

Carl Zeiss' MultiVision™

The power to bring it all together



endoscopy

image guidance

MultiVision

ultrasound

microscopy





MultiVision

Harnessing the surgical information revolution

Over the course of the last decade, an information and technology revolution has taken place in the operating room. The availability of image guided systems, advanced nerve monitoring, digital ultrasound and miniaturized, high-resolution endoscopes has significantly impacted surgical techniques, advanced the standard of cranial care and helped to improve surgical outcomes.

As beneficial as these innovations have been, they were generally developed as individual solutions, often placing a strain on the surgical workflow and increasingly encroaching on the very limited space available close to the surgical site.

OPMI® Neuro - your microsurgical cockpit

The one surgical tool used in virtually all modern cranial procedures is the surgical microscope. It represents a unique platform with ideal prerequisites for ergonomically merging this wealth of new information. For example, by bringing an endoscope's video image into the microscope, the surgeon no longer has to look away from the OPMI when viewing the critical information this instrument provides.

MultiVision's flexible design just as easily permits the display of ultrasound, image guided or monitoring information. Bringing all of these modern technologies together enables them to be used effectively in parallel. The OPMI Neuro is transformed from simply a microscope to a surgical cockpit.

Endoscopic assisted craniotomy

MultiVision's benefits are perfectly demonstrated in the increasingly popular endoscopic assisted craniotomy application for skull base and vascular surgery. A typical combined application, however, requires bringing the endoscopic tower close to the surgical field, a significant challenge in most ORs. During the case, viewing the endoscopic image requires the surgeon to look up from the microscope. Using MultiVision solves both of these issues: the tower can be located away from the field, and viewing the endoscope at any time requires no more than a tap of the foot pedal. The OPMI's ocular instantly becomes a brilliant monitor showing the surgeon the endoscope image with all of the detail and clarity otherwise found on the video screen.



Switching between MultiVision's display modes is as easy as pushing a button - either on the handgrip or the simple-to-use foot switch.

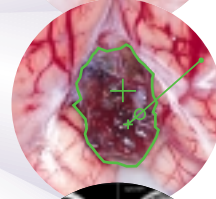




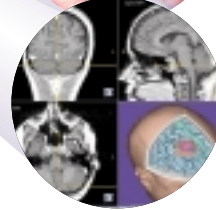
Brilliant Carl Zeiss Optics



Endoscopic Image Injection



Superimposing of IGS Information



Injection of Diagnostic Data

Your choice - one system,
unlimited possibilities

Unique to MultiVision is the ability to directly accept both video and computer signals. This combination offers tremendous flexibility and allows the system to be custom tailored to individual surgical needs on a case-by-case basis. Simply plug in what is needed and go!

Image injection - a monitor right in the surgical field

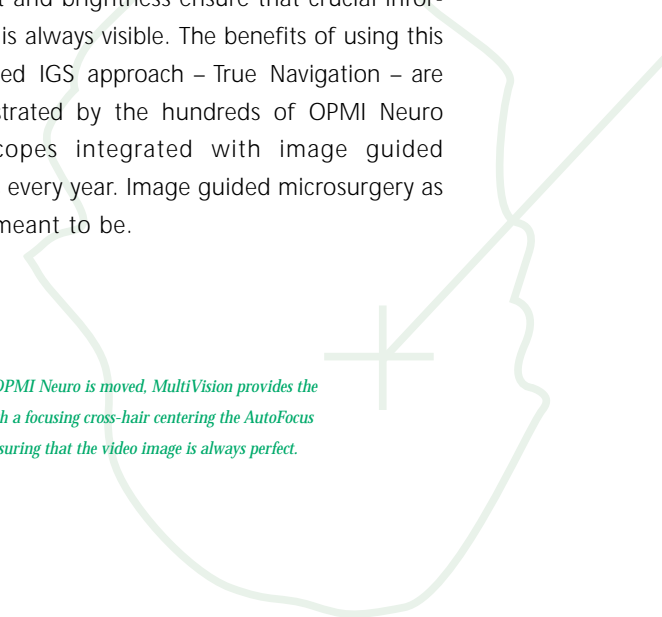
As the name implies, image injection provides the surgical team the ability to inject any video image into the surgeon's eyepiece. The regular microscopic view is turned off and replaced by a razor-sharp, crystal-clear video image. The renowned Carl Zeiss optics and unique, high resolution display technology at the heart of MultiVision provides a picture that leaves nothing to be desired. By supporting any video source the options are virtually endless: endoscopes, ultrasound, CT and MR diagnostic images, patient monitoring or even today's sports highlights are but a few examples.

Flexible configuration of the system allows the surgeon to choose between just the injected image or a combination of the injected image and the patient anatomy.

Superimposing - bringing virtual reality to the OR

A further optimized version of Carl Zeiss' already renowned superimposing technology is MultiVision's second method of presenting information. The surgeon continues to view the patient anatomy while selected information, typically from image guidance systems, is superimposed. Examples of such overlays are tumor contours or navigational cues indicating the location of key pathology. Regardless of what is being superimposed, MultiVision's unmatched contrast and brightness ensure that crucial information is always visible. The benefits of using this integrated IGS approach - True Navigation - are demonstrated by the hundreds of OPMI Neuro microscopes integrated with image guided systems every year. Image guided microsurgery as it was meant to be.

When the OPMI Neuro is moved, MultiVision provides the surgeon with a focusing cross-hair centering the AutoFocus and also ensuring that the video image is always perfect.





The unique LCOS microdisplay, smaller than the tip of a pen, provides MultiVision's incredible razor-sharp, crystal-clear video images.



MultiVision is an option for either the NC 4 Ceiling Mount (above) or the NC 4 Floorstand (right). A package is also available for upgrading installed systems.



benefits

MultiVision benefits include

- Cutting edge, high resolution microdisplay technology.
- Flexible design allows the surgical team complete configuration freedom.
- Perfectly integrated – no cumbersome or limiting external accessories.
- Crisp, beautiful images with outstanding contrast, color reproduction and brilliance.
- Controlled by a single, easy-to-use button or foot switch.
- Superimposing of diagnostic and planning data from all major image guided systems.
- Image injection of any NTSC or PAL video signal.

Technical specifications

Image Injection Mode

Color: True Color

Format: Standard NTSC or PAL automatically detected

Connector: Y/C Mini DIN

Superimposing Mode

Color: Monochromatic Ultra-High Intensity Green

Format: Standard SVGA (800 x 600 Pixels) at 60 Hz

Connector: Carl Zeiss IGS Connector

IGS Support: All major systems. Please contact Carl Zeiss for a current list of partners.

Please also see the OPMI Neuro/NC 4 System and NC 4 Ceiling Mount brochures for complete package details.

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