

Telemedicine System

EYKONA™ 900

Unique

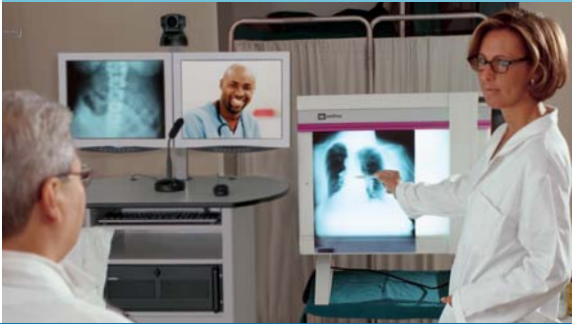
Cutting-edge high quality video communication solution integrated with medical remote consultation functions

Convenient

Built-in support for patient database management, image and medical device output sharing, including medical data gathering, storage and transmission

Flexible

Solutions for customized applications; Store & Forward and real-time transmission



Aethra®'s Eykona™ 900 combines cutting-edge videoconferencing with high-tech medical peripherals and a comprehensive patient database thanks to its specialized medical consultation software. Eykona 900 enhances remote consultations and provides access to high quality images for both patients' healthcare monitoring or for medical distance learning applications.

Comprehensive Functionality

Developed and designed to support remote medical consultations and distance learning, Eykona™ 900 manages electronic medical records, processes medical images, provides video consultation services, and allows users to share patient data in synchronized or unsynchronized mode.

Flexible

The system provides easy connection to a variety of medical peripherals and hardware devices, including vital signs monitors, digital stethoscopes, radiographic scanners, video-otoscopes, interpretative ECG, digital cameras, and more.

Supports Multiple Networks

Eykona 900 supports H.323 and H.320 standard videocommunication sessions over ISDN or IP lines, leased lines, LAN/WAN and satellite networks.

Secure

Eykona 900 provides various security levels to prevent unauthorized access, including screening and data encryption.

Easy to Use

Eykona 900 provides intuitive and user-friendly software interfaces and tools to ensure easy management of remote video-consulting sessions and allows work share and file transfer between two terminals.

Field Applications

Medical Distance Learning

Eykona 900 provides all the necessary tools to perform effective distance learning sessions.

The included MCU allows to connect together a number of remote video terminals.

Tools such as file sharing, file transfer and white board make Eykona the most suitable equipment available on the market to perform a multi video medical distance learning session connecting specialized doctors to universities and hospitals.

Cardiology

Heart pathologies demand immediate diagnosis and medical intervention.

That is why one of the most significant applications of the Eykona 900 telemedicine solution is the digital transmission of coronary exam results to specialized cardiology units. Eykona 900 is part of many regional and international medical networks.

Radiology

Digitalized RX images captured with cameras, digital scanners or digitally originated can be stored and shared with other remote medical specialists for second opinion issues.

Gynecology

Remote monitoring via the display of ultrasound images makes it possible to immediately identify and evaluate fetal alterations. The Eykona 900 telemedicine system accepts input from fetal cardiocytograms and can digitally transmit it to specialists anywhere.

Othorinolaryngology

The complete case history of a patient, an accurate examination of the nose and ears, and an examination of the paranasal sinuses, are all absolutely essential to correctly diagnosing ear diseases. In fact, early diagnosis and correction are fundamental in ensuring normal development of communication skills in children and elderly people. Eykona 900 meets these needs by

allowing for remote examinations, enabling the submission of individual clinical cases, and transmitting the results to specialized health centers.

Dermatology

Many dermatological diseases can be identified by a simple physical examination of typical primary or secondary lesions, their arrangement, and their place of onset. Dermoscopic technologies coupled with Eykona 900 video-consultation provide clear images to the specialist, allowing for rapid, reliable remote diagnoses.

Dentistry

It can provide dentists with remote consultations with physicians when systemic diseases are suspected, when anesthesia or oral surgery questions arise, or when emergencies require immediate input from a physician. In turn, it provides medical physicians with the ability to consult a dentist in cases where children have abnormal tooth growth or retarded eruption, or in cases of serious malformation or dental misalignment.

