



# CLINIO<sup>®</sup>

COMPUTERS, MONITORS & THIN CLIENTS  
HYGIENIC & MEDICALLY CERTIFIED  
INDIVIDUAL SOLUTIONS IN 22", 24", 27" AND 32"

# THE CLINIO AS



## One design - countless possibilities.

All the devices in the CLINIO family share the same design - yet every CLINIO is an individual product that fits your requirements exactly. As a COMPUTER, THIN CLIENT or MONITOR, the CLINIO is universally usable, durable, powerful, and also comes with numerous optional features. The slim design puts the focus on functionality and is equally suitable for mounting on walls, swivel arms, or spring arms.

# PC, TC & DISPLAY

## Hygienic design

The CLINIO is completely closed, has no air vents and is operated using a touch-sensitive panel. The result: a flat, smooth surface that is easy to clean and disinfect. The case has an ingress protection rating of IP54 (optionally IP65) and is absolutely impervious to commercial cleaning agents and disinfectants. The case is closed to prevent air from being exchanged with the environment, thus reducing the risk of germs accumulating and spreading.

## Made in Germany: safe & reliable

The CLINIO series is a German success story - these devices have been developed and manufactured in Germany for more than 10 years. Maximum quality and flexibility is therefore guaranteed. The CLINIO contains only industrial hardware noted for being exceptionally durable and fail-safe. This is why we can offer an optional extended warranty of five years on our devices.



# CLINIO COMPUTER

## The PC for RIS, HIS, PACS & EPA

The CLINIO COMPUTER is a perfectly balanced all-in-one PC which performs impressively, and not just with medical applications such as RIS, HIS, PACS, and EPA. With its brilliant monitor, wide variety of options and impressive performance, it meets all the requirements for use in hospitals, doctors' practices and other medical institutions.

 <p>Medical All-In-One PC</p>	 <p>INTEL i5 CPU</p>	 <p>8 GB RAM</p>	 <p>22" 16:9 56 cm Diagonal</p>	 <p>500 GB HDD</p>	 <p>Multi-Touch</p>	 <p>3+ YEARS Warranty</p>	 <p>VESA 100</p>
 <p>IP65 Frontside</p>	 <p>INTEL i7 CPU</p>	 <p>16 GB RAM</p>	 <p>24" 16:10 61 cm Diagonal</p>	 <p>500 GB 2. HDD</p>	 <p>Galvanic Separation</p>	 <p>EN 60601-1 EN 60601-2 Certified</p>	 <p>Closed Cooling</p>
 <p>IP54 Backside</p>			 <p>27" 16:9 69 cm Diagonal</p>	 <p>500 GB SSD</p>	 <p>Barcode Reader</p>		



The COMMAND BAR is used to reset the computer or switch it to standby mode. What's more, the optional touchscreen and the COMMAND BAR can be temporarily deactivated in order to clean the monitor.

## Powerful & individual

If you are looking for a high-performance PC that is equal to the challenges of everyday use in a medical environment, the CLINIO COMPUTER is simply unbeatable. The CLINIO is constantly being developed further and modified in line with user requirements. If, for example, INTEL® release a new generation of i5/i7 CPUs, these undergo extensive testing in our laboratory and then flow into our current production as part of a model upgrade.

## Flexible

Every CLINIO COMPUTER has a DisplayPort and DVI output. This means that images can be displayed on two separate screens. If required, the CLINIO display can be cloned, i.e. all three monitors can be made to display the same content. Alternatively the desktop display can be expanded to cover the whole area.

The CLINIO Computer comes into its own whenever high performance and hygiene are essential, just like the CLINIO 3 shown here in the central sterile services department at the Robert Bosch Hospital in Stuttgart. This is where medical products are prepared. In this situation, preparation processes have to be documented and the medical products being prepared have to be correctly assembled into a wide variety of sets in compliance with specified packing lists.





## Beyond standard configuration

There is no such thing as a standard CLINIO! Every CLINIO computer is optimally customized to meet your needs. This doesn't just extend to the operating system, CPU, RAM or hard disk size: with more than 20 options in all - including a touchscreen, tabletop stand, WLAN, external power supply and galvanic separation - all kinds of configuration requirement can be considered.



