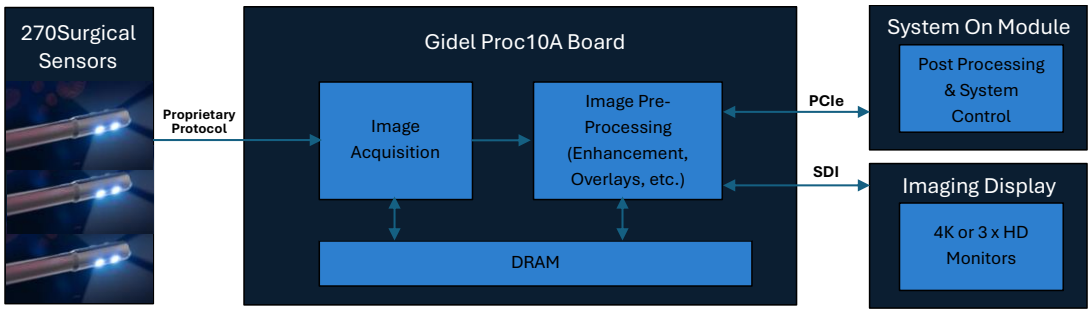
Enabling Innovation: Gidel's Contribution to 270 Surgical's Imaging System

270 Surgical's **SURROUND SCOPE™ laparoscopic system**, which provides an expansive 270° field of view, exemplifies cutting-edge advancements in surgical visualization. A key enabler of this breakthrough technology is **Gidel's Proc10A**, an FPGA-based system designed for **grabbing and image processing**, integrated into the SURROUND SCOPE™ platform.



Efficient Data Handling and High-Quality Video Output

The Proc10A plays a critical role by managing high-speed data acquisition and processing from the system's imaging sensors. Connected to a compact System on Module (SOM) running Linux via a PCIe interface, it ensures smooth and efficient data handling. This architecture allows the Proc10A to deliver uncompressed 4K or 3 x HD video outputs over 12G-SDI with exceptionally low latency, a feature vital for the precision and clarity demanded in surgical applications.

Advanced DRAM Utilization and Real-Time Image Overlays

One of Gidel's most impactful contributions to 270 Surgical's system is its innovative approach to DRAM utilization. By leveraging Gidel's architecture, the Proc10A efficiently organizes memory to support real-time features like image overlays. These overlays enhance the visualization experience for surgeons, providing critical contextual information during procedures. Furthermore, Gidel provided enveloping templates that allowed 270 Surgical to implement their proprietary image processing algorithms and map DRAM usage effectively. This support not only reduced development time but also ensured that the system could operate with maximum efficiency and reliability.

Gidel's Technology in Medical Imaging

The collaboration with 270 Surgical highlights why Gidel's technology is particularly suited to the medical imaging field. Its FPGA-based design offers unparalleled flexibility and customization, allowing it to meet the unique demands of medical imaging systems. The ability to handle high-speed camera feeds, process images in real time, and output uncompressed or compressed, high-resolution video ensures that critical details are preserved. Additionally, the system's compact size and low power consumption make it an excellent fit for space- and energy-sensitive medical environments.

Driving Medical Imaging Innovation

Gidel's work with 270 Surgical demonstrates how advanced image processing technologies can be tailored to address specific needs in medical imaging. By enabling real-time, high-quality imaging with features like overlays and efficient data handling, Gidel is contributing to safer, more effective surgical procedures and setting a new standard for medical imaging systems.

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