"Airports are constantly challenged to offer an efficient proposition to its passengers, discouraging confusion or anxiety during the travelling experience, whilst remaining profitable and attractive. NEC’s display innovation helps ensure the airport is one step ahead of the travellers’ needs."

Richard Wilks, Aviation Business Development Manager EMEA at NEC Display Solutions
Your partner for improving passenger experience and reducing operational costs

As a worldwide leading supplier of display technology into the airport industry, NEC understands the long term approach that is needed to support an airport’s display requirements.

A team of dedicated airport account specialists operates from 13 regional sales offices throughout Europe, Middle East and Africa, fitting your local needs and providing the respective airport know-how you need to ensure your project’s successful implementation.

Our airport customers receive access to product roadmaps, product transition timescales, availability and carefully selected local and partner support. We operate as a trusted display solutions partner offering total peace of mind whether projects are short term or run into years.
The world changes and so do the airports

Whereas in the past people only went out to an airport to travel somewhere, or to pick-up and drop-off loved ones and friends, there is way more reasons to go there nowadays. Airports are more and more becoming melting pots of transportation, shopping and leisure. In the future, airports won’t only be holding passengers, but also individuals specifically visiting for leisure and shopping, with no intent to fly out or accompanying someone. Besides the offers to enhance the passenger’s experience, the means of transportation will be completely integrated and seamless.

Airports as Transportation Hubs

Furthermore, the airport in the future will be more of a transportation hub with urban and suburban transportation offers. The integration of high speed train stations, regional train stations and other urban means of transport have started already and will be further expanded in the upcoming years. Integrated mobility will help mega cities to prevent from the total gridlock and protect the environment.
A comprehensive solution point for any airport display requirement

Innovative display solutions from a trusted supplier

NEC is one of only a few global brands that are focussed 100% on professional and not consumer clients, with 30+ years experience supporting corporate clients in mission critical applications. This allows us to accurately predict stock availability (without fluctuation for consumer trends) and more importantly we have built a support infrastructure that meets business needs and maximises running times.

Delivering bespoke airport services

For large scale airport projects NEC is able to offer additional services that can aid the project implementation. We understand that product may be required 6 months ahead of commissioning and for example warranty contracts may need to be adjusted accordingly.

Similarly NEC can offer a level of hot swap units that are kept on site at the airport during large scale project installations, so that customers can have instant access to replacement displays in the unlikely occurrence of a dead on arrival unit.

Display solutions ideally suited for:

- Flight Information Displays (FIDS)
- Specialist outdoor displays and digital wayfinding
- Messaging Indoor Outdoor LED Screens
- Indoor and outdoor retail digital signage
- Airport operational control centres
- Common Use Terminal Displays (CUTE)

EMEA wide warranty and service support

Even though the NEC Professional Series is renowned for its long term reliability, when a failure does occur you should expect the same world class level of service. All NEC Professional Series products come as standard with a three year warranty in Europe, Middle East and Africa, with most major countries supported with an on-site advanced exchange service (AES).

For airports operating other airports outside of their own country, NEC’s warranty is valid across the whole of the EMEA region. Large Format Series products come with a three year warranty that covers their continued operation 24 hours a day seven days a week, 365 days of the year.

NEC Display Solutions has 40 service partners covering over 100 countries in EMEA from Johannesburg to St Petersburg. With such a comprehensive coverage NEC can deliver a localised personal service with greater understanding of localised issues in almost any region. All service partners have to meet our high level of quality standards before becoming an authorised NEC repair centre.

NEC authorised repair centres have an in-depth knowledge of our products and their application in the airport environment. Service partners provide a hotline number to ensure that you can speak to someone who understands you, and understands the technology inside out. Being responsible for display technology only our service partners aim to resolve your technical issues quickly and efficiently.
The airport environment is a hostile one for a display, operating extensively for periods with much static information. Displays are often deployed open to the terminal environment or in protective casings. The design of the display must involve optimisation to operate well in these environments. Displays are typically housed in FIDS trees and therefore replacing a failed display can be interruptive and costly as replacements are normally made during non-operating times with specialist access equipment.

NEC Professional Series products are designed to meet these challenges and deliver the trusted performance expected in the airport environment.

**Peace of Mind**
Reliability has been our focus since launching the world’s first LCD product in 2002. ‘A’ Grade Panels are sealed for dust ingress and are optionally secured by Protective Glass to patronise your displays in public areas.

**Guaranteed long-term Operation**
Advanced cooling technology helps protect against static image retention issues, whilst a three sensor temperature management system maintains optimum operating temperature and uniformity.

**Low Running Costs**
LED Backlighting Technology and ambient light sensors that automatically adjust required brightness help to reduce power consumption, save costs and protect the environment.

