



[www.tecnomeditalia.com](http://www.tecnomeditalia.com)



# FALKO 3D SYSTEM

# A GLIMPSE INTO THE FUTURE



Digitalization is profoundly transforming the medical sector, reshaping the delivery of care, enhancing operational efficiency, introducing new collaborative methods and enriching the educational experience. Technologies such as Augmented Reality (AR), Mixed Reality (MR) and telementoring are redefining how medical and surgical procedures are planned and executed. Digitalizing is not merely a response to ongoing changes but a proactive strategy to anticipate the future and gain tangible advantages in terms of quality, efficiency and competitiveness. For clinics, hospitals and universities, adopting digitalization represents a decisive step toward a more connected and technologically advanced healthcare system. This investment improves internal organization, reduces errors, strengthens data security and optimizes processes, enhancing both care services and education. It is a strategic choice that elevates the competitiveness of institutions, preparing them to better face the challenges of an ever-evolving medical sector. The FALCO 3D visor is specifically designed for medical applications, surpassing the limitations of commercial visors. It facilitates medical training, enhances communication with patients and combines advanced technology with ergonomic design for optimal operational efficiency in maxillofacial, endodontic and prosthetic fields.

## KEY FEATURES:

- **COMPLIANCE WITH MEDICAL STANDARDS** - Adheres to MDR standards, ensuring safety and reliability in medical procedures
- **ERGONOMIC DESIGN** - Provides superior comfort during long surgical procedures with a medical-grade helmet featuring a “flip-up” system and customizable adjustments, reducing visual fatigue and improving posture.
- **INTEGRATION WITH DIAGNOSTIC SYSTEMS** - Compatible with a wide range of diagnostic imaging devices, enhancing operational precision while keeping focus on the patient.
- **EXCLUSIVE FEATURES FOR MEDICAL ENVIRONMENTS** - Includes innovative functionalities such as head-controlled cursor management, wireless foot pedal and hands-free interaction.
- **STABILITY AND SAFETY** - Designed to minimize latency and prevent motion sickness, making it ideal for extended operations.
- **SUPPORT FOR COLLABORATION AND TRAINING** - Optimizes collaboration between surgeons and assistants and supports remote training with instant annotations and sharing, elevating the quality of medical education.

## APPLICATION AREAS



**Clinical Setting-** Images, making it easier to explain conditions and procedures to patients. Its compatibility with 2D/3D microscopes, 3D scanners, and cameras enhances diagnostic precision, reduces visual strain and improves the practitioner's posture.



**Surgical Setting-** Ideal for computer-assisted surgeries, the FALCO 3D improves surgical precision while minimizing fatigue and disorientation. Its head-controlled cursor management ensures a sterile interaction with both the device in use and when accessing diagnostic documents and radiological images. The zero-latency feature ensures seamless, real-time visualization.



**Academic Setting-** Perfect for advanced medical education, it allows students to observe real-time procedures. Remote collaboration enables experts to provide immediate feedback, enriching the learning experience. The annotation and image-sharing features facilitate understanding of complex procedures, making education accessible from anywhere.

# FALKO 3D VISOR

## Magnification version



N. 102023000006684  
N. 102023000006690



Medical Device

Designed to adapt to the evolving needs of medical and dental professionals, the FALKO 3D system offers a new standard in clinical visualization and training. The headset features interchangeable 2.5x and 4x lenses, allowing quick magnification adjustments to suit each procedure. Its adjustable working distance—from 30 to 50 cm—combined with a depth of field of approximately 6 cm, ensures fluid hand movements while keeping a stable focus. Weighing only 490 grams, the headset is engineered to reduce nasal pressure and optimize comfort, even during long sessions. The integrated lighting system guarantees consistent, shadow-free illumination throughout all operational phases. Transitioning to digital vision is smooth and progressive: clinicians can alternate between direct and digital views without changing habits or compromising efficiency. This makes it easier to incorporate the system into daily routines, reducing adaptation time and improving overall workflow. FALKO 3D is also a powerful educational tool. Its telementoring features support remote training and immersive learning, making it ideal for universities, research institutes, and clinical workshops. Students can participate in interactive simulations or follow real-time procedures from a distance, gaining hands-on experience in a structured and controlled environment. This advanced approach increases engagement, accelerates learning, and helps future professionals build confidence in complex clinical scenarios.



### OPTICAL CUSTOMIZATION AND EASE OF USE

#### • COMPATIBLE WITH OR WITHOUT PRESCRIPTION GLASSES

FALKO 3D features diopter adjustment to compensate for myopia and supports the integration of a custom optical frame to correct astigmatism and hyperopia. The adjustable viewing angle allows the system to be comfortably worn over standard prescription glasses.

#### • ERGONOMIC POSTURE

The integrated 4K micro-camera, adjustable and interchangeable (2.5x and 4x magnification), combined with the tilt adjustment, enables users to precisely define their ideal working distance. This promotes a relaxed, ergonomic posture and helps reduce eye and muscle fatigue.

