

NEC DISPLAY SOLUTIONS



# PA SERIES FOR MISSION CRITICAL DESKTOP APPLICATIONS

## FEATURING PA242W | PA272W | PA302W



**For Businesses that demand the Highest Performance**  
10-Bit AH-IPS Panel with Image Uniformity, GB-R LED Backlighting, Next Generation Input Options

If you run a creative, design, photographic, architectural or precision engineering business that benefits from accurate imaging, you will need a display that is best suited to intense, concentrated operation cycles in terms of performance and user experience. The new NEC MultiSync PA Series offers the perfect solution.

The selection of best-in-class ergonomics and a 10-bit AH-IPS Panel with GB-R backlighting and 10-bit input via DisplayPort means guaranteed outstanding image and colour reproduction, but more importantly delivered improved productivity. With an ideal visual working environment for your employees and with top monitor quality, an increased initial outlay will be quickly repaid, whilst offering better TCO and comfort.

With an initial guarantee and the NEC brand promise of trusted performance in the most demanding applications behind it, making an outlay in the best display in its class is a wise choice for those who value continuity, consistency and precision in their working process.

### DESIGNED FOR ARCHITECTURE, ENGINEERING, INDUSTRIAL DESIGN, NDT AND PRECISION CAD FIELDS

10-bit AH-IPS Panel delivering the ultimate in image accuracy

1 billion colours with 3D colour emulation look up table

GB-R LED for the latest mercury-free and low energy backlighting source with wide gamut capability

Image Uniformity Control and Backlight Ageing Correction

Advanced connectivity including 10 bit DisplayPort input

PIP combinations, multiple input source, simultaneous viewing

24/7 Warranty Extension

## Latest 10-Bit AH-IPS with GB-R LED Backlighting and 10-Bit Input

PRECISION IMAGE QUALITY, UNIQUE UNIFORMITY AND A BILLION COLOURS FROM SOURCE TO DISPLAY

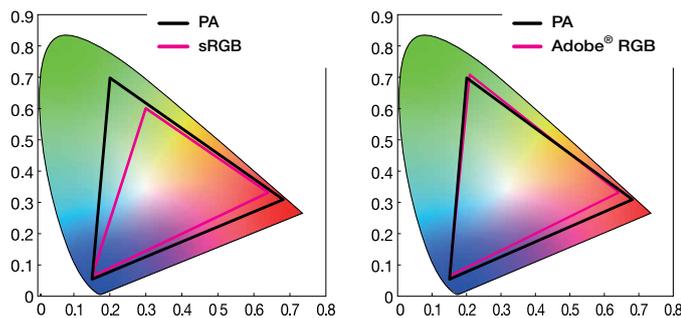
The IPS advantage of wide viewing angle with negligible colour shift means that image data is accurately and reliably communicated to all users from all viewing positions. Additionally IPS LCD colour reproduction offers a depth and realism of reproduction, in which all fine colour nuances can be appreciated.

The latest 10-bit AH-IPS panel offers the ultimate image quality and represents the cutting-edge of today's professional imaging technology, in which the light transmittance (aperture ratio) of the semiconductor transistor has been further improved. This improves specified contrast levels, as well as offering an increased energy savings.

### OVER 1 BILLION COLOURS

The PA Series employs the latest 10-bit (or 8-bit + FRC) grayscale control and processing electronics, which, when aligned with the wide colour gamut RGB colour filters, allows over a billion individual colours to be displayed. This 10-bit colour capability is best taken advantage of when using the latest DisplayPort video connector, and 14-bit LUT to ensure smooth and graded colour and grayscale spectral distributions.

Experience the very best in colour image quality with the latest generation of state of the art 10-bit AH-IPS technology, with exceptionally wide viewing angle, widest colour gamut available (108.6% AdobeRGB colour space) and absence of colour shift. The true benefit of a wide colour gamut displays is particularly visible when combined with a 10-bit panel, since potential colour banding or visible grayscale steps are eliminated.