## Three sizes - limitless possibilities

All CLINIO C models (available in 22", 24" and 27" sizes) can easily be mounted on ceiling arms and spring arms and are equally suitable for wall mounting and mobile carts. The optional tabletop stand means they can also be positioned on desks.

## Limitless extensibility

The CLINIO COMPUTER is optionally available with a full-featured PCIe x16 bus standard for extensions. This means that frame grabber cards or other system extensions can be integrated with ease. A Blu-Ray or DVD drive can be integrated on request. Behind the hygienic cover, the CLINIO COMPUTER conceals an array of connections: the USB 3.0, RS232, GPIO, audio, GbE LAN, DisplayPort\*, HDMI\* and DVI\* ports ensure that this PC can communicate with all components of the medical IT world.

# SUMMARY

Powerful & hygienic: the CLINIO Computer is perfectly adapted to meet day-to-day needs in clinics, medical practices, and operating theaters. The CLINIO Computer can be used reliably for all kinds of applications such as RIS, HIS, PACS etc.

# CLINIO THIN CLIENT



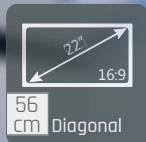
Medical  
All-In-One PC

**IP65**

Frontside



8  
GB RAM



22"  
56  
cm Diagonal



Multi-Touch



Galvanic  
Separation



Warranty



VESA 100

**IP54**

Backside



24"  
61  
cm Diagonal



Barcode  
Reader



Certified



Closed  
Cooling



## CLINIO TC: safe, efficient, economical

THIN CLIENT technology has significant advantages over conventional computers: the virtual computer on which the operating system runs is easier to maintain and offers significantly greater protection from malware and attacks from outside. This is an inestimable advantage in sensitive areas such as hospitals! Moreover, the relevant computer processing power is remoted to a server, which means that thin clients consume less electricity than conventional PCs. **In all, thin clients can save up to 35% of the total cost of ownership and reduce harmful CO2 emissions by about 60%.** This was proven in a study conducted by the Fraunhofer Institute<sup>1</sup>.

## Many reasons to use IGEL:

For our CLINIO TC, we rely on IGEL's almost 20 years of experience in the area of thin and zero clients. REIN MEDICAL uses IGEL UD9 technology in the form of a hygienically optimized thin client. The IGEL UD9 is fully integrated into the CLINIO's case. The result: a robust, easy-to-clean and consequently hygienic thin client that retains all the advantages of IGEL such as straightforward maintenance and extensibility.

## UMS - Universal Management Suite

Every IGEL thin client is supplied with the Universal Management Suite. This software raises the bar when it comes to the fast, secure management of extensive thin client installations consisting of software clients and tools, local protocols, and security features. UMS does not depend on any specific hardware. What's more, UMS supports several operating systems such as IGEL Linux OS or Windows. UMS manages your existing environment with a single framework.

Barely distinguishable on the outside from the CLINIO COMPUTER, the CLINIO TC adopts a different approach: while the CLINIO C scores points for pure power, the CLINIO TC focuses on maximum efficiency.



<sup>1</sup> <https://www.umsicht.fraunhofer.de/en/press-media/2015/thin-client-study.html>

# CLINIO MONITOR

## The monitor for everyday clinical use

The design of the CLINIO MONITOR is guided by the needs of daily medical routine. Easy to clean and hygienically safe. The integrated capacitive COMMAND BAR and the optional multi-touch screen can also be operated while wearing surgical gloves. The CLINIO MONITOR is available in various resolutions (FullHD, WUXGA, 4K UHD) and sizes (21" - 32"). However, its biggest advantage is the variety of input formats it supports.



## Automatic luminescence stabilization

ALS (automatic luminance stabilization) eliminates the fluctuations in backlighting that can for example occur during the warm-up phase or as a result of changes in temperature. It also compensates for the decrease in backlighting that occurs in connection with long run times. This guarantees optimum, luminous images even after many years of operation. ALS is integrated into CLINIO models C427DSW, C432DS and C432DCUH, among others.

## CLINIO – always the right monitor

The CLINIO MONITOR is versatile and variable, which means it can always be adapted to requirements. Available in four sizes (22", 24", 27" and 32") and featuring numerous connections (e.g. HDMI, DVI, DisplayPort, 3G-HD-SDI) and other options (signal extender, loop-through, PIP/POP etc.), the CLINIO can rise to every possible occasion. Take advantage of our consulting expertise: let us find the perfect CLINIO for you!

