

NEC Display Solutions

10 Fundamentals to Achieving Impactful Video Wall Installations



Key considerations in delivering perfect fit video wall technology

NEC video wall technology, renowned for its quality and reliability, delivers compelling benefits to both the user and the integrator whilst inspiring audiences with powerful potential.

24/7 runtimes, advanced calibration and perfect image quality make NEC video wall solutions ideal for retail signage, corporate messaging, control room applications, broadcast environments and rental markets.

New technological innovation brings ever greater enhancement to the video wall experience, tailor made to hone every application.

We have identified ten factors to consider in specifying, deploying and operating video wall installations, outlining the potential to enhance the video wall experience with the advanced features of NEC's new video wall displays.

1. Choosing the right display technology

To achieve long lasting performance it is vital to select the best fit panel technology right from the start.

Different applications will have diverse needs so matching usage to panel technology is fundamental. Identifying certain usage requirements will determine whether VA or IPS panel technology is best suited. VA panel technology maintains a high native contrast ratio, superb image quality and lower operating costs and is ideal where the major use case is static content on information screens such as passenger information, control rooms and price boards or other scenarios where the content doesn't change frequently.

For retail and corporate signage where content is more dynamic with advertising and video content, IPS technology supports best colour performance with wide viewing angles. NEC offers both technologies and will consult with users to ensure long-term satisfaction.



ADVERTISE

Retail & DooH

QSR & Catering



ENTERTAIN

Leisure & Museum

Rental & Staging

IPS: Ideal for best colour performance



INFORM

Transportation

Corporate



REFERENCE

Energy & Utility

VA: Ideal for static content & lower operating costs

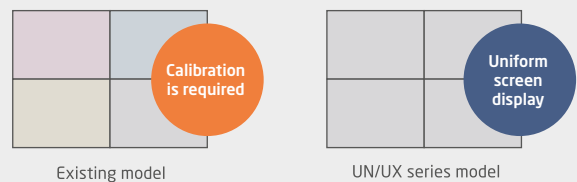
Making the right choice of panel technology ensures optimised and reliable performance for your application

2. Maintaining consistent visualisation across time and surface

Enhanced calibration before shipping reduces installation time

Even before the displays leave the factory they are already calibrated to a standardised level of brightness and colour uniformity meaning visual performance across multiple displays is near perfect right from the moment of installation. Crucial for saving time, especially significant in large and complex projects, pre calibration enables swift and timely induction with immediate wow factor. To enable rapid out-of-the-box-setup, predefined picture settings match the requirements of standard applications such as signage.

► COLOUR VARIATIONS WITHIN A MULTISCREEN SETUP (DURING INSTALLATION)



Improved visual performance from the start thanks to pre calibration during production

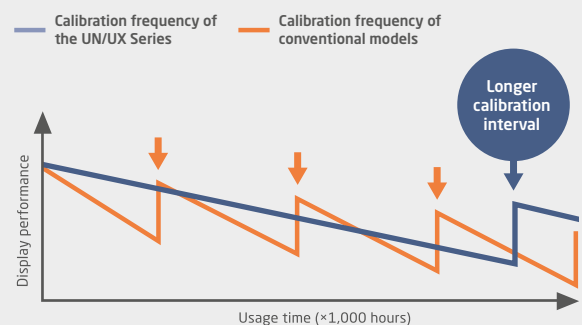
Self-calibration ensures colour perfection

Utilising proprietary SpectraView engine technology, each display is equipped to self-calibrate by connecting an optional calibration sensor to the display without using a PC or dedicated application. A 'White Copy' function enables the settings to be copied to the adjacent display within the wall. Alternatively, image colour can be configured without a calibration sensor via remote control of the on-screen display settings to save time. The display is equipped with various colour conversion functions, such as emulation of representative colour spaces (Adobe® RGB, sRGB, ITU-R BT.709, etc).

Reduce colour variation due to long-term use

As the brightness and colour temperature of the LCD naturally change over time, colour drift occurs typically around the corners of the screen. The NEC Display Wall Calibrator software ensures colour uniformity and fidelity across the entire surface to ensure a perfectly matched image in tiled environments. The Display Wall Calibrator function works twice as fast as in previous generation displays.

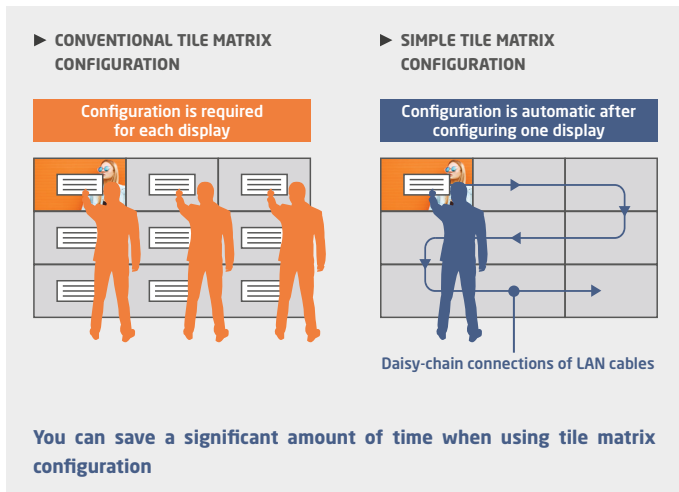
► DISPLAY PERFORMANCE OVER TIME



The calibration interval is longer by up to 3.5 times, providing savings in time and cost

