![MCD Medical Devices + Solutions]

MCD Medical Line
Solutions for Medical IT

MCD Medical Line
Solutions for Medical IT

Dear Readers,

for more than 10 years, our company is an established OEM and PLM partner for major medical device manufacturers. Over 40,000 installed systems are the basis for our know-how and know-why in medical IT. Under our brand, MCD Medical Line, we offer a portfolio of end-user products, and today we are working on solutions for tomorrow's digital IT infrastructure. As a member of the Wortmann Group, we have access to resources and future technologies such as cloud services, Server technologies, leasing services and many more.

I would like to invite you to get to know our company, our products and our philosophy. MCD is your strong partner on the road to Healthcare 4.0!

Sincerely yours
Thomas Hollex
Managing Director

The Company

Our Roots

The first medical PC was launched 1998 under the brand Tulip. MCD Medical Computers Deutschland GmbH was founded in 2005 aiming at the opportunities of optimally exploiting the growth potential of the medical IT market.

What We Do

As an OEM / ODM and PLM provider, we develop and manufacture IT components for medical device manufacturers. Under our own brand, MCD Medical Line, we offer panel PCs, workstations and displays, which are specially tailored to the medical applications.

Our Markets

Our customers are medical device manufacturers for whom we, as OEM/ODM and PLM partners, develop and manufacture medical-IT components. With the products of our own brand MCD Medical Line, we address hospitals, laboratories, doctor´s offices and the pharmaceutical industry.

How We Work

For us, quality, professionalism and reliability are not buzzwords, but value standards and quality targets, which are the basis for our day-to-day business. Our quality management, certified according to EN ISO 13485, ensures a consistently high process and product quality.

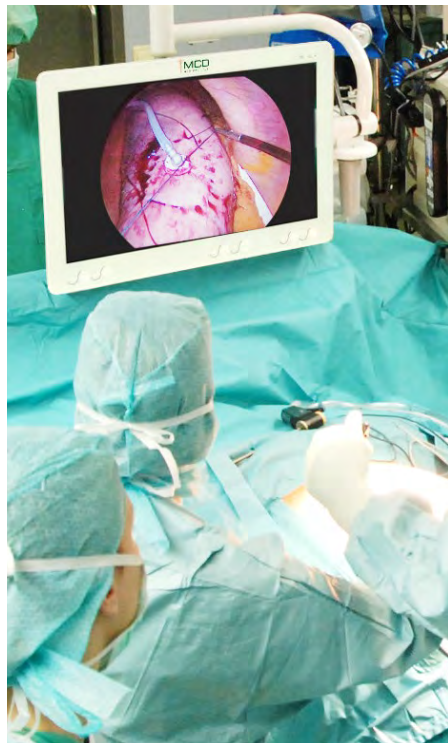| 1998	2005	2007	2008	2010	2011	2011	2013	2013	2015
First Medical-PC	MCD Founded	MCD Brand Medical Line	ISO 9001 Certified	Member of Wortmann Holding	ISO 13485 Certified	FDA Listed	Medical Line UL Certified	Medical Devices and Solutions, USA	More then 40.000 systems installed

MCD
Medical Devices + Solutions

MCD Medical Line

Rely on it!

IT solutions from MCD can be found all over the hospital: beginning with basic applications on the ward, in the emergency room or the pharmacy up to applications in the operating room, in intensive care, the laboratory or in cleanrooms. The products of the MCD Medical Line are developed and manufactured in Germany. Due to the proximity to our customers and markets, we know exactly the requirements for medical IT.

Never seen?

Even if you have never seen our distinctive logo, we are pretty sure that we are present in your hospital under the hood of products from leading medical device manufacturers - after all, we are one of the leading OEM suppliers in Germany!

THA.leia³
Medical Panel-PC

The panel PC THA.leia³ has been designed for continuous use in the rough clinic day. The solid metal housing and the frameless front made of special glass make the THA.leia³ look good and ensure excellent hygienic properties without compromising performance.

THA.leia³
Medical Panel-PC

THA.leia³: Flexible. Safe. Reliable.

The hygienic panel PC without fan for the operating room, the intensive care unit, laboratory, clean room and all applications with high demands on hygiene and safety.

