

INDUSTRIAL PCS AND SCALABLE SOLUTIONS FOR HMI, IIOT AND INDUSTRY 5.0 APPLICATIONS

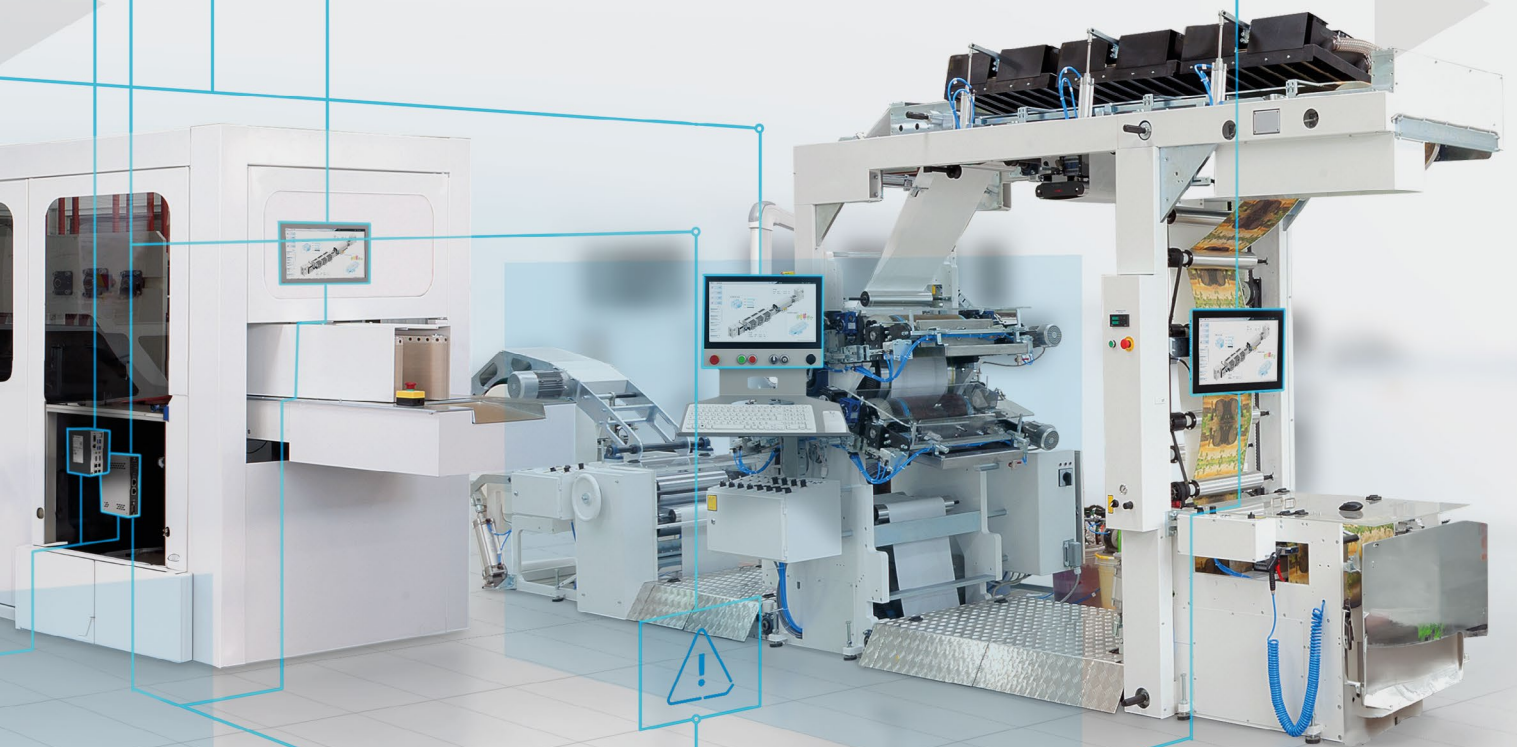


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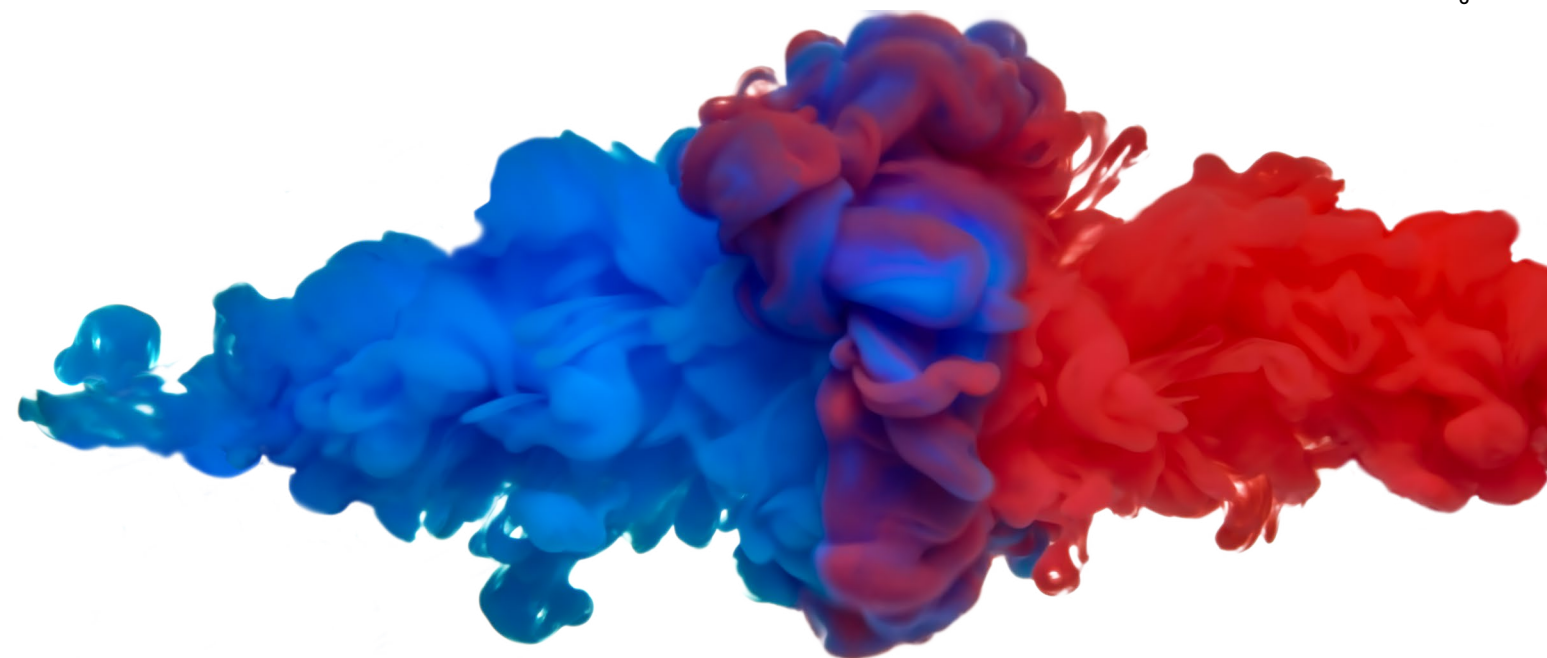
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SERVICES AND SUPPORT



VISION, INNOVATION & RESPONSIBILITY



Founded in 1979, ASEM began as an engineering company with a bold ambition to unite the power of microprocessors with the productive capacity of industrial automation. From the very beginning, it demonstrated a forward-thinking approach, becoming a pioneer in integrating PCs into factory automation systems.

By the early 2000s ASEM was leveraging its solid expertise and strategic vision to establish itself as a leading player in Italy's industrial PC sector. The company invested heavily in the development of embedded platforms and innovative software solutions, giving rise to technologies such as UBIQUITY, a remote assistance platform, and a new HMI paradigm designed to meet the evolving challenges of Industry 4.0.



In 2020, ASEM joined Rockwell Automation, accelerating its growth and innovation journey. With continued investment in advanced technologies and human capital, ASEM became the group's Center of Excellence for Visualization, further strengthening its global presence.

Today, ASEM stands as a symbol of technological innovation and social responsibility. The company is committed to promoting employee well-being and sustainable regional development through targeted, impactful initiatives.

