



PARTNER:

Barco

INDUSTRY:

Display & Imaging Technologies
(Healthcare)

AMD TECHNOLOGIES AT A GLANCE:

AMD FirePro™ GPUs

AMD | Barco Case Study —

Enabling Precision, Where It's Needed Most

HOW FEWER MONITORS ENABLE DOCTORS TO HELP MORE PATIENTS

A powerful design for medical displays revolutionizes diagnostic imaging and the assessment of patient information—enhancing workflow and quality of care.

Any radiologist will tell you that seeing in greater detail helps them do their job better. Their daily routine typically relies on them sitting at a workstation with anywhere from three to six display monitors—comparing images and looking for anomalies to make diagnoses.

As a determining factor in a radiologist's efficiency, diagnostic displays are essential tools for ensuring quality of care. Barco's prowess with cutting-edge display design, the desire to make acute improvements in day-to-day medical operations, and AMD's industry-leading graphics technologies have proven to be a powerful combination

Inspired by this pressing need, Barco developed a groundbreaking solution—the largest radiology display form factor on the market today boasting 12-megapixels, designed to match a radiologist's natural field of vision. With the concept of "one display, any image," the Coronis Uniti® provides a single monitor suitable for all of a radiologist's reading environments—from a standard x-ray to digital mammography.

GRAPHICS POWER FOR GREATER DETAIL AND CAPABILITIES

To help them achieve this single-monitor vision, Barco uses AMD technology. In a system equipped with an AMD FirePro™ GPU and a Barco-customized driver, the Coronis Uniti provides 30-bit color image rendering on a 33-inch screen with 12-megapixel resolution. To replace the need for multiple single-function displays, its capabilities encompass rendering high-quality grayscale as well as calibrated color and fused modalities, including 2D/3D and static/dynamic imaging features. Its super bright display illuminates minuscule details to support a more exact diagnosis.



AMD FirePro™ professional graphics cards are designed to efficiently balance compute-intensive workloads, including 3D imaging. These professional-class GPUs offer ultra-high geometry performance and smooth handling of complex models.

IMPROVING PRODUCTIVITY AND ERGONOMICS

While patient health is what ultimately drives their work, doctors also are acutely aware of how their own eye and neck strain can affect quality of care. Looking back and forth between the various monitors that support the different types and formats of medical images—hour after hour, day after day—can have an impact on physician performance.

The Coronis Uniti is the first display to combine PACS (picture archiving and communication system) and breast imaging for mammograms on one workstation. It replaces all display configurations and eliminates the need for a multi-display set-up or having to move to another workstation to view additional exams. This helps health professionals focus their attention and work more efficiently while helping reduce eye strain and repetitive motion fatigue.

What's more, radiologists can even use the display as a type of lightbox to help them view and compare older x-ray film. In the past, doctors would attach the film to a lightbox on the wall, look at it, then walk back to look at the current digital x-ray on a monitor to make a comparison. With Coronis Uniti, doctors can clip the film to the display itself for side-by-side comparison—improving both ergonomics and workflow efficiency.

SHINING A SPOTLIGHT ON DOCTORS' NEEDS

For radiologists to improve their outcomes, they would also need specific functionality to help them do their jobs better. To develop these new capabilities, Barco didn't just ask radiologists what they wanted. They also observed doctors within clinical environments to identify problem areas that could be addressed via product development.

"We have developed a tool for all of our diagnostic display systems called SpotView™. When you enable it, the whole display turns dim except for one single spot, where it brightens the pixels and enhances the contrast to see more detail. The first time I showed it to a radiologist, he said he had wanted something like this for decades," says Becky Kiichle-Gross, Barco's Product Manager for Display Controllers.

According to Kiichle-Gross, understanding the needs of radiologists has been a key to unlocking fuller capabilities of the technologies.

SOLVING PROBLEMS, SAVING LIVES

Diagnostic displays play an essential role in radiological practices. To help doctors provide the best possible care to patients, Barco designs display systems for acute improvements in day-to-day medical operations—and AMD's industry-leading graphics solutions help make that possible. The Coronis Uniti's ground-breaking design and features reflect a visionary understanding of the future of diagnostic imaging—better, faster diagnoses and improved outcomes for more patients. Because that's what everyone cares about most.

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