ACL

Product portfolio
Medical IT hardware solutions

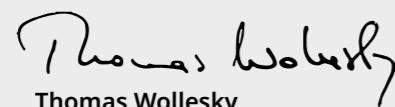# Powerful IT hardware for use in medical and hygienically critical areas

ACL, with headquarters in Leipzig, Germany, is an owner-managed medium-sized company that develops and produces optimized IT hardware for use in the medical sector that meets the special requirements of hygienically critical areas.

Our intelligent solutions set trends and are always a step ahead of the competition. Those who use ACL's products receive the highest reliability in tough routine operation, outstanding quality, durability and ergonomics. The pursuit of innovation at the highest technical standard and the realisation of your individual wishes is our incentive to always deliver excellent products.

Our wide range of products, individual consulting and services worldwide and a comprehensive portfolio of accessories make us one of the leading solution providers for IT technology in operating rooms, intensive care units, and hygienically critical areas.

This brochure provides you with an overview of our products and accessories. We would also be pleased to present our solutions on site and give you the opportunity to personally convince yourself of their quality and flexibility. In addition, we can also develop individual solutions for you.

We thank you for your interest and look forward to your enquiry.

Thomas Wollesky
CEO

Contents

Company

Products

ACL's products stand for outstanding quality, robustness and ergonomics

Our medical IT hardware is assembled exclusively at our plant in Leipzig, Germany. More than 90 employees help to perform all production steps which include CNC milling, painting, glass processing with printing as well as lamination and bonding in our own clean room and under ESD conditions.

Our own sales and service sites are located in Hong Kong and New York, USA. ACL's products are characterised by quality, functionality and sustainability and can be procured via selected dealer network in over 40 countries worldwide.