Technical Specifications

- EMR (Electronic Medical Record)
- Telemedicine Workstation Windows® 2000 / Windows® XP
- Codec H.320/H.323
- 2x19" PC/video monitor
- Omni directional microphone
- PAL/NTSC video camera with auto focus, pan, tilt and zoom

Supported Standards

- ITU-T H.320 ISDN, leased networks
- ITU-T H.323 IP networks
- IETF-SIP (RFC3261) IP networks
- PPPoE
- Video H.261, H.263+, H.264, H.239, H.241
- Audio G.711, G.728, G.722, G.722.1, MPEG4 AAC-LD
- Data T.120
- LDAP H.350
- MCU compatibility H.243, H.231

Transmission

- Bit rate 56 kbps ÷ 768 kbps over ISDN BRI
- 56 kbps ÷ 2 Mbps over ISDN PRI**
- 64 kbps ÷ 4 Mbps over IP (H323/SIP)
- Asymmetric rates
- 56 kbps ÷ 2 Mbps over V.35/Leased
- **in North America ISDN PRI/T1 at 1544 kbps (ANSI T1 recommendations)
- Simultaneous video motion coding and PC presentations from the XGA input

Video

- Frame rate 15 frames per second @ 56 kbps -128 kbps
- 30 frames per second @ 168 kbps - 4 Mbps

- Video resolution 4CIF 704 x 576 pixels
FCIF 352 x 288 pixels
QCIF 176 x 144 pixels
4CIF 704 x 576 pixels for still images (H.261 Annex D)
4SIF 704 x 480 pixels
QSIF 176 x 120 pixel
SIF 352 x 240 pixels
4SIF 704 x 480 pixels for still images (H.261 Annex D)
Up to 1024 x 768 pixels over XGA in H.263
- Remote camera control H.281 (H.320 - H.323)

Audio

- Echo cancellation Full-duplex
- Adaptive post filtering
- Automatic Gain Control (AGC)
- Automatic Noise Suppression

Codec Network Interfaces

- Basic version
- ISDN 6 BRI with integrated channel aggregator 6 RJ-45
- Ethernet 1-Port 10/100BASE-T full-duplex with integrated switch Ethernet 1 RJ-45

Network Protocols

- TELNET, HTTP, SNMP, DNS, DHCP, RTP/RTCP, TCP/UDP, ARP

Network Features

- Differentiated Service (DIFFSERV), IP Precedence, IP Type of Service (ToS), Auto Gatekeeper Discovery, Clever Packets Management (AeCPM)

Audio/Video Interfaces

- Codec video inputs

VCR	Composite (RCA)
Doc. Cam. 1	S-video (Mini-DIN)
Doc. Cam. 2	S-video (Mini-DIN)
Doc. Cam. 3	Composite (RCA)
XGA In	DB 15 Hi/Den
- Codec video outputs

Monitor 1	S-video (Mini-DIN)
Monitor 2	S-video (Mini-DIN) with monitor detect
VCR	Composite (RCA)
XGA Out	DB 15 Hi/Den
- Codec audio inputs

Connection	Level	Connector
VCR	Line	2 RCA (L/R)
- Codec audio outputs

Connection	Level	Connector
Monitor 1-2	Line	2 RCA (L/R)
VCR	Line	2 RCA (L/R)
- PC serial interface

2xUSB	
2xRS232	
- PC video outputs

XGA	
-----	--
- PC audio outputs

Audio Out	Line	2 RCA (L/R)
-----------	------	-------------

Multimedia

- High-speed data channel for high multimedia interactivity and fast file transfer
- Direct access to Internet/Intranet from the system

Encryption

- AES encryption standard H.233, H.234, H.235

AETHRA® SpA
via Matteo Ricci, 10
60020 Ancona (Italy)
Telephone +39.071.218981
Fax +39.071.887077
Video 1 +39.071.2189704
Video 2 +39.071.2189701

Beijing Hong Kong London Madrid
Mexico City Paris Miami São Paulo
Shanghai Shenzhen

Email: info.aethra@aethra.com
www.aethra.com