## DICOM greyscale calibration

The sensitivity of the human eye is not linear: CLINIO monitors therefore utilize DICOM part 14 calibration. Moreover, they use various color spaces (BT.709, BT.1886 and BT.2020) to avoid color shifts and misrepresentations.

## Smart integration from one source

The CLINIO MONITOR offers maximum flexibility for multiple imaging modalities (PiP and PoP) in the integrated operating theater. Images from almost all the imaging equipment used in the operating theater can be displayed on the CLINIO. The CLINIO is perfectly optimized for use with SMART OR and OPERION. This means Rein Medical offers optimum operating theatre integration from one source.



# INTEGRATIONS

-  Medical Display
-  DICOM Preset
-  DVI-D
-  VGA
-  22" 16:9  
56 cm Diagonal
-  27" 16:9  
69 cm Diagonal
-  5 YEARS Warranty *option*
-  VESA 100
-  IP65 Frontside
-  BT.709, BT.1886  
BT.2020
-  DisplayPort
-  3G/HD-SDI *option*
-  31" 16:10  
61 cm Diagonal
-  35" 16:9  
80 cm Diagonal
-  EN 60601-1  
EN 60601-1-2 Certified
-  Closed Cooling
-  IP54 Backside
-  PIP / POP
-  HDMI
-  RS 232
-  ALS Luminance  
Stabilization
-  Touchscreen *option*
-  Galvanic  
Separation *option*

## A variety of connections for perfect interaction

Thanks to its extensive range of inputs, the CLINIO MONITOR "understands" almost all the devices and formats used in the operating theater: from VGA and CVBS to DisplayPort and HDMI, almost all types of signal can be displayed. There is also an optional 3G-SDI connection with a loop-through function.


## Control and conversion

The signal extender option that can be integrated into the CLINIO opens up the possibilities provided by the monitor: images from medical devices located at distances of up to 100 meters (Ethernet cable) or even several kilometers (glass fiber cable) can be displayed by the CLINIO MONITOR. The CLINIO can also be controlled from an external PC, and the images stored on it can be displayed on the CLINIO MONITOR.

# POSSIBILITIES

# SUMMARY

Professional CLINIO monitors are reliable and future-proof. With a variety of sizes ranging from 22" to 32", various inputs and carefully considered options, the CLINIO monitor is always the right choice, not least due to the CLINIO's outstanding hygienic properties.



CLINIO



## Certified medical device

The CLINIO is a class 1 medical device. All the devices in the CLINIO series have been tested in compliance with the international norms DIN EN 60601-1 and DIN EN 60601-1-2, as only equipment that meets these criteria can be responsibly used in patient proximity or in combination with other medical devices, thus guaranteeing adequate safety for the operator.



## Hygienic

The CLINIO's front and housing have no edges or niches that could harbor germs. The sole means of operation is the command bar, a touchscreen on the front of the device that can also be used safely and comfortably while wearing surgical gloves.

## Internal power supply

All CLINIO computers have an internal power supply. This makes installation easy, e.g. on a ceiling arm in the operating theater. Other components can serve as power sources for the CLINIO if required. One of the options available is an external mains adapter; this means it can also be operated by an external power source.

# HYGIENIC & SAFE

# SUMMARY

All CLINIO devices, monitors, thin clients and computers alike, are hygienic, reliable and come with numerous features and options that make them highly versatile. They are therefore indispensable when developing solutions for hospitals and operating theatre integration.

## BROCHURES FROM REIN MEDICAL

Rein Medical provides you with comprehensive information. Regardless of whether it's about individual products or complex integration projects, our brochures showcase key features, benefits and application examples at a glance.



Order-Nr BR-EN-PRK



Order-Nr BR-EN-OP3



Order-Nr BR-EN-SOR



Order-Nr BR-EN-MED

We would be happy to send you our brochures free of charge on request. Simply write an e-mail telling us which brochure(s) you would like and send it to: [info@reinmedical.com](mailto:info@reinmedical.com). You can also download all of our brochures as PDF files at: <http://www.reinmedical.com/en>

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