1 New York
2 Leipzig
3 Hong Kong
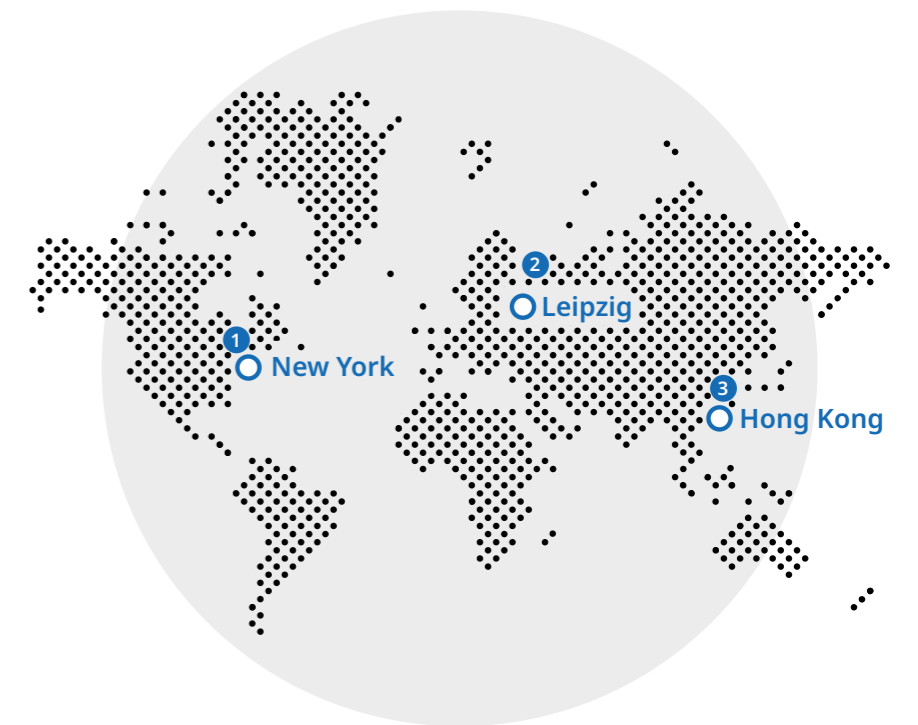
Selected references

1

Valley Hospital
Ridgewood, USA

2

Karolinska University Hospital
Stockholm, Sweden

3

Shanghai No. 10 People's Hospital
Shanghai, China
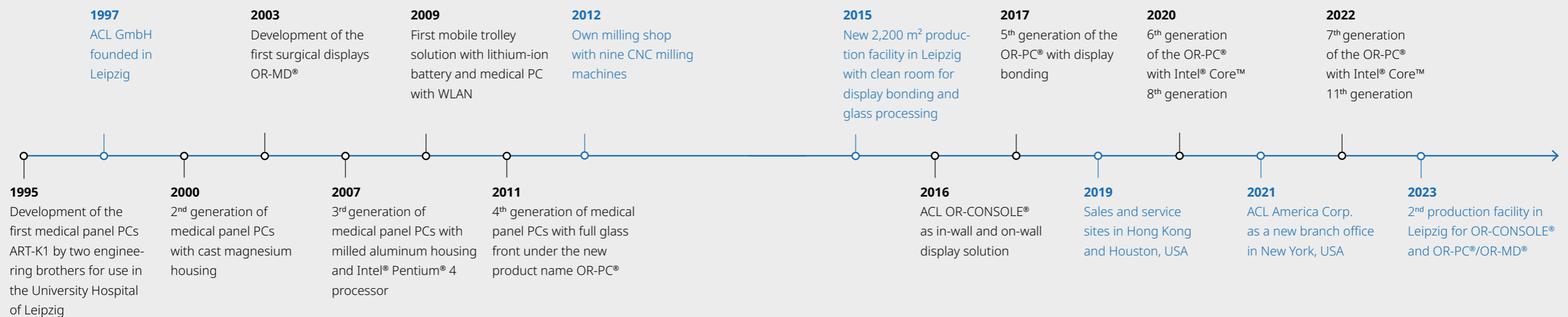
Over 25 years of quality »Made in Germany«

Since the development of the first medical panel PCs in 1995, ACL has been flexibly producing hardware solutions with great passion and technical expertise at a level that exceeds the high-est demands on devices for the medical sector. Thanks to many years of experience in the development and production of medical IT hardware, ACL offers e. g. clinics, medical technology and software manufacturers, planners and distributors the right solutions for the benefit of their patients and customers for a quarter of a century.

History of OR-PC® series 1995–2024
As an independent German manufacturer, we rely on our own production, design and electronic development and guarantee our customers durable products of the highest quality. In the development of our products we follow the maxim of combining ergonomics and design with state-of-the-art technology. ACL's products therefore also convince with their modern, compact device concept and low weight.

1997
ACL GmbH founded in Leipzig

2003
Development of the first surgical displays OR-MD®

2009
First mobile trolley solution with lithium-ion battery and medical PC with WLAN

2012
Own milling shop with nine CNC milling machines

2015
New 2,200 m² production facility in Leipzig with clean room for display bonding and glass processing

2017
5th generation of the OR-PC® with display bonding

2020
6th generation of the OR-PC® with Intel® Core™ 8th generation

2022
7th generation of the OR-PC® with Intel® Core™ 11th generation

1995
Development of the first medical panel PCs ART-K1 by two engineering brothers for use in the University Hospital of Leipzig

2000
2nd generation of medical panel PCs with cast magnesium housing

2007
3rd generation of medical panel PCs with milled aluminum housing and Intel® Pentium® 4 processor

2011
4th generation of medical panel PCs with full glass front under the new product name OR-PC®

2016
ACL OR-CONSOLE® as in-wall and on-wall display solution

2019
Sales and service sites in Hong Kong and Houston, USA

2021
ACL America Corp. as a new branch office in New York, USA

2023
2nd production facility in Leipzig for OR-CONSOLE® and OR-PC®/OR-MD®

Our vision:
»Always a step ahead«

ACL's employees are committed to providing medical staff innovative, high-performing and durable IT hardware to handle rigorous use and maintain the top hygiene standards for patient safety and comfort. The products embody the »Made in Germany« quality seal through innovation, the use of top-quality materials, workmanship and commitment to excellent customer service.

Made
In
Germany

01 Innovation

For more than 25 years and for the future – the know-how and inventive talent of our employees are the basis for continuous development of our products for the benefit of our customers.

02 Product quality

The independent production in Germany with state-of-the-art technologies and top-quality materials as well as the economical and sustainable use of resources guarantee excellent product quality in the long term. Reliable and durable products for continuous use on patients are both an incentive and an obligation for all employees at ACL.
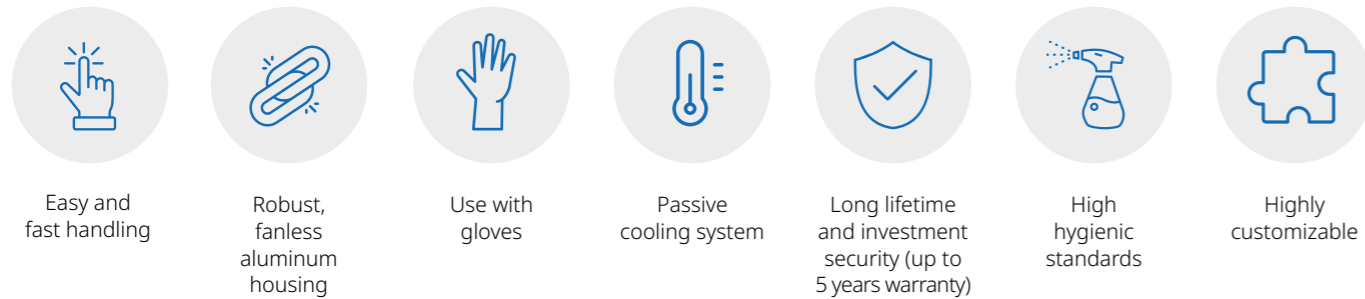
03 Service