**Superior Japanese Quality**
Reliability is assured with Japanese components that operate consistently at wider tolerance levels, commonly found in airports environments. With NEC displays you pour into a safe investment.

**Flexible Elegant Installation**
Different bezel widths and depths of displays offer the perfect appearance for all scenarios. Easy installation and front serviceability maintenance reduce the related costs and time.

**NEC Flight Information Display solutions include:**

<table>
<thead>
<tr>
<th>NEC Flight Information Display solutions include:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P Series</strong></td>
</tr>
<tr>
<td><strong>V Series</strong></td>
</tr>
<tr>
<td><strong>XUN Series</strong></td>
</tr>
<tr>
<td><strong>dv LED Series</strong></td>
</tr>
<tr>
<td><strong>Controllers</strong></td>
</tr>
</tbody>
</table>

**Advantages**
- Commercial grade LCD modules designed for 24/7 use
- Panel sealed against dust
- 3 Stage Heat Management System
- Japanese high quality components
- Low operating power with ambient light sensing
- Temperature sensors to protect against image retention
- All metal chassis designed to last
- Compliant to EU Fire Regulations as well as EMC Class B
Upgrade the power of your display at any time

NEC’s Open Modular Intelligence (OMi) platform provides a smart and seamless connection between source and display to deliver powerful, tailored and future proof digital signage. It simplifies device installation, usage and maintenance whilst making it easier to upgrade digital signage equipment. The variety of interchangeable slot-in options products alongside adjustable performance levels allow custom-made solutions that are perfectly matched to individual demands. External sources become obsolete for a neat and efficient signage solution with powerful and compelling possibilities.

Controllers for 24/7 Operation

The full-line-up of Intel powered slot-in PCs, that conform to the OPS Standard, supports a wide variety of applications starting from static flight information screens and ranging to the most demanding interactive, high resolution or resource hungry applications such as or captivating retail contents in duty free and other retail shops, airport lounges or interactive wayfinding. Airport operators can choose from a wide range of processors, solid state drives, RAM and operating systems or even WiFi, TPM and G3.75 connectivity to configure a custom-made solution which perfectly fulfills their requirements. Open modularity comprises a broad choice of operating systems plus availability of pre-configured systems for immediate operation.

Raspberry Pi Compute Module 3 NEC Edition

The NEC Edition of the Raspberry Pi compute module 3 provides extra power to your fully embedded Raspberry Pi experience. The cost effective solution is ideally suited for the majority of FIDS operations as well as for retail signage applications in duty free, retail stores and food courts in an airport environment. Flight information and Digital Signage Software providers as well as system integrators benefit from the vast number of already available open source solutions accessible from the global Raspberry Pi developers community. This supports the use of a broad range of operating systems such as Raspbian, Ubuntu and other Linux distributions, as well as Win10 IoT Core. The Ethernet and USB interfaces of the display allow easy integration into a network or connection with external devices such as mouse, keyboard and touch. With extended memory capabilities and intelligent digital signage support such as the Watch Dog Timer and Real Time Clock for scheduling, it’s the smartest combination of computing power with professional signage displays for cost-effective use.

Low operating temperature

As the modules reside inside the display, NEC has used industrial grade components that utilise less power and therefore generate less heat, ensuring the longevity of the NEC Professional display.

One size fits all

The NEC slot-in module is compatible with all NEC Professional Series products no matter what size. Airports can for the first time maintain one OS image for any display in the airport. This significantly reduces the time to manage the display estate, and minimises inventory.

Operating System Flexibility

Microsoft Windows 10 and 10 IoT operating systems provide a reliable platform for your application. For more flexibility, NEC’s modules can be provided without operating system or a pre-built customer image. In addition drivers can be provided for other operating systems such as Linux.

Pre-Configuration

NEC’s modules can be configured independently of the display they will end up driving. A stand-alone adaptor allows the module to be connected to a standard desktop display, allowing multiple modules to be quickly imaged and tested prior to deployment.

Industrial grade components

In order to provide long term availability, reliability and consistency over the life of the product, NEC’s slot in PC modules only use industrial components.

Easy installation and maintenance

The NEC module hides away inside the display and takes power and digital video feeds internally. Only one power and one Ethernet cable are needed, making for a neat installation. As the module is a slot-in failed product can be removed in the field and replaced with another pre-configured module.

For more information on our OMi accredited partners, please refer to page 15.
Engage your Passengers

Based on the latest touch technologies, all NEC LCD displays can deliver true multitouch support with fast response times and a high level of accuracy, even on NEC video walls. All NEC interactive displays are plug & play, without the need to install any external driver software.

