

DT-4096

4K Ultra-HD LCD Controller

The DT-4096 is a compact, easy to use and cost effective LCD controller board for commercial monitors & displays supporting LCD panels up to 4096 x 2160 resolution. 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, Displayport 1.2
- » V-by-One, eDP panel connection
- » Full frame memory buffer for enhanced image control
- » RS-232, I2C for commands & control
- » Light sensor support, onboard temperature sensor
- » Part Number: 4178200xx-3

Panel Connectivity

V-by-One (8 channel): up to 4096 x 2160 @60Hz
eDP (8 lane HBR/4 lane HBR2): up to 4096 x 2160, 60Hz

Panel resolutions: 4096 x 2160, 3840 x 2160, 2560 x 1440/1600
 1920 x 1200, 1920 x 1080

Input

HDMI 2.0 (connector) 60Hz up to 4096 x 2160
 75Hz up to 1600 x 1200
 1080p, 720p, 576p, 480p

DisplayPort 1.2 (connector) 60Hz up to 4096 x 2160
 75Hz up to 1600 x 1200
 1080p, 720p, 576p, 480p

Reliability

Calculated MTBF: In excess of 500,000 hours
Warranty: 3 years

Features

Colors: Up to 10 bit per color, ie 1.06 billion colors

Function Display: On Screen Display (OSD) menu

Function Controls: External buttons, Infra-Red controls, Serial Port control

Image Scaling: Up / Down scaling to fit input to panel resolution

Image Control: Brightness, Contrast, Color Temperature, Gamma, Black level, Saturation, Hue, Sharpness

Other Features: System information, Aspect ratio, Display rotate, OSD position, OSD menu orientation, OSD transparency, Volume control.
 Programmable hotkeys, Factory reset.
 DDC-CI support.
 Auto EDID - panel matched.

Sensors: Light sensor support, onboard temperature sensor

Communication: RS-232, I2C

Input Power: +12VDC / +24VDC ±5%, 4W (controller only)

Panel Power: Supports 3.3V, 5V, 10V, 12V & 18V panels

Panel Signal: V-by-One, eDP

Backlight Support: DPMS Enable pin (3.3V or 5V), PWM

Plug & Play: DDC 1,2/b compatible

Status Indicator: Dual color LED for operating status
 Single color LED for power status

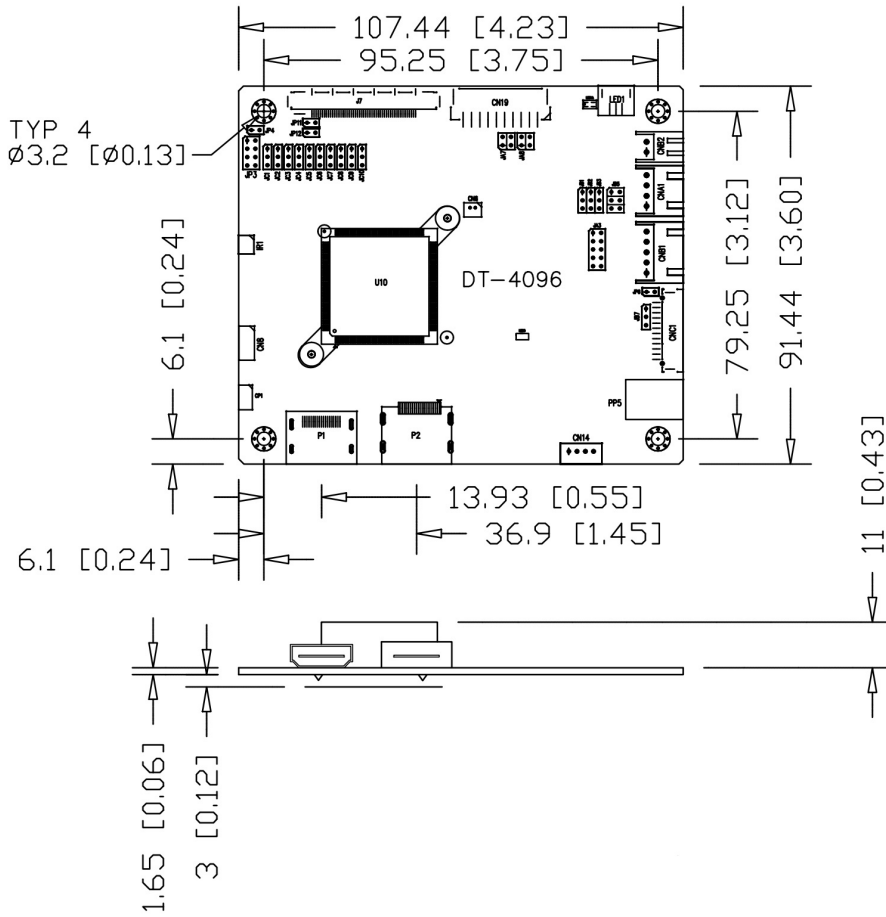
Audio: Stereo line-out

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

Firmware upgrade: The DT-4096 firmware version can be upgraded via the displayport directly, or via the HDMI port with a programming board. Contact Digital View or distribution partner for details.

DT-4096 4K, Ultra-HD LCD Controller

Mechanical Drawing



Connector Definitions

CN6	Ambient light sensor connector
CN8	RS-232 serial control
CN14	Audio line out (analog stereo)
CN19	Additional panel power output
CNA1	Auxiliary power output
CNB1	Backlight inverter
CNB2	Backlight status input connector
CNC1	OSD control
IR1	Infra-red sensor connector
J7	V-by-One / eDP panel signal output
LED1	Power LED connector
P1	HDMI 2.0 input
P2	Displayport 1.2 input
PP5	12V/24VDC input power

Accessories

Digital View accessories for the DT-4096 include:

- Cables for panel and other connectivity
- Buttons for the OSD control
- Sensors
- Add-on boards
- Other

See:

<https://www.digitalview.com/accessories/accessories.html>

Ordering Options

DT-4096	P/N: 4178200xx-3
Inverter interface board	[subject to panel model]
IR remote control	P/N: 5590001xx-3
OSD digital 5 button board	Kit 67204-3
OSD digital 8 button board	Kit 67110-3
OSD membrane kit - Horizontal	Kit 67134-3
OSD membrane kit - Vertical	Kit 67135-3

Drawings

- » 2D (DWG, PDF)
- » 3D (SLDPRT, STEP)

Download at:

<https://www.digitalview.com/controllers/dt-4096-lcd-controller.html>

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>

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18440 Technology Drive, Suite 130, 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
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