We hold dear the ultimate satisfaction of our customers. Our service is characterized by customer proximity, short reaction times, and direct contact with the manufacturer. Apart from great individualization possibilities of our products, we also offer high investment security.

OR-PC® series

The medical grade all-in-one OR-PC® is made for strenuous non-stop operation in hygienically critical areas.

Easy and fast handling

Robust, fanless aluminum housing

Use with gloves

Passive cooling system

Long lifetime and investment security (up to 5 years warranty)

High hygienic standards

Highly customizable

Specially developed for continuous operation in hygienically critical areas

Extremely robust and maintenance-free

Completely enclosed, fanless construction
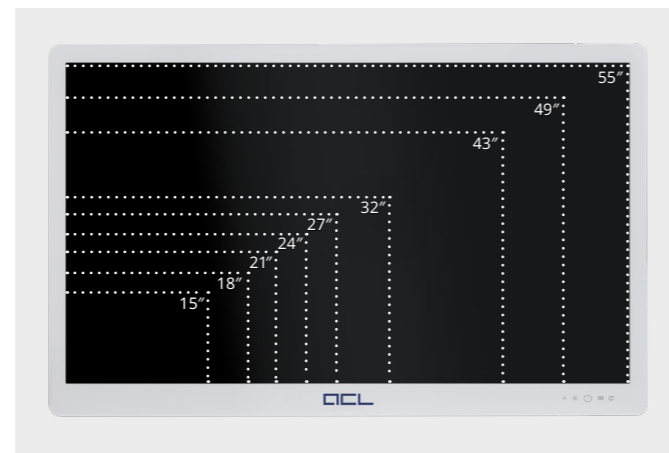
Full HD: 15″, 18″, 21″, 24″, 27″, 32″
Ultra HD (4K): 24″, 27″, 32″, 43″, 49″, 55″

Strengths at a glance

Easy handling

- Easy to disinfect
- Easy cable management (integrated power supply unit)
- Service-friendly, tool-free device mounting, integrated VESA interface
- For disinfection deactivate display by touching only a button
- Maintenance-free

Design

- Completely enclosed, milled full aluminum housing
- Noiseless operation thanks to no rotating parts
- Reduced unit weight thanks to compact design

Technology/construction

- Long product life through optimized heat dissipation from the device with passive cooling system
- Industrial components allow for continuous operation (24/7), high planning and investment security
- Use of powerful Intel® ULV Processors up to 11th generation
- Energy efficient night mode due to backlight shut-down
- Display: use of modern technologies with true-color reproduction and all-round viewing angle
- Protective glass pane: Corning® Gorilla® Glass with anti-reflection (AR) and anti-fingerprint (AF) coating
- High-performance hardware components
- State-of-the-art technologies

Optional product specifics

- Individual window or logo printing as well as individual housing colours, also for small series
- Antibacterial painting
- Special glass coatings available on request
- Various integrable accessories: e. g. RFID, barcode scanner, etc.
- Optical bonding: Image reproduction of the highest brilliance

Fields of application

- Intensive care unit and intermediate care
- Operating room
- Intervention area
- Inlet and outlet room
- Recovery room
- Clean room

Examples for application

- CIS (Clinical Information Systems)
- ePR/PDMS (Patient Data Management Systems)
- Anaesthesia Documentation Systems
- RIS (Radiology Information Systems)
- PACS (Picture Archiving and Communication System)
- Digital audio and video capturing
- Telemedicine

Material specifications

Corning® Gorilla® Glass
The use of a protective Corning® Gorilla® Glass pane is a standard feature of ACL's OR-PC®s. This type of glass is highly scratch-resistant, resilient, saves weight and increases display brightness.

Self-milled aluminum housing
ACL produces full aluminum housings in its own milling shop. The entire housing as passive heat sink has an excellent thermal conductivity and thus enables a long life of the electronic components.

OR-PC® series: variety of products

Based on the individual requirements of our customers, we tailor the right solution for the OR-PC®.

