



For Critical Visualisation
in the Control Room

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Orchestrating a brighter world

NEC

Precision to rely on in an ever-changing world

As process control and monitoring as well as command and control become increasingly more complex and multi-faceted, the function of the control room is to maintain awareness and seamless user efficiency. Instant situational awareness is paramount in facilitating informed decisions in the shortest possible time.



Volume, speed and diversity of information is growing in complexity all the time. The Internet of Things (IoT) provides a tremendous amount of data, yet demands more data analysis at the same time for a deeper insight into data supporting management processes. Artificial Intelligence (AI) and Deep Learning Algorithms enable incoming information to be classified more quickly yet the evaluation and interpretation of data remains the responsibility of a human operator. Visualisation is an essential element of human perception, making the relationship between the operator and the displays of utmost importance in the control room environment. This is achieved through careful consideration of the context and the deployment of perfect fit, yet adaptable, visualisation solutions.

The existence of new threats and risks in today's society highlights the importance of integrating vast numbers of process control systems, complemented by fire, security, intrusion and access control - all key components of a smart, connected industrial facility. Improved risk mitigation demands effective and consolidated safety and security measures.

Remaining responsive, yet able to adapt quickly as situations change is an important aspect in maintaining process efficiency and lowering operational costs. The ability to scale up, or down, adding unlimited data sources and visual outputs as requirements change, yet with minimal cost and disruption, is important in maintaining 24/7 flexibility and securing a future proof investment.



Manufacturing



Transportation



Energy

All-Encompassing Fidelity

With the widest portfolio of visualisation solutions on the market alongside a reputation for outstanding reliability and performance, NEC is well placed as your trusted technology partner, delivering robust control room solutions with specialised support, tailored to mission critical applications.

Our hardware and software products are high adaptable and future ready, for workspaces, huddles, meeting and training rooms, or integration across multiple control rooms and disaster recovery sites. NEC operate a no-compromise approach to quality, aiming to deliver continuously available visual performance in a mission critical, 24/7 environment. Combining a deep understanding of the needs of control room managers, project engineers and operators, our expertise in delivering consultancy based partnership, enables us to help maximise your investment's sustainability and efficiency.



User-Centred Application

From the transport sector including road and rail networks, airports, airlines and other distributed environments, to the energy sector including power generation and oil and gas as well as the chemicals industry and telecommunications; the data infrastructure needed to manage the control process and to ensure operational safety and efficiency is largely similar with three main areas of operation with varying visualisation requirements:

Mutual Situation Awareness



➤ Demanding the largest digital canvas for mutual situational awareness, many teams and operators can manipulate multiple data sources viewing simultaneously.

➤ Incident management rooms and breakout spaces require larger digital surfaces viewable by teams of operators to give a situational overview. Multi-usage, these rooms are also utilised as meeting and collaboration spaces with the facility to share information in real time with remote team members.

Areas and Teams Overview



➤ Single workspaces for individuals managing operational detail alongside an overview of the common operational picture. The user may require a large surface to view multiple data sources with either a single large display or multiple displays on the desktop.

Operational Details



Different control room environments will have differing spaces and needs. The crucial component is the operator, who must be able to view and manage all data across all areas via a common, easy to use interface. System resilience and redundancy remain critical in an uncompromising 24/7 environment.

Unlimited Flexibility

Today, a typical control room environment may incorporate numerous and potentially remote spaces including incident rooms, team breakout areas, meeting rooms and disaster recovery sites; visualisation and manipulation of multiple data sources takes place anywhere, anytime and must be quickly adaptable to change.



By consolidating a facility's process control systems under a single smart system, the user, regardless of their location, has immediate access to all-encompassing, reliable, real time data. As an IP based system, Hiperwall meets this need with powerful processing for the most diverse needs supporting unlimited data sources and visual display surfaces.

Easy manipulation of data by adding, moving, resizing and removing content via drag and drop enables simple and intuitive operation via the user-friendly interface. Pre-saved layouts or re-arranging of content is done in seconds, with just a few clicks of a mouse with no special training needed. The final resolution of each display is maximized for stunning detail and clarity of content. There is no limit to the number of output screens or input sources in a Hiperwall system, unlike the port-count restrictions of hardware-based technology. Receiving updates and new capabilities is seamless and your investment is protected as outputs and inputs can be added or removed and the existing system can be endlessly re-configured.

Where maximum availability and redundancy is essential, Hiperwall ensures continuous operation. Duplicating the core components, an automatic handover ensures continuous failover of the entire system.

> The NEC Advantage

- Outstanding, continuous performance; NEC is the trusted choice for mission-critical 24/7 environments
- The best technology for your application, choose from the widest portfolio of visualisation solutions
- Seamless user efficiency and flexibility is guaranteed with the IP based Hiperwall system
- Failure-free operation with redundant power supply and data transmission
- Manufactured to the highest quality standards, ensuring a secure, future-proof investment with unique service and support back-up

24/7
CERTIFIED
OPERATION

Display solutions for all requirements

A control room solution from NEC is underpinned by the Hiperwall network-based management software, tying in all associated rooms and remote spaces to form a consolidated, simple to manage infrastructure. Supporting a nearly unlimited number of visual outputs, depending on budget and available space, a number of variables will determine the best choice of visualisation technology. Considerations include the required operating time, lighting conditions, viewing distance and usage requirements. NEC and its partners are well placed to advise on the most appropriate technology in each case.



With unlimited flexibility, Hiperwall controls the big picture from any number of visual outputs with data fed from multiple sources. Supremely easy to operate, Hiperwall delivers content from single operator desktops, or projection in breakout rooms to large digital surfaces for common overview.

Warranty and Support

NEC's total control room solutions are designed to provide comprehensive system redundancy and resilience against failure. As your technology partner, NEC provides long term support in addition to robust warranties and maintenance contracts.

Laser Projection

NEC 4K laser projection delivers scalable images without borders, ceiling mounted to maximize space and offering excellent value per square metre. Large, bright and detailed 4K content ensures situational awareness, viewable by large numbers of people, operating 24/7.

Direct View LED

For common operational picture overview, NEC dvLED modules configure to create vast digital surfaces delivering content in high contrast and detail and scalable to any resolution. Light-weight and scalable to fit the space available, each module is front or rear accessible for easy maintenance.

LCD Video Walls

Video walls configured using NEC Ultra Narrow LCD displays provide a homogenous image with accurate colour reproduction across the entire canvas with the option to add multi-touch interactivity. Create as large a surface as space allows, viewable by large numbers of people in ultra-high definition and superb detail for mutual situational awareness.

LCD Large-Format Displays

In sizes 32 to 98", large format displays in meeting rooms and break out spaces with optional touch interactivity, video conferencing and collaborative whiteboarding functionality provide the visual means to observe, scrutinize, present and communicate.

Desktop Displays

Desktop displays with ultra-narrow bezels are ideal for configuring multi-screen workspaces for monitoring operational detail. Alternatively, a single 34" curved display provides a large screen estate in an immersive and highly ergonomic setup with consistent viewing distances. Focus is given to user well-being with technologies to protect the users' eyes and prevent fatigue.

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