Hygienic and still: Fanless cooling concept • Closed glass front • Easy cleaning and disinfection • Excellent image quality • Wide viewing angle • IPS display • Improved image quality with extraneous light due to optical bonding (option) • Optional touch screen for ergonomic operation, also with surgical gloves • Extended-life industrial motherboard with state-of-the-art INTEL® processors • eco mode saves up to 30% of energy • Numerous cobfigurations and options • Robust metal housing • VESA 100 mounting • High safety standard • Tested according to EN 60601-1, EN 60601-1-2 • 3 years warranty as a standard • Warranty extension up to 5 years (option) • EN ISO 13485 certified production • Made in Germany

Display Sizes 21,5", 24", 27"

Closed glass front • Protection class IP65 • Touchscreen (Option) • Viewing angle 178° • Improved image quality with optical bonding (Option) • Reading lamp on the front • USB 3.0 connector on the front • Capacitive keys behind glass

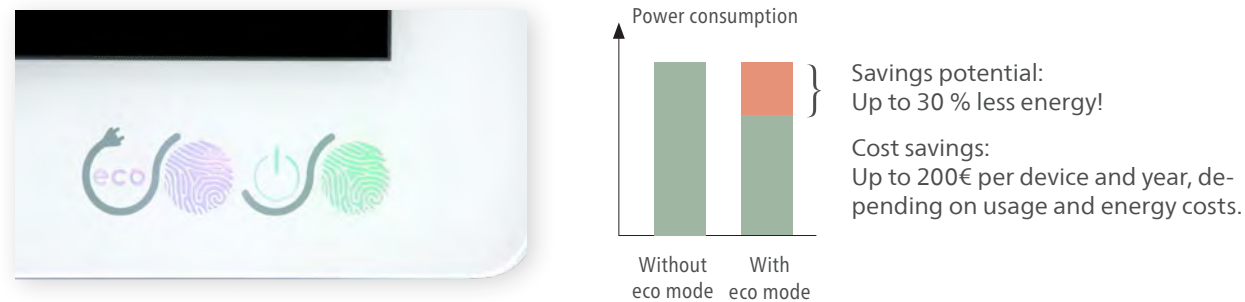THA.leia³ mounted on the pedestal available as optional accessories)

THA.leia³
Medical Panel-PC

Green IT: eco-mode saves up to 30% energy

Save energy and still be ready for immediate use: With the eco mode, you switch off the energy hungry backlighting, the TFT-panel and the touch screen, while the PC system continues to run in the background. In an emergency, you do not have to wait for the PC system to wake up again: the THA.leia³ is immediately ready for operation at the push of a button.
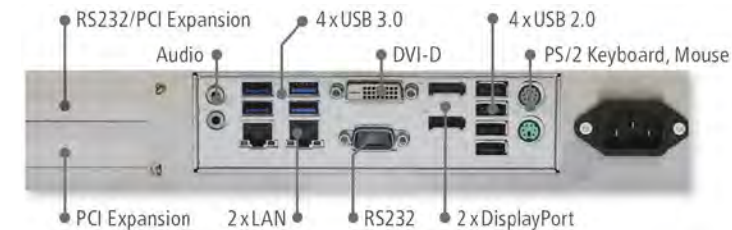

Power consumption

Savings potential:
Up to 30 % less energy!

Cost savings:
Up to 200€ per device and year, depending on usage and energy costs.

Without eco mode   With eco mode

THA.leia³ a la carte - the options

PCAP touch screen for ergonomic operation without keyboard and mouse • Optical bonding for even brighter picture • WLAN module for mobile connectivity • RS232 interface extension • LCD power adapter • Frame grabber card • external 12 V DC power supply

Interfaces for all cases

Despite its compact design, the THA.leia³ is equipped with a variety of interfaces and offers additional space for a PCI card (half-height) and an RS232 interface extension. Another practical feature is the USB 3.0 interface on the front of the device.

RS232/PCI Expansion   4 x USB 3.0   4 x USB 2.0
Audio   DVI-D   PS/2 Keyboard, Mouse
PCI Expansion   2 x LAN   RS232   2 x DisplayPort

All around tightly closed - all around hygienic

With the interface cover, the back of the THA.leia³ fulfills protection class IP54 and protects the connections even with intensive cleaning from moisture or aggressive cleaning agents.

