Partnership Success Leads to Technology Success for Endoscopic Products

Recognizing potential synergies and maintaining close relationships with technology experts is proving to be a successful equation in medical device manufacturing. This article examines how it is impacting the endoscopic marketplace, specifically examining one technology supplier.

By Fred Calnan

Minimally invasive techniques have revolutionized healthcare by reducing extensive cutting, bleeding, and long periods of healing for many types of surgery. The procedures would not have advanced as quickly as they did without micro-optical imaging and visualization. These are critical enabling technologies that provide surgeons with a direct view of the diseased organ or tissue as they operate. Through customized visualization solutions, companies are providing imaging tools that are used in almost every type of minimally invasive procedure.

Viking Medical Technologies develops the endoscopic technology that is then branded under the label of its partner.

The adoption of rigid endoscopes to visualize internal parts of the body was the first great advance in minimally invasive surgery. This was followed by the use of x-rays

or fluoroscopy for diagnostic procedures. One of the latest improvements has been the adoption of micro-optical scopes for direct visualization. These imaging tools provide surgeons with the best possible view of the surgical field in real time. Details that may not have been obvious through standard diagnostic imaging are thereby available at the point and time of care. Today, companies work directly with leading medical device manufacturers to design specialized micro-optical scopes for procedure-specific surgical equipment. One example of this type of successful partnership can be observed with Viking Medical Technologies.

Viking Medical Technologies provides Viking Surgical, its sister company, with a 3D Vision System, which Viking Surgical sells to hospitals and clinics worldwide. Through this division, Viking markets the Viking 3Di Vision System for 3D laparoscopic surgery. This device provides a full, rich, three-dimensional, high-definition view during minimally invasive procedures.

Product Innovations

Building on its success and experience with the 3Di Vision System, Viking Medical Technologies works closely with top medical device companies to create customized surgical imaging systems under the customers’ own brands. For these customers, the OEM division designs and manufactures high-definition cameras, single- and three-chip cameras, accessories, and 3D visualization systems. Cameras are customized to precise specifications, depending on the application and projected market.

Minimally invasive surgery demands the highest level of detail for imaging and visualization. Anyone browsing televisions and camcorders in an electronics shop today knows that high-definition (HD) is the future of consumer video products. Why should surgeons settle for anything less in a camera-guided surgical system? Using a standard camera during minimally-invasive surgery strains the ability of the surgeon to do his job. Recognizing that HD imaging is the future, Viking OEM offers a customizable HD camera system for companies wanting to keep pace with this technology.

The HD product is a true HDTV camera with outputs up to 1080p in HD SDI format. The camera head is configurable with a standard “C” mount or integral zoom coupler for detail visualization without the resolution loss associated with digital zoom.

The company also offers a three-chip camera featuring several networking options for integrating the camera into a complete tower control strategy. This camera, brand-labeled by some of the world's leading endoscopy companies, features a user-friendly interface and presents almost no learning curve. “Soft mount” technology adds reliability and longevity.

Single-chip cameras, which provide excellent color reproduction, are used in various camera head configurations, allowing one camera control unit to operate in different modes, depending on the application.

In addition to camera systems, a full range of imaging-related accessories are

available, including a powerful xenon light source at 300 W or 150 W power ratings, custom or standard light cables, couplers (varying focal length, C- or V-mount), micro-optical scopes with matching optics for specific applications, and personal head displays with up to XVGA resolution.

Branding a Partner's Technology

Medical device manufacturers need to establish a relationship with a supplier that is experienced in successfully providing advanced surgical imaging systems. Startup device companies lacking internal engineering and development capability will enjoy the advantages offered through the OEM services of this partner, enabling them to compete on an equal basis with leading companies providing surgical imaging systems to the marketplace.

In the case of Viking, the company's Original Design Manufacturer (ODM) development model greatly reduces the costs and risks of an internal development program. Through this business model, Viking allocates engineering and development costs among all companies that place their brand name on the core product. Manufacturers enjoy several downstream options for differentiating their system once the base model is produced. The ODM model is not new to high-tech electronics; it has been successfully employed by consumer electronics companies in the past.

Conclusion

Viking is only one example of what a strong relationship with an established endoscopic technologies supplier can offer to Fortune 500 medical device companies through to start-ups and virtual firms. It is this partnership that enables the company serving the healthcare customer to concentrate its time on its core competencies in bringing the device to market while relying on the technology expert to aid in the design, development, and manufacture of the final endoscopic product.

ONLINE

For additional information on the technologies and products discussed in this article, visit Viking Medical Technologies at www.vikingsystems.com/vmt/default.html [1].
Top shot:

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