OR-PC® 24 Hot Swap Battery

The OR-PC® 24 with Hot Swap Battery has been specially developed for mobile use in hygienically critical areas. It is perfectly suited for all those who want to use an OR-PC® without a separate power supply.

OR-PC® Thin-Client

With the OR-PC® Thin-Client, hardware and software clients from various manufacturers can be implemented. We thus offer an independent platform solution that can be easily integrated into existing networks.

OR-PC® Box

The OR-PC® Box enables the integration of additional PCIe cards. With the optional 10″ touch display, the device can be used for video capturing, for instance. The voltage and signal supply are only via a single USB-C connection.

OR-PC® Box Mini
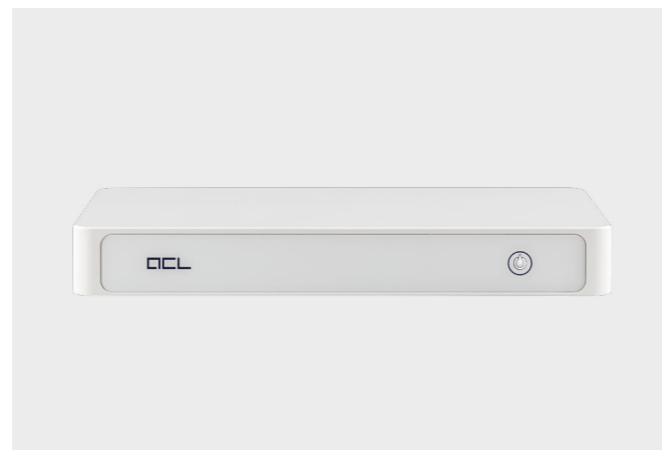
The OR-PC® Box Mini is the most compact version of the series. The space-saving stand-alone PC is also equipped with a passive cooling system and industrial components, and is suitable for continuous operation.

Specifications

Housing	Milled solid aluminum
Equipment	Intel® Celeron, Core i5, Core i7 (Intel® ULV processor up to the 11th generation)
	Up to 64 GB RAM
	Up to 2 TB M.2 SSD
	Internal power supply
Display sizes Full HD	15″, 18″, 21″, 24″, 27″ and 32″
Display sizes Ultra HD (4K)	24″, 27″, 32″, 43″, 49″ and 55″

Options

Individual configuration options
- PCAP multi-touch
- Display bonding L-OCA for extremely high image quality
- RFID reader
- Barcode scanner
- Wi-Fi and Bluetooth, mobile data transfer
- Fibre optic interface cards
- Card reader
- Integration of PCIe cards, e.g. for video capturing
- Loudspeaker
- Webcam
- Cable cover
- Pre-installed Windows operating system
- Warranty extension up to 5 years
- Customer layout

Decoupling
- Interface decoupling 4 kV (RJ-45, RS-232)

Coatings
- Germicidal coatings
- Special glass coatings available on request

Examples of customization

Antimicrobial painting

RFID reader and barcode scanner

Cable cover

OR-MD® series

The devices of the OR-MD® series are the top choice for medical imaging and video displays. Bright, true-color displays and high all-round viewing angle are the hallmarks of this series.

Easy and fast handling

Robust, fanless aluminum housing

Use with gloves

Resource saving and sustainable

Long lifetime and investment security (up to 5 years warranty)

High hygienic standards

Highly customizable

Ideal for high-resolution medical image and video presentations in the operating room and intensive care units

OR-MD® – the best picture in Full HD and Ultra HD (4K)

State-of-the-art PCAP multi-touch screen

Full HD: 15″, 18″, 21″, 24″, 27″, 32″
Ultra HD (4K): 24″, 27″, 32″, 43″, 49″, 55″

Strengths at a glance

Easy handling

- Easy to disinfect
- Easy cable management (integrated power supply unit)
- Service-friendly, tool-free device mounting, integrated VESA interface
- For disinfection deactivate display by touching only a button
- Maintenance-free

Design

- Reduced unit weight thanks to compact design
- Completely enclosed, milled full aluminum housing

Technology/construction

- Protective glass pane: Corning® Gorilla® Glass with anti-reflection (AR) and anti-fingerprint (AF) coating
- TFT panel with all-round viewing angle
- Energy efficient night mode due to backlight shut-down

Optional product specifics

- Individual window or logo printing as well as individual housing colours, also for small series
- Antibacterial painting
- Special glass coatings available on request
- Optical bonding: Image reproduction of the highest brilliance