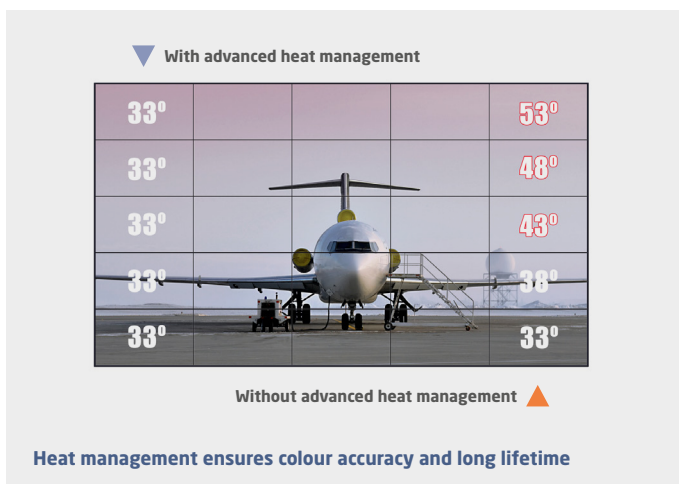
3. Time Saving set up during installation

The time and cost saving achieved using the NEC TileMatrix feature cannot be underestimated, especially for larger video walls and multiple video wall roll outs. By configuring the settings on the first display only, Auto TileMatrix automatically copies the settings across all the remaining displays in the wall via the daisy-chain function.



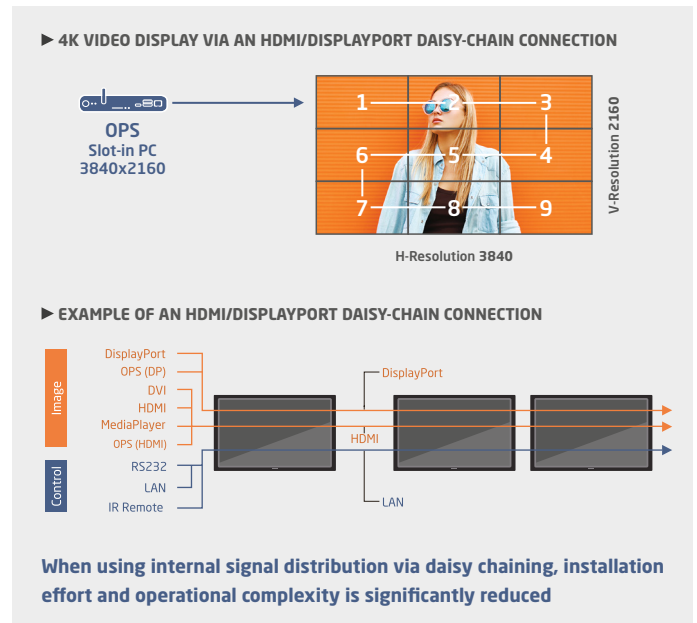
4. Operational reliability through heat management

For multiple screen configurations where heat build-up can be a major issue, monitoring and managing the temperature of each display is crucial to secure reliability and longevity. Without heat management, the displays located higher in a wall will be subject to higher temperatures than those below leading to reduced picture quality and lower life expectancy of the product. To counter this, NEC's unique advanced heat management system secures efficient heat dissipation to maintain a uniform overall temperature. An industrial-strength, premium-grade panel with additional thermal protection, plus internal temperature sensors with automatic fan-based technology protects the display for 24/7 operation over its guaranteed long life.



5. Simplified signal management for faithful playback of UHD resolution video

The built-in HDMI and DisplayPort input and output terminals support signals up to 4K UHD video (3840x2160). Even on the largest multi-screen wall, 4K UHD rendition remains pin sharp as TileMatrix supports daisy chaining of the native UHD resolution across the entire video wall without loss of quality.

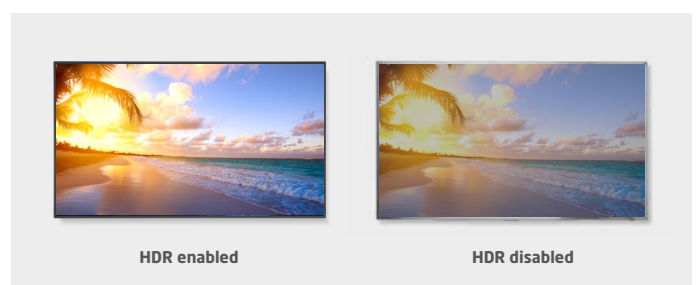


Embedded media sources ease set-up and operation

NEC's Open Modular Intelligence (OMi) platform provides an even smarter and seamless connection between source and display with computing power embedded within the display for a neat and efficient signage solution. It simplifies device installation, usage and maintenance whilst making it easier to upgrade digital signage equipment. The variety of interchangeable slot-in option products such as OPS Slot-in PCs and the OPS Digital Signage Player alongside adjustable performance levels allow custom-made solutions up to native 4K UHD resolution that are perfectly matched to individual demands.