#### • OPTIMAL FIELD OF VIEW AND ILLUMINATION

With its built-in 32,000 LUX lighting, the light beam remains centered and uniform at all times, ensuring excellent visibility throughout every phase of the procedure.

#### • PLUG & PLAY – NO SOFTWARE OR PC REQUIRED

Simply connect FALKO 3D to its built-in battery (up to 8 hours of autonomy), adjust the focus during initial setup, and start working immediately—no software installation or external PC connection needed.

**Product Code: FK30IDV**

# FALKO 3D VISOR

## Wireless version

- Compatible with all HDMI devices, Windows PCs, Mac and Linux
- Wireless, plug and play
- No software required
- AR-MR technology
- Weight: 460g

LEAN MORE



**Product Code: FK30IDV-D3**



**CONNECT IT TO ALL  
YOUR HDMI DEVICES**





# FALKONNECT 3D

## Processore multimediale



### SEAMLESS SWITCHING

FALKONNECT allows you to manage, select and simultaneously share multiple video signals from a wide range of medical imaging devices, such as cameras, X-ray machines, ultrasounds, microscopes, surgical navigators and much more. It facilitates the distribution of these signals to multiple medical displays or online streaming platforms effortlessly.

FALKONNECT is a multichannel, multi-window video processor that enables simple yet advanced management of video signals from medical imaging devices and their distribution to medical displays or online streaming platforms. With FALKONNECT, doctors have the flexibility to easily switch between incoming imaging devices and select the desired signal to display (up to four simultaneously) without constantly connecting or disconnecting cables.

Additionally, with the "Multi-view" feature, it's possible to view up to two video windows on the same screen, either in Picture-in-Picture or Side-by-Side mode. By directly connecting FALKONNECT to a digital recorder and then to a Windows or Mac PC, users can take photos, record videos in up to 4K resolution, engage in remote medical telecooperation and conduct educational sessions with a large number of participants.

USING IT

#### DR. CLAUDIO FARNARARO

DDS | MSC | ENDODONTIC EXCLUSIVIST

"Until a year ago, I only had my microscope connected to the TV, but now with FALKONNECT, there's a fully functional station that allows me to interact with colleagues, conduct telementoring and provide educational sessions. One particularly interesting feature is the ability to easily switch between two video windows. I can display them simultaneously on the same screen and effortlessly switch between Picture-in-Picture and Side-by-Side modes. The system is extremely intuitive to use and installs easily in the practice, without causing any clutter or interfering with my workflow."

VIDEO



WATCH THE VIDEO OF PROFESSIONALS

USING IT!

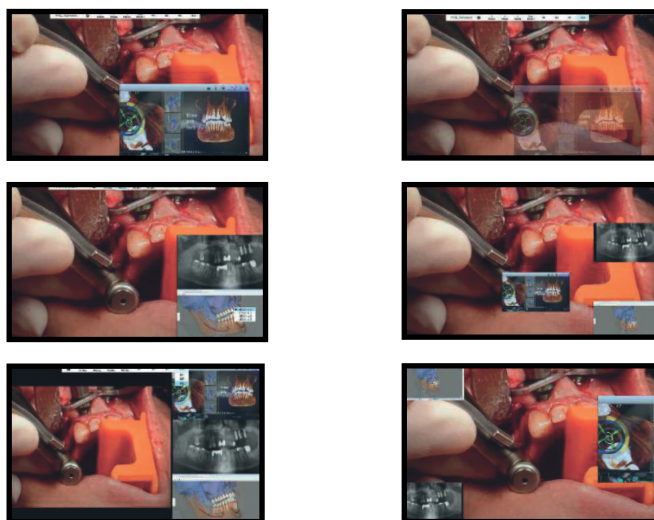
FALKONNECT 3D is a professional-grade video management and control device designed to display multiple high-definition image sources simultaneously on flat-screen TVs, projectors, FALCO headsets, and other visual devices, in a multi-window layout. Built on a pure hardware architecture with no operating system, FALKONNECT 3D operates within a fully closed environment—requiring no computer or additional software. This design ensures exceptional operational stability and plug-and-play simplicity.

Unlike conventional systems that rely on Windows and graphic cards, FALKONNECT 3D offers outstanding video output quality and superior stability. It powers on instantly without any software boot-up, delivering high performance and unmatched reliability. Equipped with four HDMI 2.0 inputs, the device allows users to resize, adjust aspect ratios, and customize video windows with ease.

The HDMI 2.0 output delivers a unified signal for maximum compatibility and can be controlled entirely via mouse and keyboard, enabling:

- Independent resizing of each video window
- Input and output resolutions up to 4K@60Hz
- Multi-window mode with up to 4 images on a single screen
- Simultaneous control of up to 4 computers via mouse, keyboard, or Head Tracking Mouse
- Dual-image and dual-display support
- Loop-through function for direct channel transmission

FALKONNECT 3D is the ideal solution for clinical, surgical, and educational environments that demand seamless visualization and control—delivering a streamlined, high-performance experience.



