

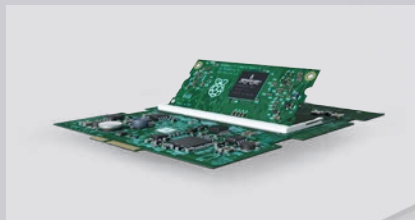
Orchestrating a brighter world

**NEC**

NEC Display Solutions

# OMi - Open Modular Intelligence

Upgrade the power of your display at any time

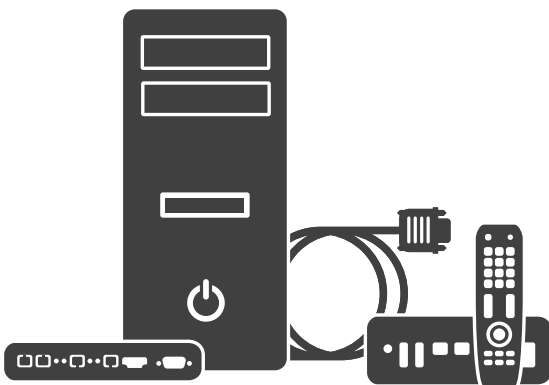


# NEC Open Modular Intelligence

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.

## Replace all external devices



Replace with



NEC Raspberry Pi Module

or



NEC OPS Module

“We are investing in modern airport facilities and systems to ensure we provide the best passenger experience. The open and modular display concept from NEC allows tailor-made and upgradable solutions that lead to the best passenger experience through public flight information displays which are reliably supporting Heathrow’s Operations and secure a future-proof and low-maintenance investment for Heathrow Airport.”

**Bhupinder Kahlon**, Infrastructure Architect for the IT Service Delivery team at Heathrow Airport Limited

## Are you ready for the world of open platform displays?

### OPS

Slot-in options based on OPS, the “Open pluggable Specification”, comply with the first industry-wide digital signage standard; it standardises slot size, display connection and power supply specifications. OPS slot-In options feature an interchangeable selection of computing power for media playback as well as signal distribution systems. All NEC large format displays (except E Series 32”to 65”) plus PX and PH installation projectors feature this option slot.

### Raspberry Pi

The compute module slot hosts the Raspberry Pi 3 compute module which seamlessly sits within NEC’s fourth generation of professional P and V Series large format displays. Open and modular, the power of the Raspberry compute module is fully accessible to fit individual usage needs. Seamless, embedded intelligence empowers smart connection to the Internet of Things (IoT) for digital signage as well as for presentation use.

Open modular slot-in products are either embedded in the OPS slot or are integrated into the compute module slot.



Flight information displays at Heathrow Airport, United Kingdom



# Modular Slot-In Options

Make digital signage simpler and more flexible without additional cables or devices.

## Benefits

### Easy Installation

NEC open modular slot-in products are simply integrated into the display for a fully embedded solution making external mounting and cabling obsolete. It is an elegant, unobtrusive, cable-free solution with internal connection for power, video, audio, and RS232 control.

- Embedded
- Cable free
- Internal power connection



Context-aware retail signage: Clas Ohlson conceptual pilot installation in Stockholm/Sweden



### High Flexibility

NEC open modular slot-in options offer an interchangeable selection of solutions including computing technology, media playback and signal distribution. The embedded solution enables compatible displays and projectors to be upgraded to a custom-made solution which matches the specific demands of any vertical sector such as Aviation and Transportation, Corporate, Education, Energy and Utility, Retail and Signage.

- Interchangeable
- Embedded
- Upgradable

### Low TCO

Industrial and embedded components lower the demand on power usage resulting in significant energy savings and a longer product lifecycle compared to consumer products.

*“When providing software for digital signage used in internal and external communications, it's important to meet the different market requests with tailor made solutions. Choosing from different computing technologies, different performance levels or different operating systems provides a high flexibility which allows us to deliver the full power of our digital signage solution for each application. The open and modular approach provides a true upgrade path for all professional digital signage users.”*

**Dan Arrias**, Sales Director International Markets Smartsign AB

## Simplified Usage

Benefit from one single point of contact for service and maintenance. An NEC display or projector that incorporates an open modular slot-in board will have matching warranties and one service contact. If a slot-in product requires servicing or upgrade, it can be easily removed and exchanged leaving the display or projector fully operational.



## Safe Investment

As standardised solutions, both OPS and the compute module offer a future proof investment. Infrastructure and design will sustain over a long lifecycle meaning its usage can continue even as the display or projector is upgraded. Industrial grade components ensure low failure rates and suitability for 24/7 applications. Additionally, the 3 years warranty is valid not only for the display and projector but also for the embedded slot-in product.

- Low failure rates
- 24/7 Operation
- 3 Year Warranty



# Open Modular Slot-in Interfaces

## Computing Interfaces

Whilst OMi provides open and modular access to a fully embedded display solution, the variety of applications addressed including signal distribution and computing technology such as Intel, Raspberry Pi and ARM, enables your signage deployment to be custom-built.

### Raspberry Pi 3 Compute Module NEC Edition

The NEC Edition of the Raspberry Pi 3 compute module provides extra power to your fully embedded Raspberry Pi experience. Software providers and 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.

### OPS Digital Signage Player

Utilising the same computing technology as used in smartphones and tablets the OPS digital signage player benefits from reduced energy consumption and investment costs. The flexible storage extension, wired and wireless connectivity and the very powerful processing and graphics performance make it ideal for digital signage applications. As an open platform product, the OPS player also runs multiple certified third party digital signage software solutions available from our partner network. Several pre-installed Apps such as Media Player, Picture galleries or HTML5 browsers allow out-of-the box signage solutions with unlimited Android Apps available to download.