6. Natural colour reproduction for superb life-like images

The built-in HDMI terminals support the display of HDR signals; with a broad display contrast widening the difference between light and dark elements, the result is intense detail and natural looking colours.



7. Homogeneous dynamic images across large screen surfaces

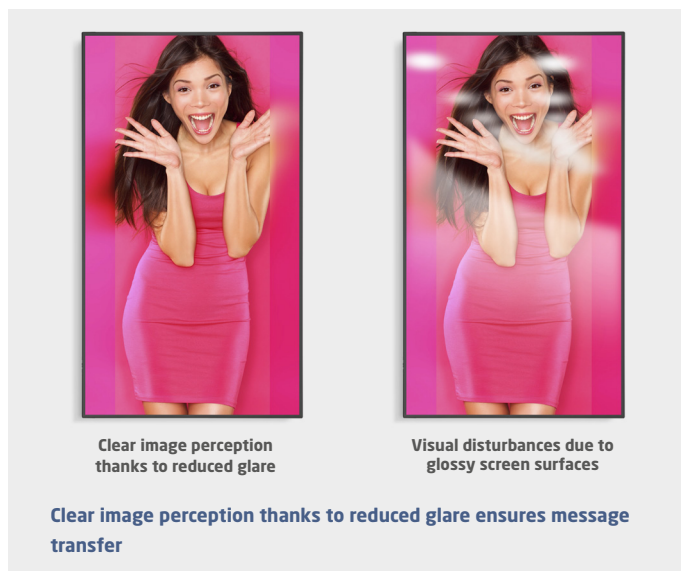
Where fast moving content is played back on a multi-screen arrangement, the image appears misaligned between the displays which causes a disruption to the viewers' overall experience. NEC's frame compensation function and vertical scan reverse function prevents the image shifts that are characteristic of multiscreen setups, adjusting the timing of each frame, resulting in perfect content synchronization and smooth image delivery.



Create a seamless display wall appearance, crucial for fast moving content

8. Reduced reflection for better visibility in high ambient light

Where displays are located in areas of high ambient light, typically in glass atrium buildings and shop front windows, light is reflected off the surface of glossy screens to greatly reduce the visibility of content. Equipped with a professional haze filter, NEC's anti-glare panel scatters ambient light rather than reflecting it ensuring excellent visibility even in direct sunlight.



Clear image perception thanks to reduced glare

Visual disturbances due to glossy screen surfaces

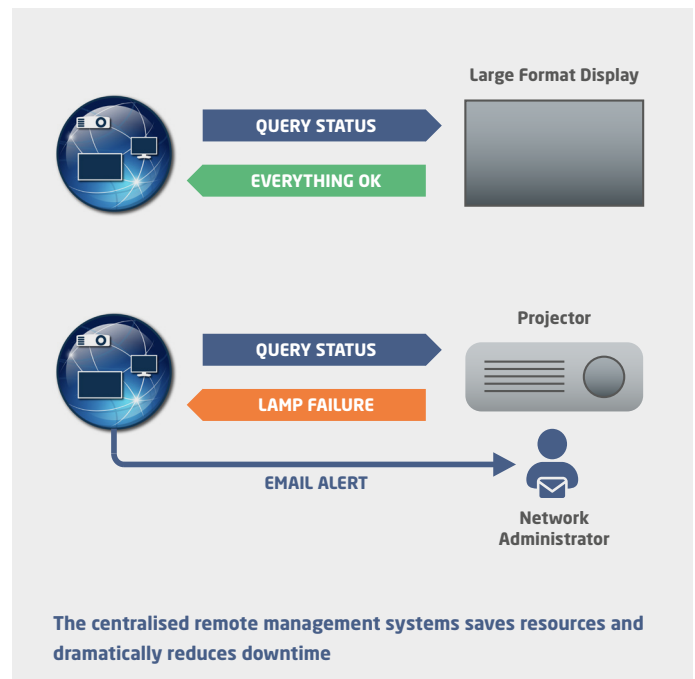
Clear image perception thanks to reduced glare ensures message transfer

9. Reducing power consumption whilst enhancing signage perception

An optional 'human sensor' detects motion to automatically control display functions; turning on or off, or changing source inputs as an audience passes by, helping to save costs whilst creatively enhancing the delivery of signage. Auto dimming adjusts the backlight of the LCD automatically depending on the amount of ambient light to ensure consistent eye pleasing readability alongside economic power usage. This sensor can control the entire video wall via the LAN daisy chain or by controlling each display simultaneously.

10. Maintaining control of your assets

NEC's NaViSet Administrator 2 software is an all-in-one remote support solution that operates from a central location and provides monitoring, asset management and control functionality of most NEC display and projection devices and Windows computers. Especially convincing for multi-device installations over large estates, this functionality offers exceptional cost and resource saving potential, assisting administrators in managing efficient operation.



The centralised remote management systems saves resources and dramatically reduces downtime

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