The VIEWPixx is a complete display toolbox which has been conceived specifically to replace CRTs in vision science labs. The VIEWPixx features high-performance industrial LCD glass and a panel controller specifically designed to support vision research. Our innovative LED backlight design features superior display uniformity, and a wide color gamut exceeding that of any CRT. In addition, the VIEWPixx includes an array of peripherals which often need to be synchronized to video during an experiment, including a stereo audio stimulator, a button box port for precise reaction-time measurement, triggers for electrophysiology equipment, and even a complete analog I/O subsystem. Because we implemented the video controller and peripheral control on the same circuit board, you can now successfully synchronize all of your subject I/O to video refresh with microsecond precision.

120 Hz CRT Replacement

OVERVIEW

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CONTACT US

Phone: (514) 328-7499
1 (844) 488-7499 - Toll Free USA/Canada
Web: vpixx.com

VPixx Technologies Inc.
630 Clairevue West, suite 301
Saint-Bruno, QC Canada, J3V 6B4
**ORDERING INFORMATION**

Description: VIEWPixx Full LCD display and data acquisition system
P/N: VPX-VPX-2001C

Description: VIEWPixx Lite LCD display and data acquisition system
P/N: VPX-VPX-2000A

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**SPECIFICATIONS**

**LCM SPECIFICATIONS**
- Display resolution: 1920(H) x 1200(V) pixels
- 22.5-inch display size (diagonal)
- Pixel pitch: 0.252(H) x 0.252(V) mm
- Pixel arrangement: RGB (Red dot, Green dot, Blue dot) vertical strip
- Active matrix LCD
- 12 bits of resolution on each of the RGB channels
- 100 Hz to 120 Hz refresh rate with zero latency stimulus presentation
- 60 Hz to 100 Hz refresh rate with internal frame buffering
- Grey-to-Grey response time:
  - 1 ms typical in scanning backlight mode
  - 7 ms typical in normal backlight mode
- Luminance:
  - 100 cd/m² in scanning backlight mode
  - 250 cd/m² in standard backlight mode
- Uniformity: 95% over 95% of display area
- Contrast ratio: typical 800:1
- Viewing angle: 176° (Horizontal), 176° (Vertical)
- Polarizer surface: Antiglare

**ANALOG TO DIGITAL CONVERTER***
- Number of channels: 16 (or 8 differential), on DB-25 connector
- Converter resolution: 16 bits
- Maximum sampling rate: 200 kSPS per channel
- Frequency programming modes:
  - Samples per second
  - Samples per video frame
  - Nanoseconds per sample
- Simultaneous sampling across all channels
- Input range: ±10 V
- Input impedance: 1.6*10⁶ Ω //3 pF
- Absolute maximum input tolerance ±12 V

**DIGITAL TO ANALOG CONVERTER***
- Number of channels: 4 on DB-25 connector
- Converter resolution: 16 bits
- Maximum sampling rate: 1 MSPS per channel
- Frequency programming modes:
  - Samples per second
  - Samples per video frame
  - Nanoseconds per sample
- Simultaneous output updates
- Output range: ±10 V
- Drive capability: ±25 mA, 250 mW per channel

**AUDIO CODEC***
- Audio line in, microphone in, speaker out, on 3.5 mm jacks
- Stereo microphone input amplifier resistance: 20 kΩ
- Microphone sampling rate: 96 kHz
- Programmable microphone bias voltage range: 2.0 V to 3.1 V
- Stereo DAC sampling rate 96 kHz

**BACKLIGHT SPECIFICATIONS**
- Scanning LED backlight
- Direct RGB LED array
- Wide gamut LED
- Factory white point D65

**VIDEO PROCESSING**
- Video input: 1920 x 1200 pixels, 60 to 120 Hz, 24 bits (Dual link DVI)
- Deterministic timing between reception of video signal and update of display pixels
- Completely bypass all image processing "enhancements" prevalent in standard consumer LCD panels
- Multiple displays can be synchronized, showing copies or subsets of original video

**POWER**
- Power consumption: 180 W
- Input voltage: 48 VDC - 3.75 A
- International AC adaptor input: 90 VAC - 264 VAC (47 Hz - 63 Hz)

**VIEWPixx Stand**
- Mounting standards: VESA MIS-D/E, MIS-F
- Hole pattern: 100 x 100 mm & 75 x 75 mm

**DIGITAL INPUT**
- Number of digital inputs: 24 on DB-25 connector
- Input termination: > 20 kΩ pullup to 3.3 V
- Input tolerance: 5 V

**DIGITAL OUTPUT**
- Number of digital outputs: 24 on DB-25 connector
- Output drive stage: 5 V through 25 kΩ series resistor
- Maximum output current:
  - Source: 15 mA
  - Sink: 12 mA

**SOFTWARE**
Software support includes a low-level ANSI C API, MATLAB/Octave and Python libraries for use under Mac OS X, Microsoft Windows, and Linux.

***These functionalities are available only with the VIEWPixx full version (VPX-VPX-2001C)