Thanks to an anti-reflective coating, reflections are reduced to a minimum which significantly increases the readability of the content shown, whilst providing an additional protective layer.

**Advantages**
- Future proof and high performance
- Low power consumption
- Increased resolution offers a perfect visibility and better results to satisfy users
- Lower maintenance costs and low TCO
- Easy to install/deinstall and low maintenance
- More flexible - mix both text based and video based content e.g. airport information and airport advertising
- Remote monitoring and management
- Engage and entertain visitors
- Bidirectional communication
- Customised information
- Compliant to EU Fire Regulations as well as EMC Class B

**Recommended:**

- **P Series** For arrival boards, check-in information and lounges
- **V Series** Value commercial displays ideal for less heavy duty applications
- **XUN Series** 24/7 video wall displays, heavily featured and ideal for building clear retail and information walls
- **dv LED Series** Replace traditional static advertising billboards and are ideal as giant entertainment screens and digital surfaces
- **Multi-Touch** T Series Infrared based touch displays for entry level applications
  - SST Series ShadowSense™ touch displays for flexibility and touch precision
  - IGT Series Enticing InGlass™ touch displays for interactive table applications
- **Controllers** OPS slot compliant slot-in single board computer modules to fulfil a range of needs within an airport
Digital Surfaces

While all the means of transportation melt to a holistic transportation system, digital signage is gaining importance.

Digital surfaces are trending the scene and mediatecture is the new catchphrase among airport architects. Digital spaces will no longer follow the building, but will be included in the planning at a very early stage already. In this way, the seamless integration of digital signage into the construction is guaranteed.

The big advantage of these walls is the instant changeability of contents when for instance the airline at a gate changes. Surfaces can be totally used for branding purpose and also serve as information carrier.

"ZeitRaum" (TimeSpace) is an interactive art installation the Ars Electronica Futurelab designed for the new terminal at Vienna International Airport. It creates real-time interpretations of arriving and departing flights. "ZeitRaum" consists of a series of stations that accompany departing passengers on their way to their gates.

credit: Otto Saxinger
Airports have widely been identified as prime sites for the deployment of digital signage, as passengers often have long periods of dwell time and in general a large proportion of passengers fit the profile of CIP (Commercially Important Person) and VIP. Some of the world’s largest digital signage networks have been deployed within airports, and NEC as the recognised leader in signage solutions has gained valuable experience in their deployment.

With some airports already generating over 70% of their revenues from commercial operations, advertising through digital signage can effectively be used to drive retail sales within the terminal.

**High impact messaging**

With the trend for larger and brighter terminal buildings to accommodate more non-operational business and provide a more comfortable and modern environment comes the challenge of getting clear and dynamic messaging to an ever increasing passenger number.

Whether for indoor or outdoor use, NEC LED modules can be used to replace traditional static advertising billboards and are ideal as giant entertainment screens.

**Recommended:**

- **dv LED Series**: Intensely bright images for the brightest environments
- **V/P Q Series**: Ultra-High Definition displays for summary boards and advertising
- **XUN Series**: 24/7 video wall displays, heavily featured and ideal for building clear retail and information walls
LCD and direct view LED Video Walls from a single trusted manufacturer

High reliability designed for a low overall TCO and a stable image quality are achieved through the use of commercial components and an intelligent thermal management which allows for an even heat distribution specifically in challenging conditions such as direct sunlight exposure - a smart and eco-friendly solution that will let you stay in touch with your audience 24/7, providing stunning visibility in a bright airport surrounding.

Advantages
- Professional grade performance and safety with NEC advanced heat management
- Perfect viewing experience and readability even in a very bright surrounding
- Functional advantages with future proof connectivity including HDMI and DisplayPort
- Safe investment and functional advantages due to modularity and flexibility
- Certified for landscape and portrait operation
NEC’s expertise in control room solutions include desktop and video wall LCD technology, wall management software, display wall processors, mounting solutions and extensive experience in delivering solutions for customer projects. This allows NEC to act as a single partner for your airport control room project.

The LC displays are optimised for 24/7/365 mission critical applications and feature guaranteed servicing. NEC assures the availability of components and support over the product lifetime. With NEC's control room solutions you have everything under control. 365 days a year, 7 days a week and 24 hours a day.

**NEC Control Room key features**
- Critical Performance Ready Professional Products
- High Accuracy, Full HD Image with Professional S-PVA or P-IPS Panel
- Full Functionality and Connectivity including HDMI and DisplayPort Daisy Chain
- Expansion Slot for Pre or Post Installation Upgradability
- Flexible Easy Access Solutions for Convenient Servicing
- Professional Desktop and Large Format Displays

**Mission critical viewing**
Viewing mission critical data in a control room environment demands the most from today's display technology.