The stand, available as an optional accessory, gives the THA.leia³ a secure hold. The pan-tilt head enables optimum positioning.

AESCU.certus³
Hygienic Medical Workstation

Cool Design - Strong Features

AESCU.certus³ - an exceptional hygienic workstation that appeals to users in clinics, laboratories and medical practices as well as medical device manufacturers or system vendors of KIS, RIS, PDMS or PACS systems. Even as a standard device flexible due to extensive options, this workstation fulfills high requirements in terms of connectivity, functionality and hygiene. The IP65 aluminum system housing with glass front and capacitive buttons gives no chance to germ concentration and can therefore be quickly and safely disinfected. With the optional interface cover, the rear side also complies with protection class IP54.

Manufacturers of medical devices and system vendors use the AESCU.certus³ as a hardware plattform, which can be expanded and adapted within wide limits. Special functions can be implemented cost-effectively and quickly. The optional SSD / HDD removable frame which allows external access without compromising IP65 / IP54 protection, facilitates hardware management and data security. With the wide range of options, the AESCU.certus³ already meets the different requirements of special applications in the operating room, in the intensive care area or near the patient in its standard equipment.

AESCU.certus³
Hygienic Medical Workstation

Easy hardware management
by exchangeable frame system (option)
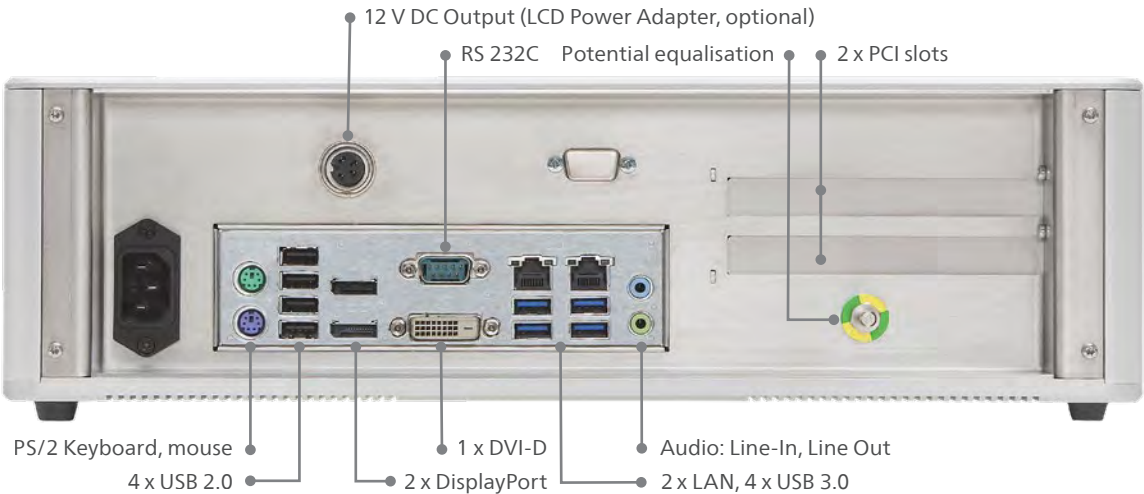
Stackable system housing

Milled cooling fins

Hygienic glass front capacitive key

12 V DC Output (LCD Power Adapter, optional)

RS 232C   Potential equalisation   2 x PCI slots

PS/2 Keyboard, mouse

4 x USB 2.0

1 x DVI-D

2 x DisplayPort

Audio: Line-In, Line Out

2 x LAN, 4 x USB 3.0

Fanless • Milled cooling fins in the base plate • Protection class IP65 (IP54 on back with optional interface cover) • No germ concentration on controls through glass front with capacitive buttons • Scalable power • Optional removable frame for up to two SSD / HDD • Two PCIex slots • Up to five RS232 Interfaces (with optional extension) • Galvanic interface separation (option) • Long-term stable industrial components • Three-year warranty standard • Warranty extension up to five years (option) • Customized adjustments on request • ISO 13485 certified production • Made in Germany