1979 / 1982

Expertise in electronic engineering

1993 / 2005

Industrial PC Leadership

In the early 1990s ASEM distinguished itself as one of the first companies in Italy to design and manufacture industrial PCs specifically for the industrial application market

2006 / 2008  PREMIUM HMI**Manufacturer of Automation Systems**

Thanks to partnerships with leading companies in the industry, ASEM offers the market premium software platforms such as HMI and CODESYS (soft PLC)

2010

Expansion across Europe

2011 / 2012  UBIQUITY**The Era of Software and Remote Support**

ASEM launches the innovative remote support platform UBIQUITY, enabling secure remote access to supervision systems and automation devices

2016

OPC UA integrated into the Premium HMI5 platform

2019

The HMI 4.0 revolution has become reality

The innovative UNIQO software platform is launched, built on a full OPC UA, cross-platform framework

2020  Rockwell Automation

ASEM a Rockwell Automation Company

2023  Optix™ **ASEM6300****Converged Roadmap**

FactoryTalk® Optix™ is launched - a new collaborative, cloud-based platform for HMI and Edge Computing applications

2025

Strategic Investments and Sustainable Development

The Artegna facility begins its expansion with a new sustainable structure. An in-house laboratory for testing and validation is introduced to support product development and ensure quality

VERTICAL MARKETS & INDUSTRIAL APPLICATIONS

ASEM's modular platforms deliver highly interoperable, reliable, and scalable technological solutions, designed to ensure high performance even in the most demanding industrial environments. ASEM's technologies are successfully employed across a wide range of vertical markets, including:

By adapting to the specific needs of each sector, ASEM has established itself as a trusted technology partner for modern industry.



LOCATIONS

HEADQUARTERS AND REGIONAL PRESENCE

ASEM operates through strategic locations in Italy and Germany, each with specialized expertise and highly qualified teams. This structure allows us to offer advanced technological solutions and tailored services, ensuring effective support for customers both nationally and internationally.



FEATURES

END-TO-END MANAGEMENT FOR MADE IN ITALY SOLUTIONS

ASEM stands out thanks to its technology focused approach, consolidated know-how, and over forty years of experience in industrial automation. These strengths enable the company to internally design and develop all its solutions – both hardware and software—ensuring full control over every phase of the process.

Thanks to a flexible production structure and a highly efficient internal organization, ASEM responds quickly and precisely to the specific needs of each customer.

Direct management of design, development, and manufacturing, combined with technological governance across all components, allows ASEM to deliver advanced, reliable, and high-quality solutions—entirely **Made in Italy**.

Moreover, ASEM completely controls all design processes, and collaborates with the leading technological trendsetters, enabling them to deliver systems with a minimum lifecycle guarantee of **7 years**. In addition, **repairability and spare parts availability** for no less than an additional **5 years**.



ROCKWELL AUTOMATION – DESIGN FOR SECURITY

Rockwell Automation integrates cybersecurity at the core of every product, ensuring reliable and secure solutions from the design phase. Through rigorous security standards and IEC 62443 certifications, we deliver technologies developed according to industry best practices, supported by advanced processes covering software development, information security, and cloud services.

Our Secure Software Development Framework (NIST 800-218) certification journey further reinforces our commitment to delivering secure products, while a “defense in depth” approach ensures multi-layered protection—from individual devices to the entire system. Robust security, designed to support our customers’ growth.

FLEXIBILITY

- Agility and dynamism in design, development, and production
- Modular process architecture
- Ability to respond quickly to market changes
- Digital solutions enabling scalability and adaptability
- Maximum configurability of systems and solutions

QUALITY

- Compliance with standards (ISO 9001, ISO 14001, ISO 45001)
- Internal audits and continuous monitoring of customer satisfaction to improve and optimize products and processes
- Compliance with Design for Security and other Rockwell Automation policies
- Pre- and post-sales support and assistance
- Careful supplier selection
- Meticulous choice of every component
- Testing, inspections, final checks, and pre-compliance procedures carried out in internal laboratories for all systems and solutions

INNOVATION

- Over 30% of Human Resources are dedicated to Research and Development
- Continuous investment in R&D, laboratories, and advanced technical and technological equipment
- Close collaboration with leading technology innovatorsPromotion of a mindset open to change and experimentation
- Agile methodologies to explore and test new ideas
- Sustainability and Responsible Innovation

HARDWARE & SYSTEMS R&D

Integrated engineering expertise for advanced architectures

The Hardware and Systems R&D team features highly qualified engineers with multidisciplinary expertise in electronic and mechanical design, firmware and operating system development, and automated testing. Thanks to a systemic approach, the team manages the entire product development cycle—from specification definition to final validation.