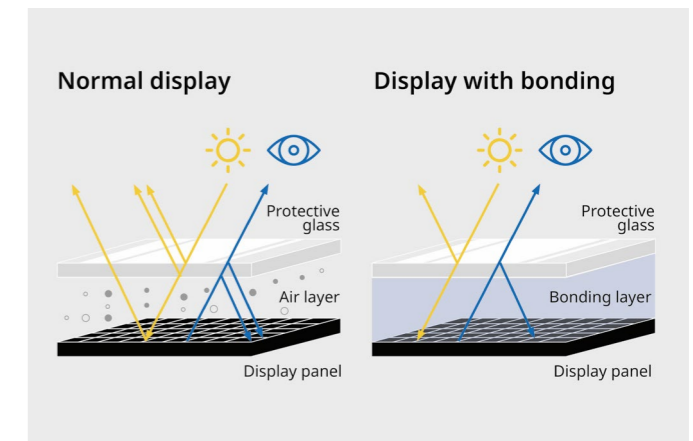### DICOM preset

Grey-scale tones
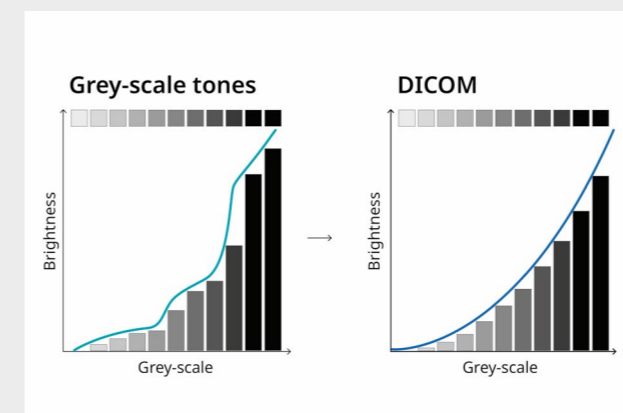
DICOM

Calibrated DICOM preset optionally possible

Fields of application

- Operating room
- Radiology
- Endoscopy
- Microscopy
- Visualization within the environment close to the patient (according to EN DIN/UL 60601)

Optical bonding

Normal display

Display with bonding

Protective glass

Air layer

Display panel

Protective glass

Bonding layer

Display panel

The special process of optical bonding reduces distorted light refractions and disturbing reflections. By bonding the display to the glass, the brilliance and brightness of the images are further increased and the experienced user can recognize the finest gradations in shades even faster and more reliably. Moreover, optical bonding prevents soiling.

All medical displays up to 32″ can be optionally bonded.

OR-CONSOLE® series

The OR-CONSOLE® serves as a central control platform for the display, recording, and distribution of patient-specific medical data.

Easy and fast handling	Passive cooling system	Use with gloves	Resource saving and sustainable	Long lifetime and investment security (up to 5 years warranty)	High hygienic standards	Highly customizable

Metal housing
This is the cost-effective basic variant within this product series. The metal housing can be flexibly painted in all RAL colors according to customer requirements. It is available with a frame for wall mounting and with a body for surface mounting.

Full glass front for modular wall systems
The wall consoles impress with a high-quality, modern and innovative design as well as a non-reflecting, full-surface glass front. The optional integrated touch, capacitive keypad and optional keyboard guarantee full functionality and easy handling.

With full glass front and keyboard
In this version, it is possible to integrate a keyboard, mechanical buttons, and interfaces leading to the outside. These can be flexibly arranged and realized in a stainless steel element.
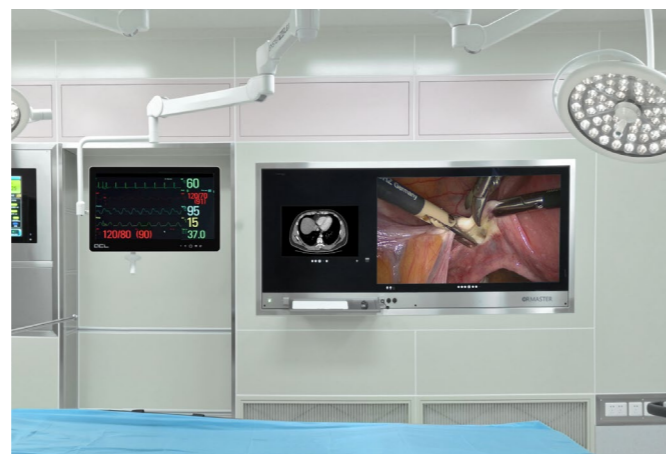
Full HD: 21″, 24″, 27″, 32″
Ultra HD (4K): 24″, 27″, 32″, 43″, 49″, 55″, 65″, 75″

Strengths at a glance

Easy handling

- Hygienic, flush-fitting device installation concept for effective disinfection
- For disinfection deactivate the display by touching only one button
- Maintenance-free

