



Established in 2003, VG Medical, as a global leading valued brand, is specialized in field of OR and ICU, and offers the market with outstanding surgical lights, operating tables, medical ceiling pendant and digital integrated OR overall solution.

VG Medical adheres to the higher standard and practices the principle of quality first with our products feature being safe, effective and cost control centred. The motto "Feels so Good to Save" encourages us to continuously improve and innovate. VG Medical is now dedicated to the balancing of the industry monopoly and provide the world with better and cost worthy surgical products.

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ORPILOT

DIGITAL INTEGRATED OR



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ORPILOT DIGITAL INTEGRATED OR

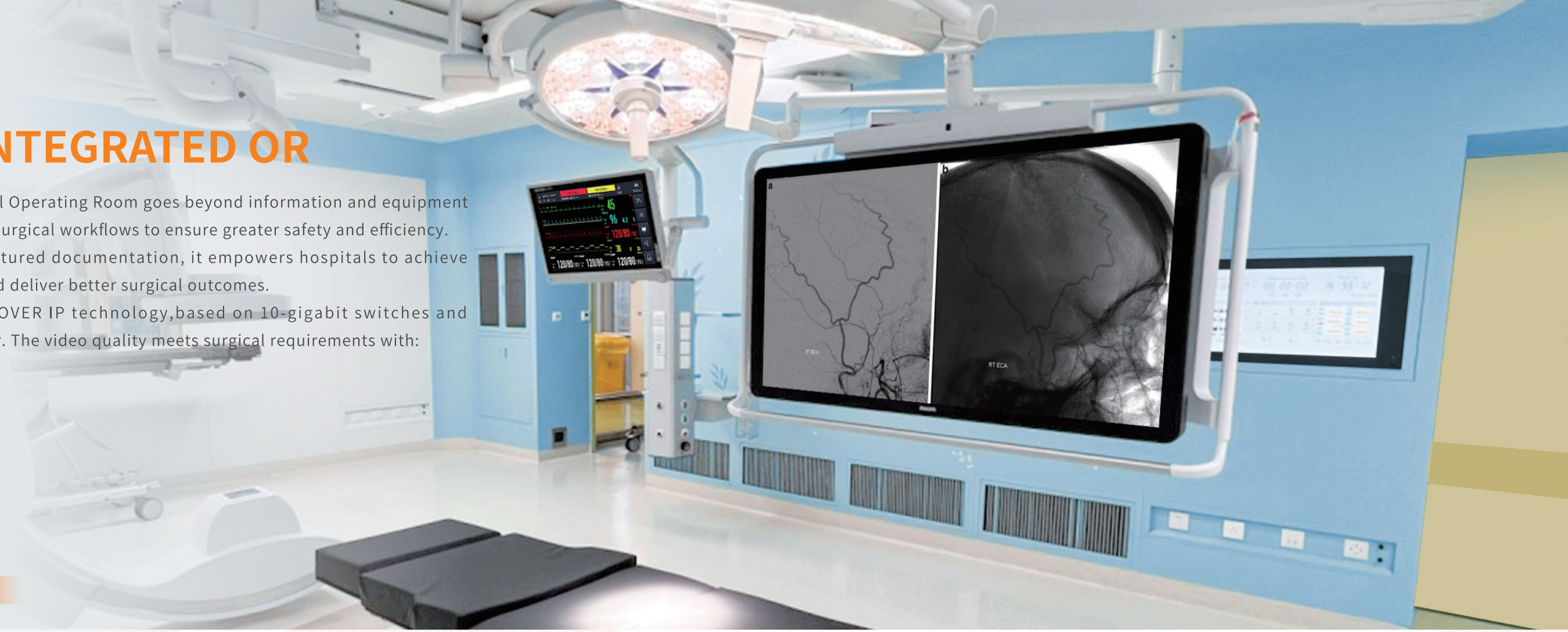
ORPILOT Integrated Digital Operating Room goes beyond information and equipment integration — it redefines surgical workflows to ensure greater safety and efficiency. With visualized and structured documentation, it empowers hospitals to achieve smarter quality control and deliver better surgical outcomes.

ORPILOT adopts the AV OVER IP technology, based on 10-gigabit switches and SDVoE4K Encoder/Decoder. The video quality meets surgical requirements with:

- 4K/3D resolution
- Zero latency
- 4:4:4 color gamut



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SYSTEM COMPOSITION AND FEATURES

01 AV over IP Solution

- Utilizes full fiber-optic network, 10-gigabit switches, and 4K encoders/decoders.

