



VIEWPiXX Series

VPiXX Technologies, Inc.
630 Clairevue West suite 301
Saint-Bruno, QC Canada, J3V 6B4
vpixx.com
scientist@vpixx.com
1-844-488-7499





VIEWPixx Calibrated Research-Grade Displays

The VIEWPixx series of calibrated research-grade LCD monitors are designed specifically for vision science labs. These displays ensure unparalleled performance and temporal precision with features including Full HD resolution at 120Hz, industrial LCD glass, fully calibrated and uniform display, scanning backlight technology for crisp frame transitions, and built-in digital TTL triggering for synchronization with third-party systems.

The VIEWPixx /EEG model provides a cost-effective option with standard 8 bits per color, while the VIEWPixx /3D model offers expanded data acquisition capabilities, support for high bit depth, and stereoscopic 3D display functionality when paired with 3DPixx active shutter glasses.

These displays are ideal for advanced psychophysics research and other timing-sensitive applications. To discover how VIEWPixx displays can enhance your research, explore the links below or consult with a VPixx Staff Scientist today.

Learn more with

VOCAL

VPixx Online Classroom and Library

Scan the code to learn more about the timing properties and features of the VIEWPixx Series!





	Consumer LCD	VIEWPixx /3D	VIEWPixx /EEG
Ideal for	–	Dynamic, high-contrast moving stimuli; 3D stimuli	Dynamic, high-contrast moving stimuli
Resolution	Various	1920 x 1080 @120 Hz	1920 x 1080 @120 Hz
Size (diagonal)	Various	24 inches	24 inches
Pixel response time	variable, typically >7 ms	<ul style="list-style-type: none"> • 1 ms typical in scanning backlight mode (black-to-white) • 2 ms typical in normal backlight mode (grey-to-grey) 	<ul style="list-style-type: none"> • 1 ms typical (black-to-white)
Scanning backlight	None	Default operation; can be disabled	Default operation

LCD TECHNOLOGY

Backlight Technology	White LED/ edge lit	RGB full array LED	White full array LED
Bit depth	8 bits per colour	8 bits per colour; 10 bits per colour in custom video mode	8 bits per colour
Colour gamut	Medium – Narrow	Wide	Medium
Display colour uniformity	<80% typical	95%	90%
Display luminance uniformity	<80% typical	95%	95%
Factory white point D65 calibrated	No	Yes	No

DATA AND I/O SYNCHRONIZATION

Digital I/O	No	Yes	24 TTL outputs on DB25 (control via Pixel Mode)
Analog I/O	No	Yes	No
Audio I/O	No	Yes	No
Automated TTL triggers via Pixel Mode	No	Yes	Yes
Video copy to console	No	Yes	No
MATLAB/Python API	No	Yes	No



SPECIFICATIONS (ALL MONITORS)

LCD SPECIFICATIONS

- Contrast ratio: typical 1000:1
- Viewing Angle: 170° Horizontal, 160° Vertical
- Pixel Pitch: 0.277(H) x 0.277(V) mm
- Pixel Arrangement: RGB vertical strip
- Luminance:
 - 100 cd/m² in scanning backlight mode
 - 250 cd/m² in standard backlight mode (VIEWPixx /3D)

VIDEO PROCESSING

- Video input: 1920 x 1080 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

DIGITAL OUTPUT

- Number of digital outputs: 24 on DB25 connector
- Output drive stage: 5 V through 25 k Ω series resistor
- Maximum output current:
 - Source: 15 mA
 - Sink: 12 mA

MOUNTING STAND

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

POWER

- VIEWPixx /3D
 - Power consumption: 180 W
 - Input voltage: 48 VDC – 3.75 A
- VIEWPixx /EEG
 - Power consumption: 160 W
 - Input voltage: 24 VDC – 6.67 A
- International AC adaptor input: 90 VAC – 264 VAC (47 Hz – 63 Hz)

CABLING

- Trigger cables sold separately
- Custom cabling options available

ADDITIONAL SPECIFICATIONS (VIEWPIXX /3D ONLY)

3D SUPPORT

- VESA 3D connector for use with 3DPixx (sold separately)
- Maximum 120 Hz (60 Hz/eye)

AUDIO CODEC

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

DIGITAL INPUT

- Number of digital inputs: 24 on DB25 connector
- Input termination: > 20 k Ω pullup to 3.3 V
- Input tolerance: 5 V

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: $1.6 \cdot 10^8 \Omega // 3$ 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