

Multi-Signal Converter enables Gisela Hospital the re-use of an analog sonographic scanner



The Customer

Gisela Hospital is a charitable humanitarian project providing basic health-care for destitute and underprivileged people in Habiganj, Bangladesh. Initially established as an eye clinic, emergency rooms for outpatients and a nurses' training center were added later.

Built by a local NGO called C-RUD (Committee for Rural and Urban Development) with the support of a fund-raising project organized by German doctors, the hospital is now under local control. All medical equipment has been procured through financial and product donations, including a huge amount of surplus medical equipment including ophthalmologic instruments, tools, laboratory and diagnostic units, donated by German hospitals and medical practices.

The Challenge

To reuse an older ophthalmologic diagnostic sonographic scanner in conjunction with a modern, space and weight-reduced flatscreen monitor, the hospital needed a solution for lossless conversion of high-resolution analog video signals to digital signals. The device offers analog video outputs for S-Video and RGB. The sonographic scanner enables the display of imaging diagnostics and biometrics. The scanner can be focused on a small target resulting in

excellent detail. For optimum display of the high-res graphic material it is advantageous to use a large monitor; with lossless signal conversion to maximize image quality.

Transporting an old, heavy cathode ray tube screen would have created logistic difficulties and high transport costs. It would have to be sent to Bangladesh and then carried to the hospital on inaccessible terrain by foot. Future maintenance and repair of the monitor would be practically impossible in that region because older technology is unknown there.

The sonographic scanner is now working faultlessly and will remain up-to-date for a long time. It is the same technology that is being used in many European hospitals and Gisela Hospital is profiting from the fact that in Germany operational products are frequently replaced by newer devices.



The Solution

A solution for the complex requirement was found in IHSE's multi-signal converter K238-5VE. The device enables conversion of all relevant analog signals including S-Video and RGB to digital DVI signals. That makes it possible to continue using legacy equipment based on analog standards in graphics in conjunction with modern displays like TFT monitors or digital video projectors. The

converter automatically recognizes all regular VGA resolutions up to 1920 x 1200. Incoming signals can be scaled to a selectable format. In this case, ultrasound images are displayed at full size and without distortion on the monitor – naturally without any delay or annoying video artifacts.

The multi-signal converter delivers a high level of investment security, extending the lifetime of legacy machines by enabling continuous use in conjunction with up-to-date monitors; a feature that is also ecologically beneficial.

Since Gisela Hospital is an important charity project, IHSE decided to donate the converter to the hospital.

“It was clear from the start that we wanted to support the project. If our converter enables an old medical instrument to be reused for charity purposes and perhaps even save lives, this really makes us proud.”

Markus Drautz, Sales Director of IHSE

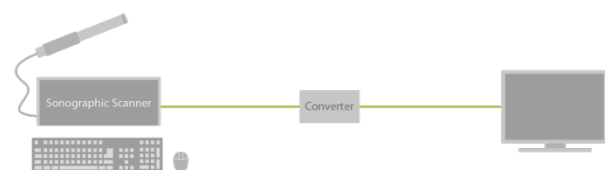
The Benefit

The IHSE converter enables the replacement of a legacy monitor by a new, lightweight flat screen monitor, requiring less space despite a far larger screen size. Furthermore, the new monitor offers better contrast and much more detailed display of ultrasound images.

As a result of the converter integration, pathological detail of organs can be viewed in high detail on the screen. Serious diseases can be diagnosed at an early stage. For mission-critical applications in the medical sector, where technology can affect life or death decisions, resilience and reliability of the equipment are of central importance.

“IHSE’s conversion solution is invaluable to us. Modern medicine is dependent on leading technology. Whenever it is about human beings and their participation in life we must not tolerate any inferior solutions.”

*Dr. Gisela Swoboda,
Founder of Gisela Hospital*



Functional Diagram

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