02 4K Encoder/Decoder

- Ultra HD 4K Encoder/Decoder delivering 4K resolution, zero latency, and 4:4:4 color gamut

03 Wall-Embedded Installation

- Flush-mounted display with full glass panel integration and unified embedded cabinet, fully compliant with Architectural Technical Code for Hospital Clean Operating Departments.

04 4K Surgical Field Camera

- 4K surgical camera features image rotation and voice control, ideal for surgical teaching.

05 4K/3D Display

- 4K/3D medical endoscopic display available in 27"/32" sizes, with cable-free boom arm mounting.

06 Data Center

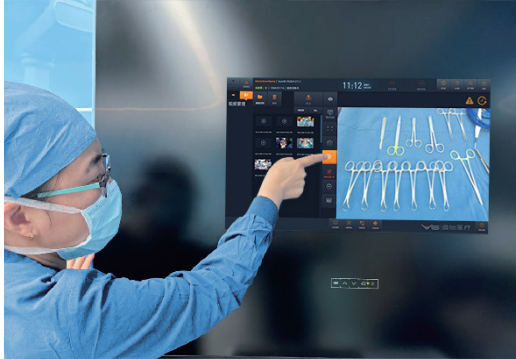
- Employs high-performance multi-server architecture and multiple storage solutions to ensure data security.

FUNCTION INTRODUCTION



Devices Management

- Realize integrated control of panoramic cameras, surgical field cameras, surgical light, and other equipment.



Surgical Instrument Management

- Support full traceability management of reusable surgical instruments and items in the operating room, enabling standardized and regulated management.



Info Integration

- Directly connect to PACS, LIS, HIS, EMR and other systems for data integration and information sharing.



Voice Control

- The integration of voice control for both hardware and software has fundamentally transformed traditional operational models.



3rd Party Safety Check

- 3rd party verification in compliance with WHO standards, and provide input and storage of audio and video.



3D Image Transmission / Recording

- Enables real-time 3D image transmission and recording, providing comprehensive visualization of medical imagery and ensuring holistic data review capabilities.



Video Routing

- Free drag and drop of video sources like 4K surgical field, monitor, ultrasound, 4K endoscope, PACS imaging, etc. to any screen for display.



Integration of High-End Medical Equipment and Advanced Systems

- Serves as a core hub for achieving clinical data interoperability and enhancing precision in surgical diagnosis and treatment. Built on open interface technology, this module offers robust compatibility and scalability, enabling seamless integration with emerging medical technologies and equipment.

TELEPILOT

Surgery Lecturing System



FUNCTION CHARACTERISTIC



High Quality

4K/3D resolution, Zero latency, 4:4:4 color gamut



Professionalism

Utilizes full fiber-optic network, 10-gigabit switches, and 4K encoders/decoders.



Efficiency

Supports integrated workflows across multiple operating rooms and lecture halls.



Multi-Terminal Access

B/S architecture enables simultaneous viewing on mobile devices, PCs, and in lecture halls.



Reliability

Proven system maturity and reliability, validated by hundreds of hospitals.



Diverse solutions

Enables diverse applications including remote consultation, mobile teaching system, and live surgery broadcasting.

E-LEARNING

Online Surgery Management System



Full Color Reproduction



Ultra HD 4K



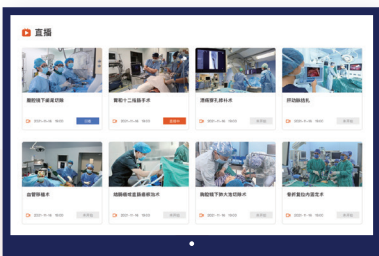
Multi-Terminal Support



Lossless Compression

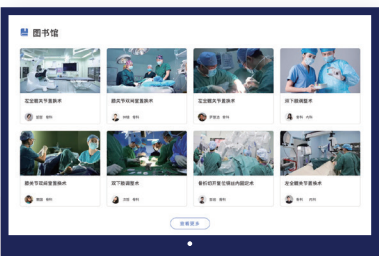


Access Control



Live Surgery Broadcasting

Delivers clear and smooth video streams, supports live event scheduling and concurrent multi-channel broadcasting.



