HDBaseT for Healthcare: Optimizing the Digital Operating Room

The Digital Operating Room

Technology has the potential to improve medical procedures and education of those outside of the operating room. Surgeons can benefit from operating with the highest possible quality video image, that precisely and accurately represents the procedure. On the one hand, the advent of medical-grade visualization systems can help improve procedural workflow. On the other hand, such systems drive new requirements for advanced, high-bandwidth connectivity, offering increased video performance. For imaging to be medical-grade, reliable connectivity solutions must guarantee near-zero video latency, high image quality, simplicity, and complete interoperability between various sources and displays.

Connectivity for the Digital Operating Room

During surgical and medical procedures, decisions and techniques can be critically time-sensitive. To help maximize workflow efficiency, operating rooms need to utilize the most advanced digital platforms. Imaging systems and monitors must connect easily and seamlessly to generate accurate and reliable visualization. Such visualization is not only used to collect data for training, broadcasting and analysis purposes, but also to allow surgeons to conduct minimally invasive endoscopic procedures.

Common Challenges for the Digital Operating Room

- **Performance & Reliability:** In the operating room, quality and performance cannot be compromised. Whether using diagnostic imaging systems such as MRIs, displaying x-rays, or conducting endoscopic surgery, medical professionals need real-time reliable information, where high resolution and color correctness are essential. Visualization in the operating room requires the best possible quality to capture and reproduce images accurately, with no loss of visual information.

- **System Integration:** The integrated operating room presents new challenges for managing various medical imaging technologies using different formats and connectors. Universal video format conversion and easy connectivity among devices is a must to maximize the benefits of the integrated OR.

- **Lack of Space:** During many procedures, the medical team and a wide range of equipment are confined to a small work area. With the proliferation of hi-tech video imaging bringing more devices and cable clutter into the OR, workflow efficiency is a growing challenge and space is at a premium.

HDBT

Coffee Break

Take 15 minutes with HDBaseT and simplify AV connectivity

The HDBaseT Difference

HDBaseT is the **one-cable solution for the healthcare sector.** HDBaseT technology allows for the convergent delivery of the 5Play feature set: ultra-high-definition audio & video, Ethernet, controls, USB 2.0 and up to 100W of power over a single LAN (Cat6 or above) cable or optical fiber.

- **Best Possible Performance:** HDBaseT is the global standard for delivering ultra-high-definition video, enabling the best possible quality image with near-zero latency. HDBaseT delivers an advanced connectivity solution that meets the high standards of medical-grade visualization technologies.

- **System Interoperability:** HDBaseT technology can easily connect different devices, allowing seamless video transmission, while handling different formats, and input or output types , such as 3G-SDI, DVI, HDMI, DP; that can be transmitted over a long distance.

- **Simplicity & Cabling:** The HDBaseT 5Play feature set simplifies the overall infrastructure by using a simple LAN or optical fiber cable. This means reducing cable clutter without compromising performance or features for an optimized medical environment.

Source		Scaler	OR Processor/ Switcher	Display

3G-SDI / DP / DVI-D / HDMI

HDBaseT Up to 100m

HDBaseT Up to 100m