**ECO friendly and low running cost**
NEC has developed an innovative cooling system which compensates for the heat created by backlighting. Advanced heat management plays a vital part in the uniformity and long term performance of your display. Low operational cost, improved longevity and mercury-free LEDs are just three of the many benefits for the environment.

**Video wall management**
The IP based video wall content and source management software is the preferred choice for mission critical applications such as control rooms to visualise vast amounts of information from multiple data sources via video walls, projection, large format displays and dv LED walls.

**Recommended:**
- **UN Series**
  - 24/7 video wall displays for modular and flexible vast screen surfaces
- **dv LED Series**
  - Fine-pitch direct view LED modules with front access for easy maintenance
- **Mounting Solutions**
  - Flexible mounting options for control rooms when space is limited and quick servicing is required
- **Hiperwall**
  - Video wall content and source management software
Remote Management of your Display Estate

Knowing the status of all the displays in an airport at any time is impossible, and too often the passenger is the first to notice a display that is blank or has a system error message. Displays that are mission critical to the airport, whether they are revenue generating, informational or directional, or whether they are on their own or in a cluster or contained within a video wall, must be operational at all times, and when errors occur they must be quickly identified and resolved.

Managing your network

NEC provides the NaViSet Administrator 2 (NaViSet) that allows you to remotely monitor and control individual or grouped displays from a centralised point on your network. Using either the RS232 or LAN connection on the display, NaViSet allows you to connect to the networked display to obtain asset information such as asset location, serial number, number of hours of use, current brightness, input source, as well as status information of the temperature at sensors, power supply, inverter, video signal detection and backlight stability.

Power of control

Once you have determined the status of the display, NaViSet then allows you to control the display remotely as well. Any setting that you can normally access via the display’s remote control unit, can be controlled remotely via NaViSet.

Automatic scheduling

One powerful feature of all NEC Professional Display Series is the automated scheduler. Each and every display has a real time clock built-in, which allows you to trigger up to 5 commands at particular times of the day. Of course scheduling can be controlled remotely via NaViSet as well.

Preservation

NEC Professional Series products may be built into wall recesses, cased in a FIDS tree housing or built into a video wall. Monitoring and managing the temperature of each display is crucial if the display is to maintain its long life. Three in-built sensors monitor the temperature of different areas of the display. Administrators can set the maximum temperature limit of each sensor manually. Once the limit is met, fans can be automatically turned to one of two speed settings. If the display continues to overheat then backlights will be dimmed, and eventually the display will be turned off.

This sophisticated three stage heat management system inherent in all NEC display products improves reliability and longevity of life, and protects your display investment.

Displays with intelligence

A special feature of NEC Professional Series displays is the ability of the display to notify you automatically via email of a problem. Our alert email function allows the network administrator to programme two receiving email addresses into the display. A number of self-diagnosis tests are performed by the display on itself, and will notify the administrator via email on the following detected errors:

- Power supply abnormality
- Cooling fan fault
- Backlight fault
- User configured temperature limit met
- FIDS controller abnormality

On receipt of an alert email, the network administrator can then use NaViSet to figure out whether an engineer needs to be called out to site.
Space is always a limitation on desks located at check-in and gate departure, so the NEC desktop products have been designed specifically with ergonomics in mind. With thin bezels and height adjustable stands that lower the display to the desk, the displays’ robust design ensures prolonged life and comfortable viewing.

The increased productivity of your back office is at the heart of the design of the NEC desktop LC Displays. NEC’s desktop products deliver consistent high quality image, coupled with a reputation for unrivalled reliability through the use of high quality Japanese components. With various sizes and a stand design that gives comprehensive positioning flexibility, the MultiSync® displays are ideal for all airport applications. With a comprehensive range of connectivity such as DisplayPort, DVI and VGA your investment is future proof.

Recommended:

- **AS Series**: Office productivity for cost conscious professionals
- **E Series**: Future proof displays for the performance oriented workplace
- **EA Series**: For the advanced ergonomic and high performance-oriented workplace
- **P Series**: The professional series for most demanding office and industrial applications
- **PA Series**: The Reference series for demanding precision applications
- **EX Series**: Speciality displays for air traffic control and control rooms

![NEC MultiSync® EX341R curved](image)
At NEC Display Solutions we make strong and lasting alliances with the world’s leading flight information display system (FIDS) providers in order to build on our extensive know-how.

The NEC Display Solutions OMi accredited partner scheme has been created to give airport clients the confidence that our partners FIDS software has been tested for compatibility with the range of NEC Open Modular Intelligence (OMi) embedded scalable computing. For more information on NEC’s Open Modular Intelligence, please refer to page 7.