PANA.ceia³
Medical Workstation

MCD Medical Line Workstation

A broad range of options and different configuration characterize this Medical Workstation. With the high electrical safety standard, PANA.ceia³ is designed for patient-related use in combination with medical devices, but also convinces with the flexibility of the interfaces for use in the laboratory, in the pharmacy or on the ward. The solid metal housing fits well into the application environment through its shape and coloring. We use only industrial components to ensure safe and reliable 24/7 operation.
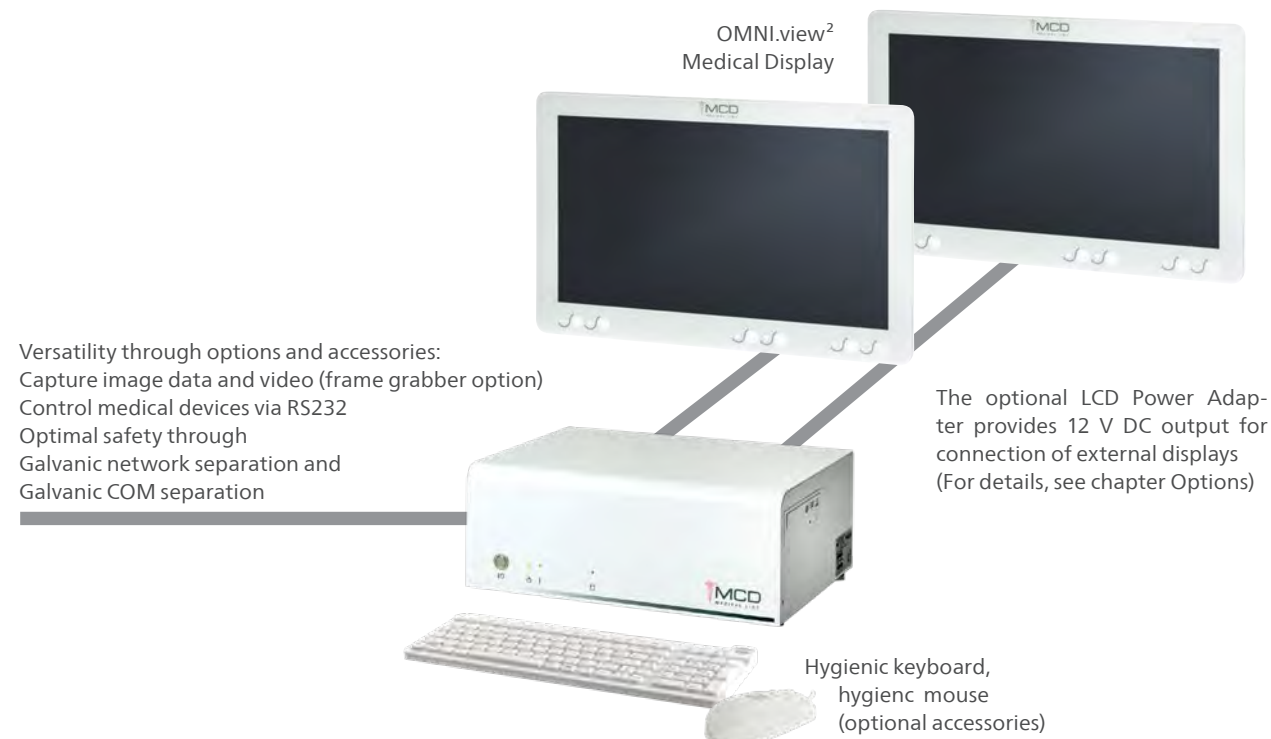
PANA.ceia³
Medical Workstation

PANA.ceia³ - Excellent performance and flexibility

PANA.ceia³ is the universal medical workstation for the clinic, designed for use also in a patient environment in normal hygienic conditions.

OMNI.view²
Medical Display

Versatility through options and accessories:
Capture image data and video (frame grabber option)
Control medical devices via RS232
Optimal safety through
Galvanic network separation and
Galvanic COM separation

The optional LCD Power Adapter provides 12 V DC output for connection of external displays (For details, see chapter Options)

Hygienic keyboard,
hygienc mouse
(optional accessories)

Go safe!