**Product Code: FK70IDTR**



**LEAN MORE**



## HDD VIDEO RECORDER



**Product Code: DE6.302XR.4**

**LEAN MORE**



4K UHD Digital Video Recorder. Experience true Ultra-HD recording with this 4K UHD digital video recorder specifically designed for medical applications. With a simple HDMI connection, it captures and stores photos and videos at resolutions up to 4K, ensuring that every detail is preserved with maximum clarity.

The removable HDD allows for easy file transfer to any computer system. Ideal for recording photos and videos from medical devices, this recorder supports a variety of resolutions and frame rates to meet your needs. It can be operated using the included remote control or the Esacam Tecnomed remote. Additionally, when connected via USB to a PC, you can view the footage on Windows or Mac camera apps, as well as on Zoom, Meet, Teams and

# OKKIO

## USB - HDMI - 3D

LEAN MORE



### OKKIO: SMART MEDICAL CAMERA

The OKKIO camera line, engineered by Tecnomed Italia, offers advanced visualization solutions, ideal for both surgical and educational environments. Available in 2D USB, 2D HDMI, and 3D versions, these cameras provide high-definition imaging with intuitive operation. The OKKIO 3D version integrates seamlessly with the FALKO 3D system, enhancing diagnostic and operational precision, while the 2D models deliver excellent quality and versatility. With easy remote sharing and collaboration, OKKIO stands out from commercial cameras repurposed for clinical use.

PRODUCT CODE FK900D-	2580KLA	2580HD	3DG25
RESOLUTION	4K	4K	FHD
LENS	25 MM - F8.0	25 MM - F8.0	25 MM - F8.0
FOCUS	Autofocus and manual 650-750 mm	Manual 300-1000 mm	Fixed 380-420 mm
ZOOM	4X	Up to 40X	4X
CONNECTION	USB	HDMI	USB
TYPE	2D	2D	3D
MICROPHONE	Si	No	No



#### OKKIO 3D

OKKIO 3D is a high-definition stereoscopic camera equipped with a 4X optical zoom, fixed focus, integrated light, and a 25 mm lens. Specifically designed to enhance visual performance in clinical, surgical, and educational environments, it delivers a truly immersive 3D viewing experience with realistic depth perception. By improving diagnostic precision and supporting advanced medical training, OKKIO 3D transforms the way professionals visualize, document, and share procedures.



#### OKKIO 2D HDMI

OKKIO 2D HDMI is a high-performance 4K medical camera featuring 4X optical zoom, up to 40X digital zoom, and manual focus control. Designed for clinical, surgical, and educational settings that demand real-time visual precision on external monitors, it ensures accurate and detailed imaging during procedures. The HDMI connection enables direct, smooth, and latency-free video transmission. Available with a 16 mm or 25 mm lens, with or without integrated lighting, to suit different operational needs.



#### OKKIO 2D MICRO USB

OKKIO 2D Micro USB is a compact 4K medical camera equipped with 4X optical zoom, autofocus or manual focus options, and a built-in microphone. Ideal for medical practices and educational environments, it offers a streamlined solution for high-quality image and sound capture. The USB connection allows for simple and immediate simultaneous video and audio transmission to a computer. Available with a 16 mm or 25 mm lens to suit various application needs.



# HEAD TRACKING MOUSE

LEAN MORE



The Head Tracking Mouse revolutionizes the daily management of your dental practice by streamlining data entry into any dental software.

This innovative device allows you to control your computer entirely through head movements, a foot pedal and voice commands, eliminating the need for a traditional mouse and keyboard. With voice dictation, you can: write texts, transcribe files into patient records, take real-time notes during appointments and even record clinical conversations.

In addition to improving operational efficiency and digitizing processes, the Head Tracking Mouse raises hygiene standards by saving valuable time and resources.

This advanced system allows professionals to focus on more valuable tasks, increasing productivity and profitability in the clinic.



## NO SOFTWARE INSTALLATION REQUIRED

**PLUG-AND-PLAY:** simply connect the receiver to your PC's USB port, attach the Head Tracking Mouse transmitter to your helmet, headset, or glasses frame, position the microphone, press the power button and the system is ready to go!

## COMPATIBLE WITH



VIDEO




### HEAD TRACKING MOUSE - WINDOWS

Product Code: **FK801MTR**

### HEAD TRACKING MOUSE - IOS

Product Code: **FK801MTRM**



 TEL: +39 0721 955125

 [www.tecnomeditalia.com](http://www.tecnomeditalia.com)

TECNOMED ITALIA SRL

Via Salvador Allende n°2

61040

Monte Porzio (PU), ITALY