*\*

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