To protect patients, medical PCs need to meet a higher safety level than the standard PCs used in the office or at home. Therefore, the strict medical safety standards also apply to PCs when used in conjunction with medical devices. All Medical-PCs from MCD are equipped with certified power supplies as well as a potential equalization bolt and have been tested according to EN60601-1 as well as EN60601-1-2. The robust metal housing protects the electronics and is easy to clean. Through the use of industrial components, the medical PCs from MCD are permanently reliable in 24/7 operation.

USB extension, side mounting
2 x USB 3.0 (option)

Optical drive
(option)

Equipotential bonding bolt

Certified power supply

LCD Power Adapter (option, max. 2x)

PS/2 keyboard, mouse, 2 x USB 2.0

Twofold RS232 extension (option)

1 x PCIe x16 (4 lanes)
1 x PCIe x16 (16 lanes), 2 x PCIe x1

Audio: 1 x Mic In, 1 x Line In, 1 x Line Out

LAN, 4 x USB 3.0

1 x RS232

Video: 1 x DVI, 2 x DisplayPort

AESCU.nano
Medical Slimline PC

MCD Medical Line Slimline PC

Visualizing, recording and transmitting of data - the AESCU.nano is the ideal entry-level solution for KIS / PACS systems with high hygienic requirements or little space. The footprint of the AESCU.nano is smaller than a DIN A4 page and the slim housing without ventilation slots is only 87 mm high. Whether Ultra HD video playback or thin client functionality - the flexible hardware concept of AESCU.nano gives you the computing power you need at the price that fits into your budget.

AESCU.nano
Medical Slimline PC

The clear design of AESCU.nano expresses clear product concept: a medical PC for basic applications, which require a powerful medical PC with well-defined functionality but no extensive extensibility. Compact and robust, the AESCU.nano meets high hygienic and safety standards as required in medical applications.

Fanless • Metal housing without ventilation openings • Degree of protection IP65 at the front and side • Easy hygienic cleaning • External, medical-certified power supply • Scalable performance • Universal mounting with VESA adapter • Long-term stable industrial components • 3 years warranty standard • Warranty extension up to 5 years (option) • EN ISO 13485 certified production • Made in Germany

As in all MCD Medical Line products, we only use certified, long-lasting industrial components for the AESCU.nano. The passive cooling system, which is realized with heatpipes, transfers the heat from the processor to the external heat sinks and does not have any fans or ventilation slots. Thus the thermal load in the housing remains low and dirt or germs can not penetrate. Outstanding operating safety in 24/7 operation is guaranteed.

AESCU.nano

Original size

OMNI.view²
Medical Display

The OMNI.view² is characterized by precise detail reproduction, a large viewing angle and a hygienically optimized design. A low-reflection, smooth glass pane covers the entire front side as well as the control elements designed as capacitive keys. The OMNI.view² is easy-to-clean, safe to disinfect and with its robust metal housing it is the first choice for applications such as endoscopy, sonography or general, hygienic-sensitive applications in the medical environment.

OMNI.view²
Medical Display

OMNI.view² - Hygienic display and user interface

The universal hygienic medical display for the operating room, the intensive care unit, the clean room and general applications in all clinic areas. With the touchscreen option, the OMNI.view² becomes the user interface for your application when there is no space for keyboard or mouse.

Display sizes 21,5", 24", 27"

Closed plane glass front • Controls as capacitive buttons behind glass • Outstanding image quality • Great viewing angle • IPS display • Optical bonding (option) for improved contrast under bad light conditions • Ergonomic operation with touch screen option • External power supply • Tested according to EN 60601-1, EN 60601-1-2 • VESA 100 mounting • 3 years warranty as a standard • Warranty extension up to 5 years (option) • EN ISO 13485 certified production • Made in Germany
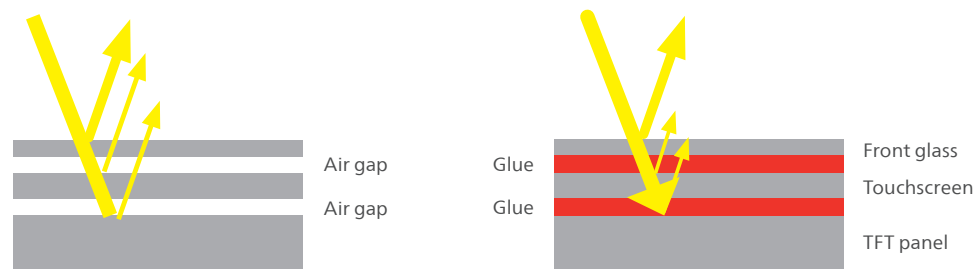
Options

