The Digital Microscope Platform
Heads-up Surgery™ with Integrated Applications
“I now routinely use heads-up 3D surgery in all my retinal and cataract cases, and I believe many surgeons will perform ophthalmic surgery this way within five years. The implication for digital imaging, beyond the obvious ergonomic benefit, is far reaching. This digital image quality is extremely impressive, even at low light levels used in posterior segment procedures.”

Prof. Dr. Med. Claus Eckardt, surgeon and professor of ophthalmology, Klinikum Frankfurt Höchst, Frankfurt, Germany
The TrueVision Digital Microscope Platform quickly turns an optical microscope into a powerful digital imaging system designed to improve patient outcomes and promote surgeon comfort. Intended for anterior, posterior, glaucoma or refractive procedures the plug-and-play system can be integrated into an existing suite or included in the creation of a new system.

Available in both Portable Cart or Integrated System configurations the comprehensive platform consists of a multi-faceted visualization system, surgical applications and the ability to integrate and interface with OR data and surgical systems technologies.

**PORTABLE 3D VISUALIZATION SYSTEM**

Our Portable System incorporates patented technologies into a small-footprint system, ideal for any size OR or surgery center.

Lightweight and easily moved, the medical-grade cart houses and conceals the Compact Image Processing Unit and its proprietary software, supports a range of 3D flat panel displays and provides storage for 3D glasses, cables and accessories.

Modularly designed, the system easily integrates with external imaging or data systems.

**Platform Components**

- 3D Surgical Camera (High Dynamic Range)
- Compact 3D Image Processing Unit (CIPU)
- 1080p 3D Flat Panel Display
- TrueWare® 3D Imaging OS
- TrueVideo 100+ Hours Recording
- TrueEdit® 3D Video Editing Software
- TrueBridge to Link Camera and Oculars
- Medical-Grade Portable Cart

**INTEGRATED 3D VISUALIZATION SYSTEM**

The Integrated 3D Visualization System is seamlessly assimilated into Leica Microsystems’ popular 844 and 822 surgical microscopes. The combined best-in-class technologies create a small footprint system, ideal for any size OR or surgery center.

The system is modularly designed allowing for easy upgrade or integration with external digital imaging or data systems.

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VISUALIZATION

The heart of the TrueVision Digital Microscope is our award winning visualization system known for its unprecedented image quality that closely mirrors the microscope oculars.

The visualization system is composed of a patented fifth generation image capture module (ICM5 camera), proprietary software and compact processing unit that includes 2- and 3D streaming video.

5th Generation Image Capture Technology (ICM™5)

The ICM™5 3D high dynamic range camera attaches to all leading surgical microscopes including Leica, Zeiss, Möller-Wedel, Alcon and more.

Developed from the ground up using surgeon input and market data, ICM™5 leads the industry in image quality, resolution, light balance capability and brightness and does not require alignment, focus or synchronization. ICM™5’s image quality outperforms competing 1080p cameras and so closely mirrors the oculars that surgeons can operate heads up right out of the box.

TrueWare® Proprietary Software and Compact Image Processing Unit (CIPU)

The visualization system’s proprietary and patented software streams in either 2- or 3D to one or more 3D flat panel displays.

With an impressive latency of less than 80 milliseconds and state of the art image correction and calibration, TrueWare provides unmatched visualization and processing power.

TrueWare captures up to 100 hours of high definition video which can be quickly edited using the system’s best-in-class TrueEdit® software. TrueEdit is intuitive and easy to use and includes movie editing, image organizing, text overlay, transition, fade and single image capture.
APPLICATIONS

**TruePlan™**

TruePlan collects, stores, and processes variables related to eye surgery to generate a customized surgical plan with targeted refractive outcomes.

The customized plan is transmitted to the TrueGuide intraoperative surgery system to generate guidance templates for lens alignment and incision placement.

**TrueGuide®**

TrueGuide® is a state of the art, patented guidance technology designed to improve patient outcomes and at the same time allow for more comfortable heads-up surgical procedures. Templates appear on the live surgical field of view to aid surgeons in navigating IOL alignment and centration, LRI incisions, AK and much more.

Completely customizable, the TrueGuide application is personalized to the patient and specific to surgeons’ preferences. TrueGuide fits into the flow of a premium practice interfacing at all levels, from pre-op to post-op.

In addition to excellent alignment and incision guidance, TrueGuide’s placement on one or more OR flat panel screens allows an ergonomically superior heads up capability which is more comfortable for the surgeon and allows easy projection of the surgical field of view to OR staff.

Since its recent introduction, surgeons all over the world have reported positive results during procedures where TrueGuide was employed. (see Jonathan Solomon’s results, left)

**TrueEdit®**

The best in class TrueEdit® 3D video editing software is intended to quickly and easily assist surgeons and staff in compressing and collecting up to 100 hours of recorded procedures.

TrueEdit’s intuitive and easy to use feature set is second to none with text overlay, zoom, fade, image organizer and other editing capabilities.
“Integration is an important component in our practice. We can most effectively serve patients by mixing and matching the best technologies in the industry. With the Digital Microscope Platform we easily integrated with existing equipment and have seen amazing results including improvements in astigmatic outcomes.”

Jonathan D. Solomon, M.D.
Director, Refractive / Cataract Surgery, Solomon Eye Physicians & Surgeons
INTEGRATION

Substantial Integration Capability Creates Best in Class Collection

The Digital Microscope Platform is designed with customization in mind. The platform easily integrates into a practice’s existing digital equipment and external data systems or helps create a brand new, best-in-class surgery system that integrates with:

- Electronic Medical Records (EMR)
- All Leading Surgical Microscopes
- Optical Coherence Tomography (OCT)
- Aberrometers
- Phaco Machines
- Femtosecond Lasers
- Excimer Lasers
- Topographers