### 3D LOOK UP TABLES

The integrated 3D LUT with colour emulation preset within the PA series can be used to transform the colour space of the monitor to emulate that of the printer, or other colour workflow device. The 3D LUT is a three dimensional table that maps colours into a different colour space. The Colour Processing Engine in the NEC MultiSync® PA Series monitors allows complex colour gamuts such as those of colour printers to be emulated on the monitor directly. This allows print previews to be performed with applications that do not support this feature directly. The MultiProfiler application can easily load ICC Profiles into the 3D Look Up Tables.

## Consistent Image Consistent Output

### IMAGE UNIFORMITY CONTROL

For many professional applications, a homogeneous distribution of brightness and colour across the entire image area is an essential basis for decision making. A fine matrix together with high-precision sensor electronics measure, at factory, individual irregularities in brightness, colour and gamma values for each individual display. Digital Uniformity Compensation (ColorComp) determines variations and optimises millions of pixels to ensure a uniform image with regard to brightness distribution and colour re-production. At the same time, various parameters such as temperature, operating time and even the alignment of the monitor are taken into account.

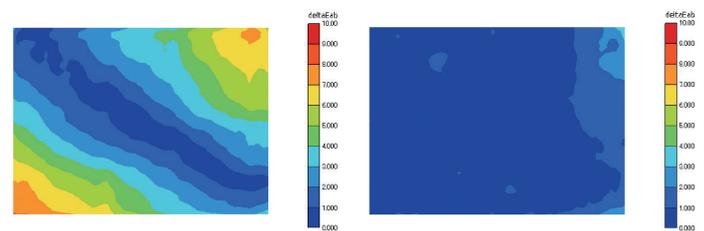


IMAGE UNIFORMITY CONTROL  
Before Image Uniformity Control (Left)  
After Image Uniformity Control. (Right)

### BACKLIGHT AGEING CORRECTION

The Backlight Ageing Correction function is an additional feature to assure stable colour reproduction and luminance during the warm-up phase, as well as over the lifetime of the product. An internal electronic back light compensation system assesses the luminance of the back light, corrects and stabilises it during its operation. Additionally as the backlight ages the white point temperature shifts to yellow, which can be periodically compensated through an ageing estimate to appropriately modify the RGB filter gains.

### FINE TUNING IMAGE ADJUSTMENT

MultiProfiler is designed as a software companion to the NEC MultiSync® PA Series monitors. It provides complete control via USB or DDC/CI over the powerful and sophisticated technology in these models in an easy-to-use desktop-based application.

NEC MultiSync® PA Series monitors feature a custom-designed colour processor called the Colour Processing Engine. This sophisticated processor, combined with internal luminance, temperature and time monitoring of the monitor, and individual characterisation and calibration of each unit during production, results in an unparalleled level of colour control, accuracy and stability.

The wide colour gamut and high-contrast LCD panel used on the monitor, coupled with the Colour Processing Engine, provide the utmost in versatility; from the ability to emulate colour spaces such as AdobeRGB and sRGB, to performing printer output emulations using ICC Profiles and internal 3D Look Up Tables.

MultiProfiler provides a simple, intuitive Wizard-based interface so functions and activities can be easily performed.

## Improving Productivity Enhancing Creativity

### DESIGNED FOR TODAY'S RAPID AND PRECISE INFORMATION FLOW

The powerful Picture-in-Picture or Picture-by-Picture feature of the PA Series allows two different platforms or images to be simultaneously viewed, with a single mouse and keyboard being switched between active operating systems (DisplaySync Pro). Financial traders will save time by enjoying instant access to multiple information feeds in the same display workspace, whilst many colour managed workflow applications will appreciate the automatic and real-time conversion of colours consistent with ICC profiles or colour gamut emulation.

