

23" | 24"

# NEC MultiSync® P Series with SpectraView™ II

*Color calibration solution ideal for color-critical applications*

Delivering accurate color required by the web graphics and photography professional, NEC MultiSync P Series displays are smart investments for your desktop. These standard-gamut models include the SpectraView<sub>II</sub> Color Calibration Solution, which combines award-winning NEC display technology with a color measurement sensor and sophisticated calibration software. The result is a highly reliable, repeatable and feature-rich display calibration and profiling solution.



## Highlights

- **Professional-grade LED\* backlight technologies** help deliver consistent color and long life
- **Best-in-class IPS LCD technology with wide viewing angle** provides optimum performance for displaying color images
- **Internal 14-bit programmable 3D lookup tables (LUTs)** allow the display of 1.07 billion colors out of a palette of 4.3 trillion for lossless color and smooth images and hardware calibration
- **Every MultiSync P Series display is backed by a 4-year limited warranty** with 48-hour Advanced Exchange service
- **Free MultiProfiler software** provides complete control over the five picture modes. This includes loading any ICC profile directly into the monitor for optimal color space matching.
- **Built-in USB hub with DisplaySync Pro™** controls two computers with only one keyboard and mouse
- **AmbiBright™ ambient light sensor** automatically adjusts the display's brightness based on lighting conditions
- **Picture in Picture and Picture by Picture modes** allow real time previews in a second color space
- **ENERGY STAR® compliance** reduces electrical costs and lowers total cost of ownership (P242W only)

\* HDMI input and LED backlight on select models



# SpectraView<sub>II</sub> Color Calibration Solution Features and Benefits



## How it works

The SpectraView<sub>II</sub> system uses the customized NEC MDSVSENSOR3 colorimeter to take color measurements of the display screen during calibration. The software analyzes these measurements and sends color adjustment commands directly to the display monitor. All adjustments are made in the monitor rather than in the video graphics adapter, resulting in full use of the number of colors available on the graphics adapter and a much brighter image with the maximum possible color gamut. Since the video graphics adapter is not used at all to make any gamma or tone response curve corrections to the display, so the full color resolution and fidelity of the system is maintained and the display remains calibrated for all digital video inputs.

## Multiple calibration targets

Different monitor calibrations can be instantly loaded, allowing quick and easy switching between different calibration settings without the need to re-calibrate the display. These calibration targets contain many settings, including luminance, contrast ratio, color gamuts and gamma curves. Each time a calibration set is loaded, the necessary monitor settings and ICC/ColorSync profiles are automatically updated.



## Calibrated display information

At the end of each monitor calibration, an information window is displayed that includes a wealth of information about the display such as the measured color gamut, grayscale color tracking, Delta-E and luminance values as well as the model name, serial number and the total hours of use.

## Monitor profiling

After calibration, the display is automatically profiled and highly accurate ICC/ColorSync color profiles are generated and automatically registered with the computer's color management system.



## Calibration status validation

SpectraView<sub>II</sub> will query each calibrated monitor to see if any controls have changed since the last calibration. If anything has changed, the previous calibrated state can be restored automatically.

## Colorimeter function

The software features a colorimeter function, which allows direct measurements to be taken by the color sensor and the results displayed in a variety of different formats.



## USB & Display Data Channel Command Interface (DDC/CI) Communications

SpectraView<sub>II</sub> communicates with the monitor using either USB or DDC/CI, which is a two-way communications link between the video graphics adapter and display monitor using the standard video signal cable.



## Monitor locking

Once calibrated, the On Screen Display (OSD®) controls for the display monitors can be locked to prevent accidental or unauthorized adjustment, which may invalidate the calibrated state of the monitor.



## NEC NaViSet™ Administrator integration

SpectraView<sub>II</sub> integrates with the NEC NaViSet Administrator network software to provide remote network access and monitoring of display monitors. NaViSet Administrator is able to read, display and log the current calibration settings and status of displays on a corporate network.

## SpectraView<sub>II</sub> Software Requirements

Apple Mac OS X v10.5 or higher. Microsoft Windows 2000, Windows XP (Home and Professional editions), Windows XP 64 bit, Windows Vista 32 bit and 64 bit versions, and Windows 7 32-bit and 64-bit versions. Suse Enterprise Desktop 10 and higher. At least one available USB port for MDSVSENSOR3 color sensor.

Visit [www.necdisplay.com](http://www.necdisplay.com) for the latest requirements.