Design

- Noiseless operation thanks to no rotating parts
- Use of high-performance hardware components

Technology/construction

- Use of state-of-the-art technologies
- Long product life through optimized heat dissipation from the device with passive cooling system
- Using industrial components allows for continuous operation, long-term high planning and invesment security
- Flexible modular system for individual multi-display solutions
- Modern TFT panels with all-round viewing angle
- Protective glass pane with anti-reflection (AR) coating

Optional product specifics

- Individual window or logo printing as well as individual housing colours, also for small series
- Special glass coatings available on request
- Customizable in dimension and equipment options
- Various integrable accessories: e. g. RFID, barcode scanner, etc.
- Calibrated DICOM preset
- Individual equipment with additional data and video interfaces possible

Fields of application

- Operating room
- Intervention area
- Laboratory
- Clean room

Examples for application

- RIS (Radiology Information Systems)
- PACS (Picture Archiving and Communication System)
- PDMS (Patient Data Management System)
- Digital OR integration

Design specifics

ACL puts great emphasis on quality in terms of housing and the mechanics. This is ensured by flush integration into system walls, adjustment options for the exact adaptation of the devices to existing wall niches, as well as the flexibility of processing.
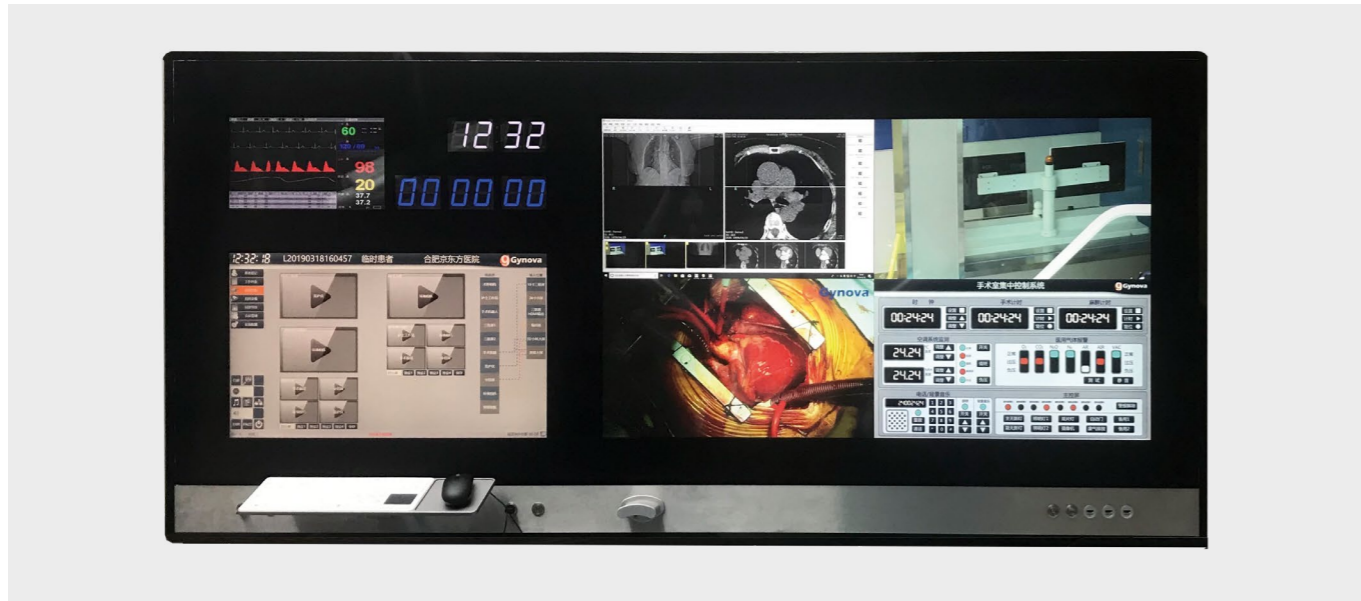
Quality Check

The OR-CONSOLE® – like all ACL's devices – is subjected to a comprehensive quality check before delivery. In addition to a visual inspection and an intensive functional test, all installed electronic components go through a documented stress test to guarantee the longevity of the device.

Customized configurations

In addition to the OR-CONSOLE® standard systems, ACL is also able to produce individual dual or multi-screen solutions due to the high vertical range of manufacture and its own design team.