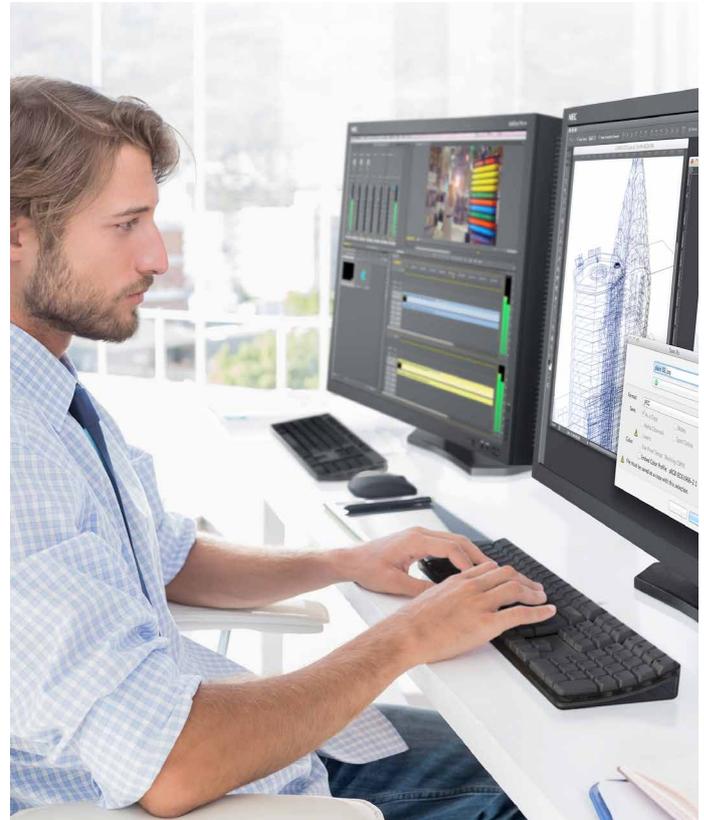
A PA Series monitor can be used in a colour managed workflow, with the monitor being setup to use its full (native) colour gamut. This will provide the maximum possible colour gamut and not be artificially limited by using a set colour space such as AdobeRGB or sRGB. The colour management within the applications being used will automatically convert colours as necessary by using the ICC/ColorSync profile created by MultiProfiler.

### ENHANCED WORKFLOW

The PA split screen workflow is ideal for many applications including industrial rendering, where different stages of the rendering process can be viewed simultaneously and fine adjustments can be made in advance of any tooling cost.

For print publishing, two picture modes can be created, one for normal viewing, and one for a print emulation preview. The two modes can be simply toggled using MultiProfiler or using the monitor's OSD controls. Each of the picture modes have an assigned colour gamut, brightness setting and white point temperature. For instance a photographer can take photographs under D50 conditions, and view the results in a raw format. However, a second picture mode, visible in real-time with the Picture-in-Picture mode can show the same image with a reduced sRGB colour gamut, and with alternative D65 white points and brightness setting for web design.

Alternatively the second picture mode can be configured to show the same photograph when printed out on standard ISOCoated\_V2 or eciRGB\_v2 offset printing data as CMYK image.



## Future Ready Source and Control

**INCLUDING ALL THE CONNECTIVITY FOR TODAY AND TOMORROW MEANS A SAFE INVESTMENT AND PEACE OF MIND FOR THE FUTURE.**

Experience time saving and reduced hardware requirements through easy multi-platform support (Windows, Mac, Linux) and input following USB hub (DisplaySync Pro) all on one display.

### DISPLAYPORT 10-BIT INPUT

The DisplayPort connector is compact and features an in-built locking mechanism, which can be disengaged with a simple button press, giving you hassle-free installation. Longer cable lengths and 10-bit colour support ensure that you enjoy greater installation flexibility as well as an enhanced viewing experience with future-proof peace of mind.

### MULTI-PLATFORM

Less desk clutter and easier multi-platform working with the integrated USB hub (2 up; 3 down) for attaching eg a mouse or keyboard. The 2 upstream USB ports can be assigned to different video inputs. This is most advantageous when feeding the Picture-by-Picture feature with two independent video signals from different platforms, since a single mouse and keyboard can be used to drive both platforms. The thin bezel design and compact form factor ensure clean desktop look.



# PA SERIES FOR MISSION CRITICAL DESKTOP APPLICATIONS

FEATURING PA242W | PA272W | PA302W

## NEC GREEN VISION DISPLAYS

A BILLION COLOURS AND ALL OF THEM GREEN



The PA Series product concept has been engineered from the start to be consistent with NEC's long term environmental commitments. Clearly articulated in its award winning Green Vision campaign, NEC is combining its leading edge technology and passion for innovation, with all efforts to minimise life-cycle environmental impact, while at the same time as continuing to meet the most demanding customer expectations. The Green Vision campaign is based on the two pillars of Green Productivity and Green Sustainability.