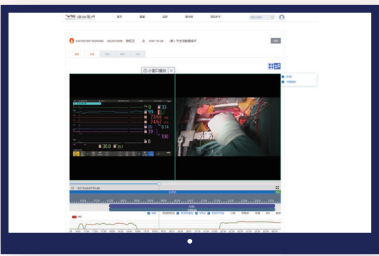
Video Library

Hospital-grade surgical video library with categorized content by medical specialties.



Rich Media EMR

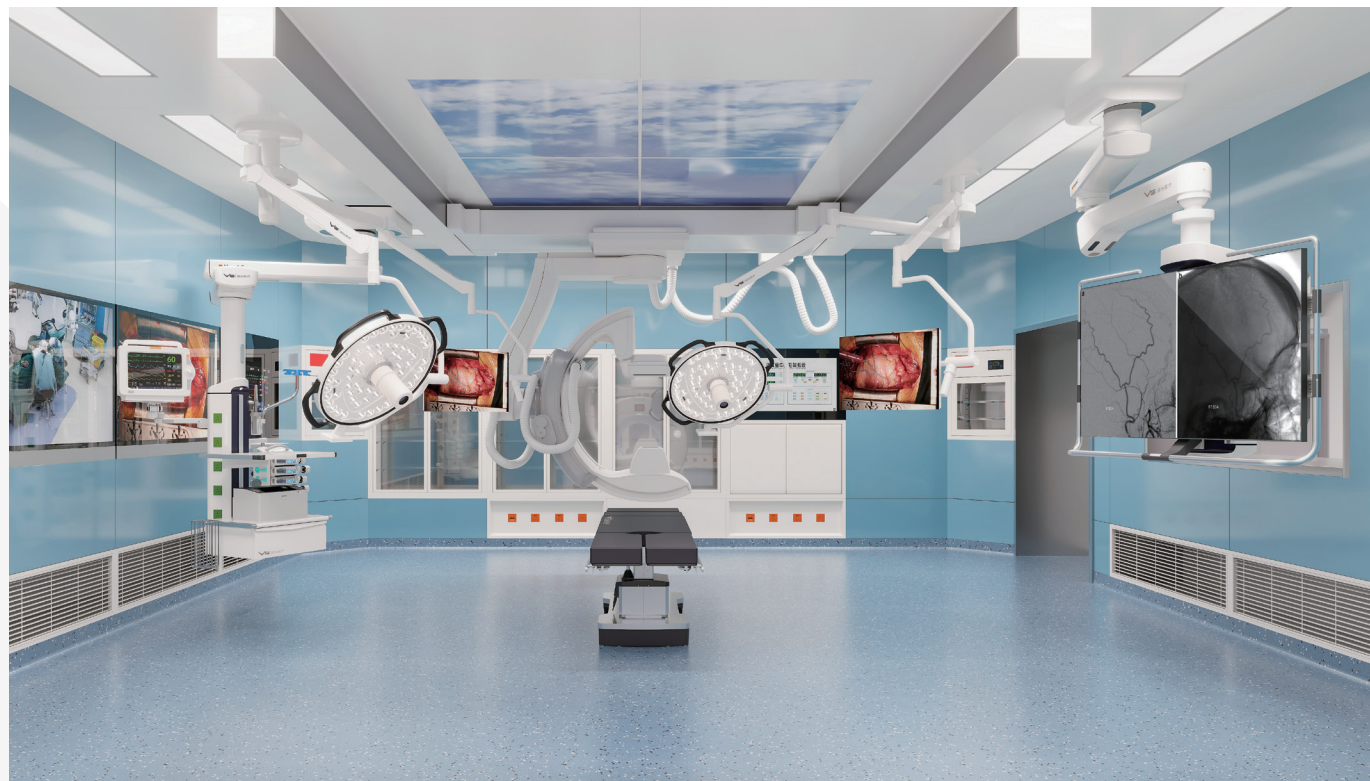
Integrated Intelligent Control, Consolidates critical intraoperative images, audio, and video into a unified multimedia surgical records database.



Holographic Data Presentation

Integrated multi-dimensional surgical audiovisual and anesthesia data enables holographic display, coaxial visualization, and event tracing.

