

FINLAND

Highs and lows

Installing high-resolution LED tiles in a location that can experience temperatures of -30°C led to some interesting challenges, writes **Tom Bradbury**



The screen can also be viewed from hotels in the surrounding Narinkka Square

[INSTALLED]

VIDEO
■ displayLED digiLED IT system

THE KAMPPI Shopping Center in the Finnish capital of Helsinki welcomes many thousands of shoppers to its 120 stores each week.

The decision was recently taken to install a 108sqm high-resolution LED screen above the entrance to deliver a striking advertising experience with unparalleled image quality and reliability, even in the extreme Finnish temperatures, which can plunge below -30°C in winter or soar to +30°C in summer.

Content for the screen, operated for Kamppi Center Investments by Clear Channel Finland, features advertising

by high-profile brands as well as regular live event screenings, so the client needed confidence in the screen's ability to perform. In addition, it had to be visible from multiple angles, high and low, as it can be viewed from hotels in the surrounding Narinkka Square. Light weight and ease of maintenance were other key considerations.

Systems integrator CraneWorks Oy and screen specialist displayLED were called in to provide the necessary technology.

"The idea was to replace the previous LED screen,

which was much smaller and at the end of its lifespan, to make maximum use of the available space," says Derek Latham, digital signage specialist at CraneWorks. "The centre had originally planned to fit a high-resolution LED when it opened in 2006 but this was deemed too difficult at the time because of available technology and costs."

CraneWorks approached displayLED's Finnish sales manager Paavo Kilpiö, who was able to suggest the digiLED IT system, a new fixed-installation platform that features an IP67 LED tile

weighing just over 40kg per square metre. With a 16mm pixel pitch, the 14m-high, 7.7m-wide display has a resolution of 880 x 480.

"We have had a relationship with Paavo for many years," says Latham. "We wanted to work with someone we could trust and rely on who would give us the best quality screen within our budget."

IN DESIGN

There were many hurdles to overcome along the way, not least the design process. The screen had to fit a certain aperture and not protrude past the outside glass walls

of the shopping centre. "This design challenge meant that a bespoke product needed to be created together with a structure that would fit the site perfectly," explains displayLED project manager Tonie Wishart. "Good communication from all parties; the client, their architect, CraneWorks and our design engineers ensured an impressive product designed to suit the location and environment."

After two years' planning work, displayLED began the build in mid-October 2012. Adding over 10,000kg of galvanised steel to the

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structure of the Kamppi Center, remarkably without the use of bolts or welding, ensured there was no need for ground support. Every cross-member, horizontal and vertical beam was either clamped or mechanically fixed to the shopping centre's existing steelwork. Each screen module was then individually installed by crane over four days, while internal module power and data cabling was completed ahead of schedule.

During the installation period, the team experienced the type of conditions the screen would have to withstand when the temperature fell to -6°C and sleet turned to snow on two occasions. Nonetheless, the system was up and running ahead of schedule by the start of November 2012.

"The screen has been designed to show portrait content with a vertical resolution approaching that of HD and the viewing distance covers several blocks of the city centre, including surrounding hotels and restaurants," says Wishart.

A further impressive statistic is that the screen is so tall, the support platforms and service structure at the back of the screen spans three of the centre's storeys.

The beauty of the new installation, according to Latham, is that it allowed the client to upgrade with minimum cost as the pre-installed processing equipment can feed into the digiLED IT system. "The Kamppi Center's existing media player, video scaler processors and other equipment all cascade to the new screen," Latham explains. "We already had a fibre optic network in place so we made the necessary updates and can now take a live feed from an event in the market square and broadcast it on the screen as it happens. We also added audio to enhance the advertising experience so that music, voiceovers and sound effects can be added to the video material."

BATTLING THE ELEMENTS

The weatherproofing was also a significant accomplishment. "The front surface of the IT tile has an IP rating of 67 which means it's 'dust tight' and protected against immersion," says Wishart. "The tile is totally encased with a polycarbonate front mask

[ABOUT THE INSTALLER]

■ Craneworks develops solutions and software and builds state-of-the-art digital displays for clients

■ The company also has experience in AV design and production including television commercials and feature film post-production

■ It has recently moved to a new HQ in Sörnäinen, Helsinki

■ Other projects include digital signage solutions for Helsinki-Vantaa airport; the installation of double-sided outdoor screens in Helsinki, Tampere, Lahti and Jyväskylä; and the design and implementation of Oy Aurinkomatkat - Suntours Ltd Ab's digital signage system

and die-cast aluminium back plate." The frame is high-grade aluminium and the modules' power boxes boast a thermostatically controlled air circulation system and a separately activated heating circuit.

"The digiLED IT screen installed at Kamppi represents a new level of sophistication for LED screen technology," explains Guy Horrigan, displayLED's commercial director. "We hope this is the first of many projects utilising our new platform. The system benefits from full remote diagnostics, down to pixel level, which allows the screen to be monitored anywhere in the world. The IT tile control system also has the capability to send notifications to a service desk or technician via email or SMS should there be any untoward occurrences. We also installed thermostatically controlled heaters to ensure vital components are protected from the extreme cold."

"The screen is functioning really well even in extreme temperatures," confirms Latham. "We've had -26°C recently and the screen was not affected. The advertisers are also impressed with the large hi-res images produced. The city of Helsinki was World Design Capital in 2012 and this screen is a perfect fit to go with that title." ■

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The screen modules' power boxes boast a thermostatically controlled air circulation system and a separately activated heating circuit



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