Specifications

Basic system	Designed as monitor
Display sizes Full HD	21″, 24″, 27″ and 32″
Display sizes Ultra HD (4K)	24″, 27″, 32″, 43″, 49″, 55″, 65″ and 75″
Optional PC module: Equipment options	Intel® Celeron, Core i5, Core i7 (Intel® ULV processor up to the 11th generation)
	Up to 64 GB RAM
	Up to 2 TB M.2 SSD
	Internal power supply

Options

Individual configuration options
- PCAP multi-touch
- RFID reader
- Barcode scanner
- Wi-Fi, Bluetooth
- LWL-Interface cards
- Integration of PCIe cards
- Loudspeaker
- Individual customer layout
- DICOM preset
- Pre-installed Windows operating system
- Warranty extension up to 5 years

Decoupling
- Interface decoupling 4 kV (RJ-45, RS-232)

Coating
- Germicidal coatings
- Special glass coatings available on request

There are almost no limits to the possible combinations and expansions for dual or multi-screen solutions. Screen diagonals from 10″–75″ can be individually combined with each other and can also be supplemented with additional function displays, for example for time, timer, temperature and humidity. The same range of variants can be accessed as for the standard systems, optionally with metal housing or full glass front, designed as a wall recessed or surface-mounted solution and with integrated PC or as a monitor. The modular device concept also guarantees a high degree of future and investment security, as hardware expansions or upgrades are possible at any time without difficulty.

High hygienic standards

The OR-CONSOLE® is water- and dust-proof on the front side. Dust turbulence is avoided by the fanless, completely enclosed design. The full-surface protective glass pane makes it completely disinfectable. The flush installation avoids surfaces or edges where dirt can accumulate. An additional antibacterial coating is optionally available.

Interfaces and switches

Individually adapted to the respective application, the OR-CONSOLE® can be flexibly equipped with interfaces, switches and buttons. The customer can also define the number as well as the position of the elements, regardless of whether the devices have a metal housing or a full glass front.

Mobile Solution

ACL offers several mobile solutions equipped with the latest technology. Depending on customer requirements various combinations are possible. The OR-PC® or the OR-PC® 24 Hot Swap Battery in combination with flexible cart solutions can be tailored to every requirement in the field of digital and mobile healthcare.

ACL's mobile cart solutions support medical staff during their daily tasks in an optimal way. During medical examinations the full digital access to patient data and records provided by the hospital information systems will help to improve the effectiveness and the patient education, which eventually enhances the contentment of all parties.

Telemedicine solutions will gain more and more importance in a fully connected world and considering distances to keep. ACL's mobile solutions meet this claim perfectly with:

- Integrated loudspeakers
- Webcam
- Microphone or
- 2nd screen

No need for additional wiring or devices resulting in a lack of hygiene. With an integrated battery system, the OR-PC® 24 Hot Swap Battery lasts all day and merely alerts you when it is time to power up. This way you can fully concentrate on your work and continue when the battery charge runs out. Just grab a loaded battery and swap it during operation of the system.

OR-Pad® Medical Tablet

The OR-Pad® is your reliable companion in everyday clinical use.

Wherever you are
ACL's OR-Pad® Medical Tablet combines functionality and performance in a compact, durable and light-weight aluminum housing (1.8 kg). It accompanies you wherever you need it in the daily clinical routine and offers you access to your digital content at any time thanks to excellent connectivity.

Extremely robust and easy to clean
Certified to IEC 60601-1/60601-1-2 and with an IP65 protection rating, the OR-Pad® resists drops, shocks and liquids. It is also protected against heat, cold and submersion. As usual for ACL devices, all commercially available cleaning agents and disinfectants from the clinical environment can be applied to the tablet without any problems.

High quality touch screen
The 13.3″ touchscreen convinces with a Full HD panel and brilliant colors. Thanks to the capacitive 10-point multi-touch, it can also be operated with wet hands or gloves. The anti-fingerprint (AF) and anti-glare (AG) screen coatings based on Corning® Gorilla® Glass reduce interference on the display surface.

Powerful
With 11th generation Intel® ULV processors and blazingly fast M.2 SSDs, the OR-Pad® Medical Tablet is every bit as good as a stationary computer.

High connectivity and flexible use
Besides WiFi 6 and Bluetooth 5, for fast and stable wireless connections according to the latest standards, the OR-Pad® also offers extensive interfaces: 1 × HDMI, 2 × USB 3.0 (Type-A), 1 × USB 3.1 (Type-C), 3.5 mm audio in/out. There is a front camerab (5 megapixels – fixed focal length) and a rear camera (8 megapixels – auto-focus and LED flash). The keyboard on the front includes a power button, volume up/down, and three programmable buttons as options.