### OPS Slot-In PCs

The full line-up of slot-in PCs supports a wide variety of applications starting from static content playback and ranging to the most demanding interactive, high resolution or resource hungry applications. Customers 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.



NEC Raspberry Pi Module NEC Edition



NEC OPS Module



Signage Player

## Ideal for application in these sectors



Aviation and Transportation



Corporate Conferencing



Education



Leisure and Museum



Rental & Staging

**“As a leading provider of digital signage software solutions, we have been enthusiastic about the possibilities of the Raspberry Pi Computer right from the start. The performance and robustness of the Raspberry Pi Compute Module in combination with the modular display slot is ideal for high-quality and durable digital signage installations that can be upgraded during operation.”**

**Roland Grassberger, CEO Grassfish Marketing Technologies**

## Signal Interfaces

### OPS HDBaseT Solution

HDBaseT is a connectivity standard for the distribution of uncompressed HD multimedia content. The cornerstone of HDBaseT technology is a feature set that converges uncompressed Full HD digital video plus audio, 100BaseT Ethernet and control signals through a single LAN cable. This helps to overcome cable length limitations to achieve distances of up to 100m with a single LAN cable. NEC offers a complete HDBaseT solution with sender and receiver modules; a plug and play solution, easy set-up and operation is guaranteed making it ideal for corporate conferencing, education, rental and staging as well as for leisure and museum.



### OPS HD-SDI Solution

The HD-SDI interface is a digital video transmission standard used to transfer uncompressed high-definition video and audio based on a coaxial cable. The various HD-SDI options achieve broadcast-grade video in various data rates and are mainly used in broadcasting, media companies, medical applications and rental. Select your perfect match from various options serving resolutions up to UHD for “pixel-free” viewing.



DOOH



QSR



Retail and Signage



# Industry compatible modular solution

## Don't replace, just upgrade

The comprehensive line-up of computing performance devices ensures the perfect match to all usage scenarios and requirements. Choose between different options to fit your needs:

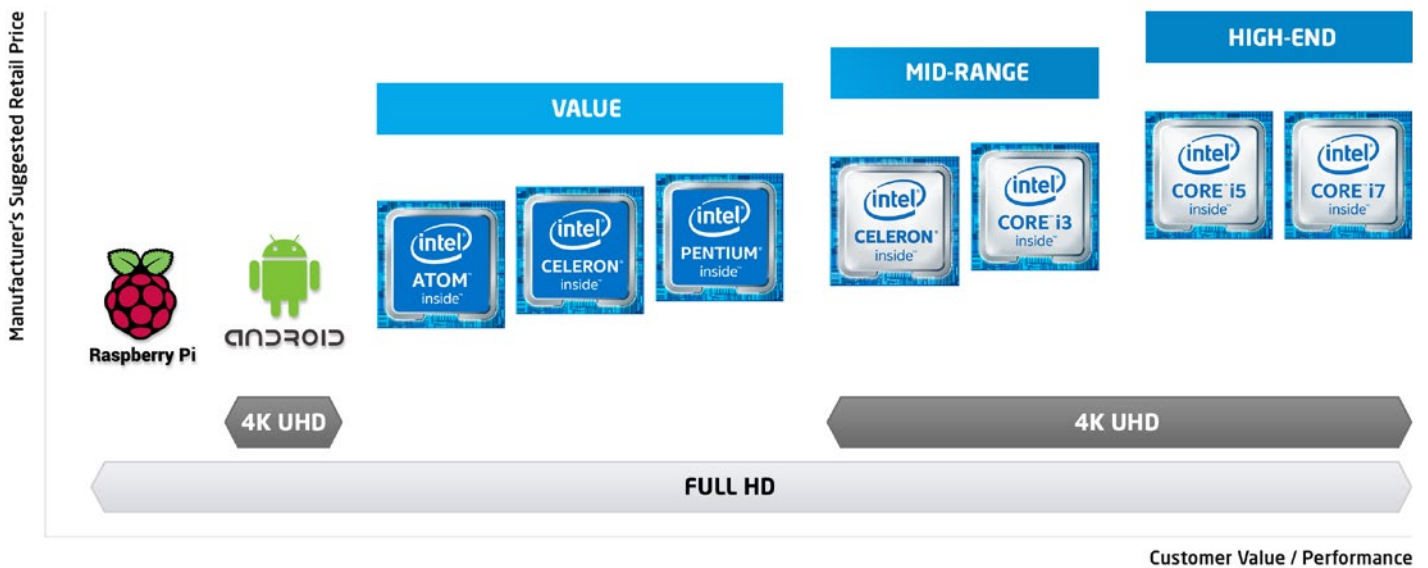
**Raspberry Pi Computing:** Enter the world of computing with this smart and resource saving computing device with access to its worldwide developers community.

**Digital Signage Player:** For Android based applications, this OPS device delivers excellent graphics performance up to UHD resolutions.

**Value Slot-in PCs:** Well suited for static and simple signage and Full HD playback, these entry-level Intel x86 processors run Windows and Linux based operating systems.

**Mid-Range Slot-in PCs:** Ideal for more demanding signage applications, Intel's Celeron and Core i3 processors provide strong dual-core performance.

**High-End Slot-in PCs:** Delivering superior processing and graphics performance ideal for the most complex tasks such as multi-touch, high resolution video playback and video wall operation, Intel's Core i5 and i7 series also promise a future-proof investment capable of handling all upcoming standards like UHD with ease.



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