

KLM Operations Control Centre (OCC), The Netherlands



KLM's Operations Control Centre (OCC), located at Schiphol-Oost in The Netherlands, manages virtually every aspect of the airline's daily operations. As well as monitoring all flights to KLM's 145 destinations worldwide, the OCC plays a crucial role in planning, engineering, maintenance and customer care.

BACKGROUND

KLM's Operations Control Centre operates 24/7. Its open-plan space is dominated by a large central video wall displaying a huge variety of information, from live flight data to the latest news, weather reports and even customer satisfaction ratings. As the main visual workspace for the OCC's numerous operator workstations, video wall performance and reliability is paramount. But achieving these high performance standards using mercury lamp illuminated DLP rear projection, with its associated maintenance costs, was becoming increasingly costly. In line with KLM's policies on cost reduction, energy efficiency and sustainability, the decision was made to upgrade the video wall to the latest LED DLP cube technology.

PROJECT LOCATION

Schiphol East The Netherlands

CUSTOMER

KLM Operations Control Centre

APPLICATIONS

Traffic Management

PRODUCTS USED

15 x VS-XE74U

INSTALLATION

AVEX / Mitsubishi

FURTHER INFORMATION

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PROBLEM & SOLUTION

System's integrator AVEX was commissioned to provide a modern, energy efficient video wall solution for the OCC. Along with the upgrade of the video wall itself to reduce running costs and improve efficiency, improvements were also planned in the data processing and management of the video wall system, with all operations to be made possible from a single central control point at the Duty Manager Operations' workstation. As the OCC is busy 24 hours a day, the upgrade had to be completed swiftly with the minimum of disruption to normal operations.

AVEX proposed to replace the outdated and inefficient mercury lamp DLP cubes with Mitsubishi Electric Universal Upgrade engines based on the latest LED technology. By utilising the existing screen framework and cabling, AVEX would be able to complete the upgrade quickly and cost-effectively, whilst also achieving a significant upgrade in performance and a dramatic reduction in running costs. Unlike mercury lamps, which need to be replaced every 6000 hours, Mitsubishi's LED light sources are rated for up to 100,000 hours of continuous 24/7 operation. LED also produces much less heat than mercury lamps, resulting in a significantly reduced workload for the center's HVAC system.

Specifications

Model	VS-XE74U
Technology	Universal Upgrade Engine
No. of Modules	15
Cooling system	Air cooling system with efficient cooling pipe and aluminum plate (No liquid)
Type	DLP™ technology (0.7" DLP™ 1 chip), DarkChip3™, BrilliantColor™
Screen Size	70"
Resolution	XGA, 1024 x 768 pixels (per module)
Light Source	Redundant LED (RGB)
Light Source Service Life	≤ 100,000 hrs.
Brightness	470 cd/m2 bright mode 360 cd/m2 normal mode 260 cd/m2 eco mode 70 cd/m2 advanced eco mode
Contrast Ratio	1700: 1
Power Consumption	79 W in advanced eco mode 102 W in eco mode 127 W in normal mode 174 W in bright mode

DLP™ and Digital Light Processing are trademarks of Texas Instruments.

INSTALLATION & RESULTS

Thanks to thorough preparations, excellent teamwork between Mitsubishi, KLM and AVEX, and tight scheduling, AVEX technicians completed the replacement of the old video wall projectors

with fifteen Mitsubishi Universal Upgrade engines in just three days, including final set-up adjustments, causing minimal disruption to the OCC's vital operations. Along with the new projectors and image processing, a new Crestron touch panel interface provided the Duty Manager Operations with a single point of control to simplify operation of the video wall.

The installation was successfully completed on schedule, achieving an immediate and remarkable improvement in both performance and operational efficiency. Along with greatly improved image quality, thanks to Mitsubishi's colour space control and digital graduation circuitry, the LED engines are 65% more energy efficient than the lamps they replaced. As the LED systems require less cooling they have a reduced effective power consumption. Particularly in the case of such a large video wall, heat emissions have reduced considerably, resulting in a tangible improvement in the ambient temperature from day one.

On completion of the project, AVEX compiled a delivery report on the key performance metrics specified by KLM at the commencement of the project, covering brightness, light output, electricity/power consumption and heat emission readings. Measurements taken before and after the upgrade provide conclusive proof of the dramatic improvements in performance and cost-efficiency made possible by Mitsubishi Electric Universal Upgrade engines.

CUSTOMER REACTION

"AVEX/Mitsubishi prepared thoroughly for the replacement of the video wall, then performed the work highly competently. We are highly satisfied with both the level of cooperation and the end result. The video wall displays an excellent picture, while yielding substantial energy savings, which is in keeping with KLM's CSR objectives."

UNIVERSAL UPGRADE ENGINES FROM MITSUBISHI ELECTRIC

Mitsubishi Electric's Upgrade models are available for almost all brands of DLP cubes manufactured over the last 15 years, enabling owners of all legacy mercury lamp systems to easily upgrade to the latest LED technology, quickly and efficiently.

Universal Upgrade Engines employ state-of-the-art LED illumination but are designed as direct, slot-in replacements for older technologies, based on exactly the same physical architecture to ensure 100% compatibility with existing systems. Upgrading to Seventy Series from Mitsubishi Electric delivers not only the latest high brightness LED performance - and in some cases increased resolution - but dramatic savings in the total cost of ownership and the extension of the operational lifespan of existing facilities by over a decade.