### VISUAL COMFORT ERGONOMICS

Our monitors are designed for the people who work with them, and for their environment. If you spend the whole day working in front of a monitor, every ill-fitting millimetre will make itself felt.

Especially in the world of publishing and media, errors can be costly. The MultiSync® PA Series offers a range of features to guarantee outstanding image quality and colours and levels of ergonomic comfort which allow for accurate, fatigue-free working to minimise human error.

The AmbiBright feature, which is kind on the eye and saves energy from the moment you switch on. An in-built ambient light sensor measures the lighting conditions and can if required automatically adjust brightness to changes in either daylight or artificial lighting.

|                                   | PA242W                             | PA272W  | PA302W  |
|-----------------------------------|------------------------------------|---|---|
| Panel Technology                  | AH-IPS / GB-R LED Backlight        | AH-IPS / GB-R LED Backlight                     | AH-IPS / GB-R LED Backlight                     |
| Screen Size [inch / cm]           | 24.1 / 61.1                        | 27.0 / 68.5                                     | 29.8 / 75.6                                     |
| Aspect Ratio                      | 16:10                              | 16:9  | 16:10   |
| Colour Gamut AdobeRGB / NTSC [%]  | 109 / 99                           | 109 / 99  | 109 / 99  |
| Brightness (typ.) [cd/m²]         | 340                                | 340   | 340   |
| Contrast (typ.)                   | 1000:1                             | 1000:1  | 1000:1  |
| Viewing Angle Hor / Vert [°]      | 178 / 178                          | 178 / 178                                       | 178 / 178                                       |
| Response Time (typ. G to G) [ms]  | 8                                  | 7   | 7   |
| Colours [Mio.]                    | 1073                               | 1073  | 1073  |
| Resolution at 60 Hz               | 1920 x 1200                        | 2560 x 1440                                     | 2560 x 1600                                     |
| Connectors                        | DisplayPort, DVI-D, USB, VGA, HDMI | DisplayPort, Mini DisplayPort, DVI-D, USB, HDMI | DisplayPort, Mini DisplayPort, DVI-D, USB, HDMI |
| Power Use Max / ECO [W]           | 56 / 37                            | 73 / 37   | 87 / 47   |
| Power Saving Mode [W]             | 2                                  | 1.4   | 1.4   |
| Internal Power Supply             | •                                  | •   | •   |
| Height Adjustable Stand [mm]      | 150                                | 150   | 150   |
| Other Ergonomics                  | Tilt, Swivel, Rotate               | Tilt, Swivel, Rotate                            | Tilt, Swivel, Rotate                            |
| Bezel Width T - B / L - R [mm]    | 18.2 / 18.2                        | 20.0 / 20.3                                     | 22.0 / 22.4                                     |
| Dimensions with stand (W x H x D) | 556.8 x 378.0 x 227.6              | 640.4 x 396.2 x 235.5                           | 688.0 x 466.4 x 301.6                           |
| Weight with stand [kg]            | 10.6                               | 12.9  | 17.0  |
| TCO                               | •                                  | -   | -   |
| NaViSet Administrator 2           | •                                  | •   | •   |
| MultiProfiler Software            | •                                  | •   | •   |

This document is © Copyright 2012 NEC Display Solutions Europe GmbH. All rights are reserved in favour of their respective owners. The document, or parts thereof, should not be copied, adapted, redistributed, or otherwise used without the prior written permission of NEC Display Solutions Europe GmbH. This document is provided "as is" without warranty of any kind whatsoever, either express or implied. Errors and omissions are excepted. NEC Display Solutions Europe GmbH may make changes, revisions or improvements in, or discontinue the supply of any product described or referenced in this document at any time without notice. All rights re Mobishow Wifi-Doc and MirrorOp are owned by AWIND.

|                    |                                   |
|--------------------|-----------------------------------|
| Document Name:     | MISSION CRITICAL DESKTOP DISPLAYS |
| Document Revision: | Version 2                         |
| Document Date:     | 04/14                             |