Wide range of applications:
- directly at the patient
- Nursing and intensive care units
- Emergency room
- Telemedicine

Accessoires

Docking station

Hand strap

VESA mount

Carrying handle

Carrying strap

Accessories

We offer a wide range of accessories to match our core products. These come from our own development and production and thus meet the high quality standards of ACL's products. Our dedicated team will work with you to plan all your options and maximize performance.

Height-adjustable wall station
The height-adjustable wall station is used for space-saving wall mounting of the OR-PC® devices up to 32″ in combination with a foldable keyboard or keyboard/mouse combination. All cable connections are located inside the mounting. All required interfaces (e. g. USB, network connections) are splash-proof. The milled aluminum wall station can be completely disinfected and meets the highest standards of durability and quality.

Desk stand
With the stand developed and manufactured by ACL, one can use OR-PC® and OR-MD® as desktop units up to 27″. The elegant design matches ACL's device concept and guarantees the best possible stability. The stand is made of aluminum and easy to disinfect. It can be delivered in different RAL colors.

Further accessoires:
- Keyboards and mice
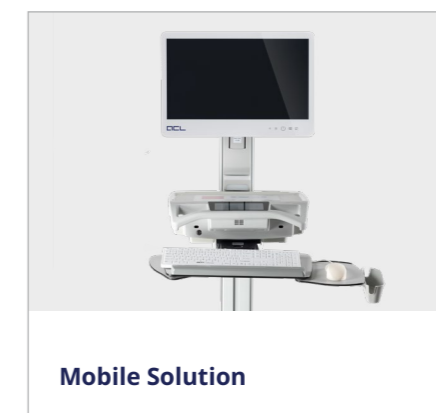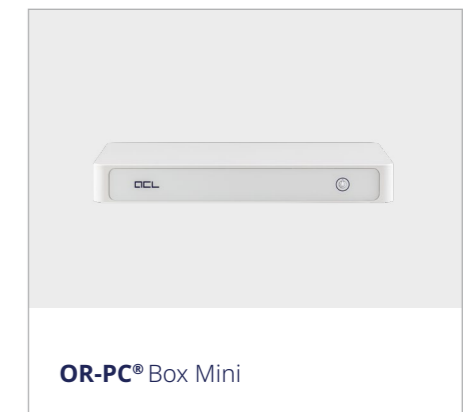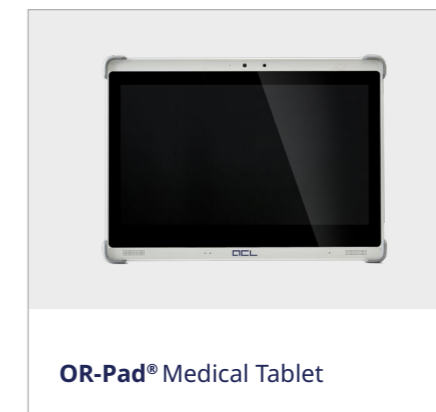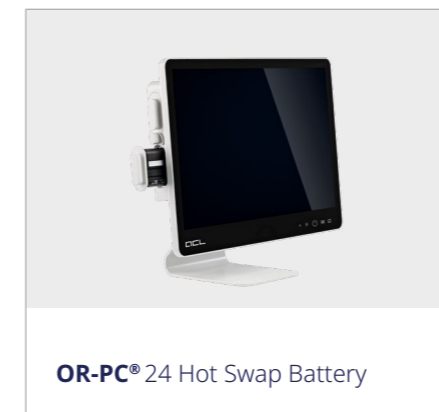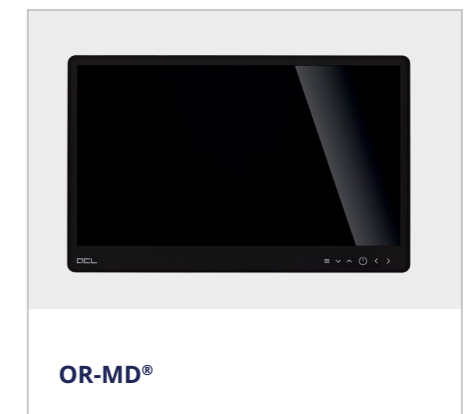- Cables
- Support and mounting systems

Please do not hesitate to contact us and discuss your individual requirements.

Product request

Our sales team will be happy to advise you.
You can send your product request at sales@acl.de or via contact form at the ACL website.

Contact form

OR-PC®

OR-CONSOLE®

OR-MD®

OR-PC® 24 Hot Swap Battery

OR-Pad® Medical Tablet

OR-PC® Box Mini

OR-PC® Box

Mobile Solution

Height-adjustable wall station

ACL
ALWAYS A STEP AHEAD

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