Touchscreen in PCAP technology (optional)

Options for THA.leia³ and OMNI.view²

Many panel PCs are equipped with touch screens in resistive technology. This technology is inexpensive but can not be operated behind a glass front. Therefore, these touch screens can not be used with hygienic requirements. MCD uses the more complex PCAP technology (P-rojective CAP-acitive) as it is known from smartphones. Touchscreens from MCD can be safely operated with surgical gloves and support gesture control.

Optical bonding

Options for THA.leia³ and OMNI.view²

Incident light it is reflected by the display and degrades the brilliance of the image significantly. For a layer structure consisting of the IPS panel, touchscreen and glass front, the reflection takes place even three times. In the case of optical bonding, the components are glued together with a highly transparent adhesive so that incident light is reflected only once. Contrast and color reproduction are greatly improved.

Air gap	Glue		Front glass
			Touchscreen
Air gap	Glue		
			TFT panel

At every transition between air and front glass, touch screen and TFT panel, the incident light is reflected. This degrades contrast and color reproduction. By filling the air gap with an adhesive, the refractive index changes and the reflections are markedly lower. The touchscreen and front glass are already bonded to the MCD panel PCs and displays with the Touchscreen option. The Optical Bonding option also attaches a touch screen and a TFT panel.

LCD Power Adapter - Power supply for external displays
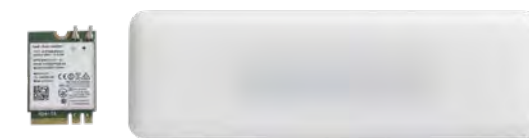
Option for AESCU.certus², PANA.ceia³, THA.leia³

The optional LCD Power Adapter allows easy connection of an external display such as an OMNI.view² without the need of a separate additional power supply. A 12 V short-circuit-proof DC voltage is derived from the internal certified power supply of the device and connected to a connector on the rear.

WLAN-Module

Option for THA.leia³

The WLAN module connects the THA.leia³ to the WLAN. The small module is integrated in the housing of the THA.leia³. The antenna is located under a small plastic cover, which is mounted on rear of the housing. Protection class IP54 is maintained.

Optional WiFi module with antenna for THA.leia³
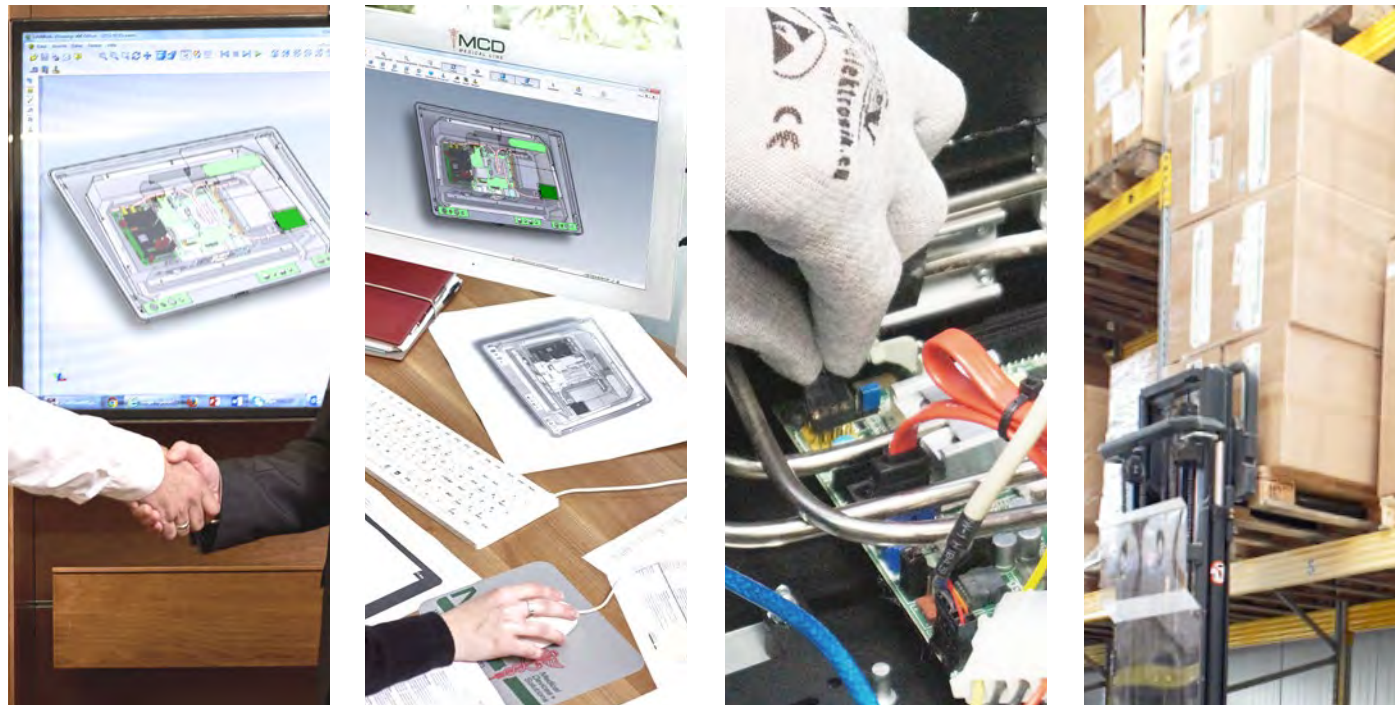
Galvanically isolated serial interfaces