PREMIUM SERIES



STANDARD SERIES



PREMIUM SERIES

(IP Video Rack-Based OR Integration Solution) is specifically designed for university hospitals and those undertaking complete greenfield reconstruction or reorganization of operating rooms. Ideal for new hospital construction or renovated ORs.

Recommended Departments:

Hybrid OR (combined procedures), hepatobiliary surgery, cardiothoracic surgery, neurosurgery, orthopedics, and other complex surgical specialties.

Key Features:

- Top-tier hardware configuration
- Includes physician workstation with dual-screen functionality for improved efficiency
- Comprehensive software capabilities

Performance Metrics:

Zero-latency transmission speed, 4K60P 4:4:4 image quality.

STANDARD SERIES

Designed for large-scale Grade A and Grade B hospitals that primarily perform routine surgeries (e.g., general surgery, urology, gynecology, ENT, ophthalmology) and require integrated device management and information consolidation capabilities. Ideal for institutions seeking high-quality medical imaging and essential digital functions.

Recommended Departments:

General Surgery, Urology, Gynecology, ENT, Ophthalmology, and other related departments.

Key Features:

- Cost-effective hardware without compromising performance;
- Comprehensive coverage of commonly used functions;
- High scalability for future expansions.

Performance Metrics:

Zero-latency transmission speed, 4K60P 4:4:4 image quality.

ECONOMY SERIES



ECONOMY SERIES

Designed for Grade B and smaller hospitals with standardized requirements for equipment configuration and digital functionality, as well as limited budgets. Meets basic needs for surgery-related audio/video integration and device control.

Recommended Departments:

Hospital Networks / Endoscopy Centers

Key Features:

- Built-in large screen enables seamless future upgrades while meeting current needs
- Ideal solution for departments/hospitals requiring only surgical video recording, capture, or live demonstration broadcasting;
- Cost-effective choice with high value.

Performance Metrics:

Zero-latency transmission speed, 4K60P 4:4:4 image quality

BASIC SERIES

Delivers an innovative solution for hospital-wide surgical video management.

- 4K Imaging Lossless Recording
- Cloud Storage Technology Worry-Free Storage
- Live Surgery Streaming One-Click Activation
- Data Integration Process Monitoring
- No Renovation Required Easy Implementation



DIUN 604 Digital Integration Unit

- 7-inch Touch Screen
- Supports up to 4K Resolution
- 2 HDMI Inputs, 2 SDI Inputs
- 2 Gigabit RJ45 Ports , 3 POE Ports (for external cameras)
- 2 Audio Inputs , 2 HDMI Outputs



DIUN 603 Digital Integration Unit

- Supports up to 4K Resolution
- 4 HDMI Inputs,1 Gigabit RJ45 Port, 2 Audio Inputs,2 HDMI Outputs

HARDWARE

In addition to proprietary hardware and software solutions, offers customers additional hardware options. Our hardware is designed around surgical workflows, supporting diverse clinical scenarios through ergonomics and ease of use.



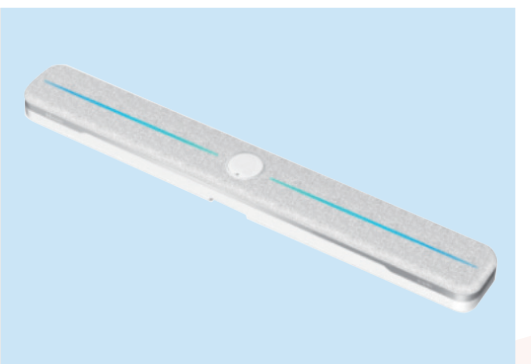
Medical Wall-Embedded Display

Featuring an integrated chassis designed for flush wall mounting. The front panel utilizes 3mm black tempered glass with full lamination and AG anti-glare treatment. The chassis can be smoothly opened forward with dual gas spring assists for maintenance without wall damage. Equipped with 11 identical professional Gamma modes to meet precise medical imaging display requirements. Supports 1-4 screen display with PIP (Picture-in-Picture), PBP (Picture-by-Picture) and other multi-window modes.



Multi-Functional Network Array Microphone

Integrates 3D Audio Fencing and Virtual Microphone Technology, with built-in AI algorithms including noise reduction, de-reverberation, intelligent full-duplex, and howling suppression. Delivers premium sound capture within an 8-meter radius.