# Specifications for MultiSync P232W-BK-SV/P242W-BK-SV

MODEL	P232W	P242W
<b>DISPLAY</b>		
Panel Technology	IPS	
Viewable Image Size	23"	24.1"
Aspect Ratio	16:9	16:10
Native Resolution	1920 x 1080	1920 x 1200
Pixel Pitch	0.265mm	0.27mm
Pixels Per Inch	96 @ native resolution	93 @ native resolution
Backlight Type	W-LED	
Brightness (typical)	250 cd/m <sup>2</sup>	350 cd/m <sup>2</sup>
Contrast Ratio (typical)	1000:1	
Viewing Angle (typical)	178° Vert., 178° Hor. (89U/89D/89L/89R) @ CR>10	
Response Time (typical)	8ms	
<b>Color Gamut*</b>		
Adobe RGB Coverage/Size**	75.2% / 75.3%	78.4% / 81.0%
NTSC Coverage/Size	70.7% / 72%	75.2% / 77.4%
sRGB Coverage/Size	96.8% / 101.6%	99.6% / 109.3%
Lookup Table	14-bit 3D	
Displayable Colors	1.07 billion out of 4.3 trillion	16.7 million out of 1.05 billion
<b>Synchronization Range</b>		
Horizontal (Analog/Digital)	31.5-83/118.4 kHz	31.5 kHz-93.8 kHz and 118.4 kHz / 30-135 kHz
Vertical	50-85 Hz	
<b>Input Signal</b>		
Video	Analog RGB 0.7 Vp-p/75 Ohms	
Sync	Separate Sync: TTL Level (Positive/Negative); Composite Sync: TTL Level (Positive/Negative); Composite Sync on Green: (0.3Vp-p negative 0.7Vp-p positive)	
Input Connectors	DisplayPort, HDMI, DVI-D, VGA 15-pin D-sub	DisplayPort, DVI-D, HDMI, VGA 15-pin D-sub, USB hub (2 up/ 3 down) with DisplaySync Pro
<b>POWER CONSUMPTION</b>		
On (typical)	29W	29.5W
Power Savings Mode (typical)	0.3W	0.2W
<b>PHYSICAL SPECIFICATIONS</b>		
<b>Dimensions (WxHxD)</b>		
Net (with stand)	21.4 x 14.9-20.8 x 9 in. / 543.6 x 338-488 x 227.6mm	21.9 x 14.9-20.8 x 9 in. / 556.3 x 378.5-528.3 x 228.6mm
Net (without stand)	21.4 x 12.7 x 2.9 in. / 543.6 x 322.4 x 74mm	21.9 x 14.3 x 3.3 in. / 556.3 x 363.2 x 83.8mm
<b>Weight</b>		
Net (with stand)	20.3 lbs. / 9.2 kg	22.5 lbs. / 10.2 kg
Net (without stand)	n/a	15.0 lbs. / 6.8 kg
VESA Hole Configuration	100 x 100mm	
<b>ENVIRONMENTAL CONDITIONS</b>		
Operating Temperature	41-95°F / 5-35°C	
Operating Humidity	30 - 80%	20-80%
Operating Altitude	6562 ft. / 2000m	16404 ft. / 5000m
Storage Temperature	14-140°F / -10-60°C	
Storage Humidity	10-85%	
Storage Altitude	40,000 ft. / 12,192m	
Tropical Environment	No	Yes
<b>LIMITED WARRANTY</b>	4 years parts and labor, including backlight***	
<b>ADDITIONAL FEATURES</b>	ECO Mode; Carbon footprint meter; Thin frame; Tilt; Swivel; Pivot; Height-adjustable stand with locking base; Quick release stand; Carrying handle; Rapid Response; Ambix4; XtraView+; OSD user controls; MultiProfiler software; USB hub (2 up/3 down) with DisplaySync Pro; Cable management; Touch-integratable; VESA mount; HDCP; DDC/CI; No Touch Auto Adjust; 14-bit 3D LUT; X-Light Pro; Black Level adjustment; AmbiBright; sRGB; CableComp; TileMatrix; TileComp; GammaComp MD QA software-ready; SpectraView software	
<b>OPTIONAL ACCESSORIES</b>	Multimedia soundbar (SOUNDBARPRO); Hood (HDP23)	Multimedia soundbar (SOUNDBARPRO); Hood (HDP212426)

\* Color gamut size and coverage calculated as 2-D gamut area in CIE 1931 xy colorspace. Size is the total relative display gamut area and includes any colors outside the reference gamut. Coverage is the relative display gamut area contained inside the reference gamut. NTSC values provided for comparison purposes - modern broadcast video uses SMPTE-C, ITU-R BT, 709-5/sRGB or EBU primaries.

\*\* AdobeRGB is a standard defined by Adobe Systems Incorporated.

\*\*\* Warranty restrictions apply. Contact your representative for details.

The MultiSync P Series design allows you to adjust the displays to your exact ergonomic preferences. In addition to tilt and swivel functionality, the height adjusts up to 150mm, and the displays pivot between landscape to portrait orientations.



### SpectraView<sub>II</sub> Software Requirements

Apple Mac OS X v10.5 or higher. Windows XP (Home and Professional editions), Windows XP x64, Windows Vista 32 bit and x64 versions, and Windows 7 32 bit and x64 versions. SUSE Enterprise Desktop 10 and higher.

At least one available USB port for MDSVSENSOR3 color sensor.

Visit [www.necdisplay.com/SpectraView](http://www.necdisplay.com/SpectraView) for the latest requirements.



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