The galvanic isolation of externally connected devices offers the utmost electrical safety. Galvanic isolation prevents current from flowing from one device to the other or to the human body in case of a fault. The data signals are transmitted with transformers, or with optocouplers. The latter cover a considerably larger frequency range.

OEM and ODM

Our expertise: solutions for medical IT

The development and maintenance of the IT components is complex and diverts valuable ressources from other tasks. With our service portfolio in the field of OEM / ODM / PLM we support you effectively when it comes to IT components in your medical devices. Our qualified project teams at the headquarters in Mönchengladbach and at our production site in Hüllhorst know the technical and normative requirements for medical products and are experienced in process-controlled work according to the rules of an EN ISO 13485 certified quality management system.

OEM – Original Equipment Manufacturer

As an OEM we manufacture components or products according to your specifications under your brand. We control the purchasing process, ensure adequate stock of components, and also take over warehousing for assemblies or entire equipment. As a part of the end-of-live process, we qualify new components and ensure a complete quality chain by auditing the suppliers. In short: you get the IT components for your products in the desired quantities in guaranteed quality and leave the work to us.

ODM – Original Design Manufacturer

You have the ideas for your product - but the implementation lacks time, resources or know-how: Then talk to us! As ODM, we develop IT solutions for your medical device according to your functional specifications and ensure the necessary tests and approvals. A project manager is assigned to you as a contact person - so we ensure that the necessary coordination processes run smoothly and quickly. After the prototype is released, the new product will be taken over by our production department. This allows you to concentrate fully on the development of the medical components.

PLM

PLM – Product Life Cycle Management

In PLM, our responsibility does not end when the product leaves our production line. Within the scope of the PLM, we maintain the IT components of your medical device during its active period in the market. We ensure that current-generation components are used, ensure their certification, store spare parts and, together with you, develop strategies for end-of-life management if the product is not to be produced at the end of its active period.

Worldwide partner network for strategic supplier management

Our international network of partners covers almost all continents. We do not select our partners according to proximity, but according to their requirements. No way is too far for us.

MCD Product Life Cycle Management – Benefits for you:

- Reduced development time - MCD can quickly implement design specifications.
- Best design result - Benefit from our experience of many hundreds of projects.
- Standard-compliant products - We master the certification processes and ensure that the products meet all regulatory requirements.
- Certified quality - our comprehensive QMS is certified according to EN ISO 13485.
- Cost-effective, on IT systems specialized production in Germany.
- High flexibility - built-to-order or batch production.
- Reduced logistics costs - We take over product and component storage.
- MCD relies on long-term and trustworthy customer relationships and maintains them.