SDVoE 4K Encoder/Decoder

Supports uncompressed, zero-delay transmission of 4096×2160@60Hz 4:4:4 and HDR video. Enables seamless signal switching, screen splicing, external audio embedding/de-embedding, and multi-type audio matrix switching. Supports adaptive HD auxiliary streaming, meeting the stringent requirements for ultra-high-definition image quality, zero latency, and flexible audio management in operating rooms, conference centers, and similar scenarios.



Surgical Field Camera

Utilizes a SONY 4K Exmor CMOS sensor and 20x motorized rotating lens. Features anti-glare surgical light resistance, one-touch medical mode, and a fully antibacterial aluminum body. The lens offers 350-degree clockwise motorized rotation to ensure the surgeon's primary line of sight and image clarity.



4K Medical Suspended 32-inch Display

The MS8320P integrates "4K ultra-high definition + zero-loss fiber optic transmission + medical-grade protection" into a 32-inch large screen, serving as the professional display hub for digital and hybrid operating rooms that ensures "clear visibility, long-distance transmission, and durable performance".



10-Gigabit Switch

Provides 24 SFP+ 10GbE ports and 2 QSFP+ uplink ports. A single unit can connect up to 24 channels of 4K SDVoE/NDI video sources, supporting 40G uplink ring networks or cascading connections to ensure zero latency and non-blocking forwarding of multiple uncompressed video streams. And redundant power supply design, it delivers a high-bandwidth, highly reliable, and easily scalable "fiber-to-desktop" IP audiovisual backbone for digital operating rooms and teaching system.



VERSION COMPARISON CHART

	PREMIUM SERIES	STANDARD SERIES	ECONOMY SERIES	BASIC SERIES
Recommended Departments	Hybrid OR, Hepatobiliary Surgery, Cardiothoracic Surgery, Neurosurgery, Orthopedics	General Surgery, Urology, Gynecology, ENT, Ophthalmology	Limited Coverage	Endoscopy/ Laparoscopy Center
Hardware Configuration				
Control Screen	Built-in 27" Touch Screen (Integrated Medical Keyboard/Mouse)	Built-in 27" Touch Screen	Built-in 55" 4K (Physician Workstation)	Standalone 27" All-in-One Touch Screen
Display 1	Built-in 65" 4K Display	Built-in 55" 4K Display (Main Unit/Keyboard)	✗	✗
Display 2	Built-in 65" 4K Display (Physician Workstation)	✗	✗	✗
Suspended display	32" 4K Endoscopy Display ×2	32" 4K Endoscopy Display ×2	27" 4K Endoscopy Display	✗
4K Side Camera	✓	✓	✓	✗
4K Panoramic Camera	✓	✓	✓	✓
Wireless Voice Intercom System	Smart Video/Audio Integrated Device	Smart Omnidirectional Microphone	Smart Omnidirectional Microphone	Smart Omnidirectional Microphone
Digital Integration System	ORPILOT Module	ORPILOT Module	ORPILOT Module	Digital OR Mini Device (DOMC)
Software Features				
Equipment Integration	One-touch start/stop, camera control, voice control	One-touch start/stop, camera control, voice control	One-touch start/stop, camera control, voice control	Voice control, Photography/Video Recording Control
Information Integration	HIS/PACS/LIS/EMR	HIS/PACS/LIS/EMR	(Optional)	(Optional)
Video Recording & Capture	✓	✓	✓	✓
Surgical Conference (Incl. Lecture Hall)	✓	✓	(Optional)	(Optional)
Audio-Video Output & Storage	✓	✓	✓	✓
Patient Data Package	✓	✓	✓	✓
Third-Party Software (Tencent Meeting/NetEase Music)	✓	(Optional)	(Optional)	✗
Safety Verification	✓	✓	✓	✓
Physician Workstation Software	✓	✗	✗	✗
Data Center	E-learning + Server (with Holographic surgery Review Function)	(Optional)	(Optional)	(Optional)
Performance Specifications				
Transmission Speed	Zero latency	Zero latency	Zero latency	Low latency
Image Quality	4K60P 4:4:4	4K60P 4:4:4	4K60P 4:4:4	4Kp30
Number of Connectable Video Sources	Configurable as needed	Configurable as needed	Configurable as needed	4 video sources

INSTALLATION CASES



VISION
Becoming a global leading valuable surgical brand.

MISSION
Balancing monopoly and providing high-quality and cost-effective surgical products for global operating rooms.