Each device is the result of an iterative and collaborative process, driven by ongoing dialogue with leading technology trends and direct interaction with customers. This enables the integration of cutting-edge solutions that fully comply with functional, performance, and regulatory requirements. The synergy between engineering expertise and application-oriented vision allows the

development of scalable, reliable, and optimized solutions for complex ecosystems, with a strong focus on:

- Robustness
- Energy efficiency
- Electromagnetic compatibility

All design processes follow Rockwell Automation's Design for Security principles, ensuring high security standards from the earliest stages of development.

SOFTWARE R&D

Advanced Software Engineering for Modular & Distributed Architectures

The R&D Software team develops advanced solutions for visualization platforms and remote assistance, designed for smart factories and Industry 4.0 applications. The software is compatible with a wide range of devices, from open, general-purpose systems to proprietary ones. ASEM solutions ensure:

- High performance
- Long-term reliability
- Seamless communication between proprietary and third-party systems

Full control over the development lifecycle ensures efficiency and quality through:

- Automated CI/CD pipelines
- Unit, integration, and performance testing
- Continuous monitoring and dynamic tuning

The team adopts the following methodologies:

- DevOps: automation of build, testing, and deployment for continuous delivery
- Lean: focus on value, waste reduction, and optimized processes
- Agile: short sprints to ensure flexibility and rapid adaptation

Security is integrated into the process through rigorous checks:

- Threat Modeling
- Security-by-default principles
- Regular code and architecture reviews
- Automated testing (DAST, SAST)
- Penetration testing by Red and Blue teams to simulate real-world scenarios

LABORATORIES

CERTIFIED INNOVATION FOR SYSTEM CONTROL AND VALIDATION



Shock & Vibe Testing

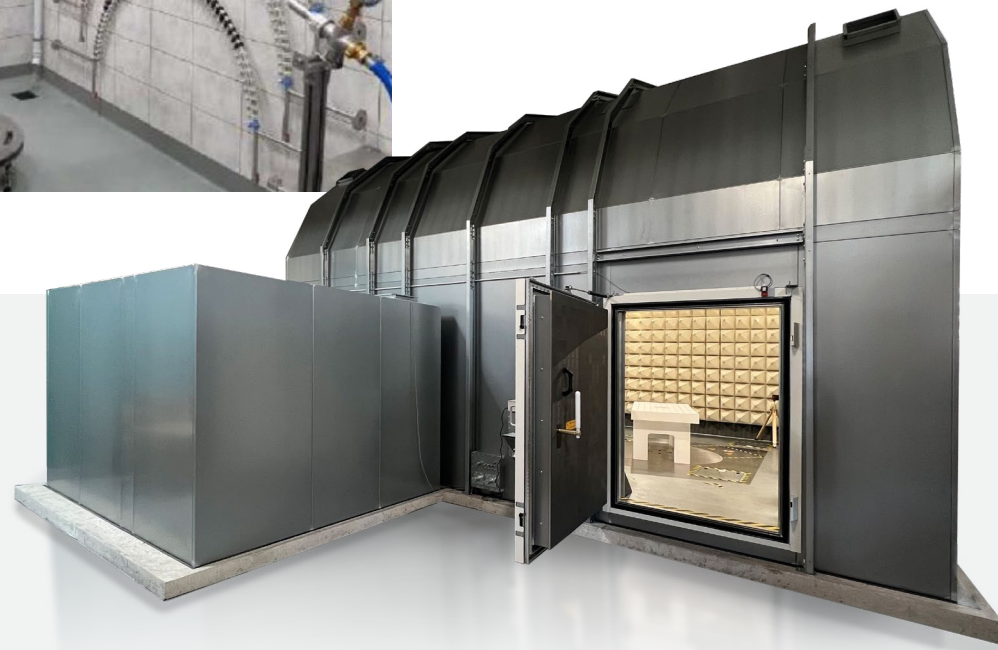


IP-protection Testing

The constant pursuit of technological innovation is one of the pillars of ASEM's success. In this spirit, the company invested in an internal laboratory dedicated to product validation, to accelerate development processes and ensure maximum reliability.

Key activities carried out in the lab include:

- Electromagnetic compatibility (EMC) testing
- Mechanical shock and vibration testing
- Environmental testing in climate chambers
- Dust and liquid protection testing (IP)
- Stress and endurance testing
- Display validation through image analysis using OpenCV cameras



Anechoic Chamber - Exterior



Anechoic Chamber - Interior

The centerpiece of the lab is a fully compliant anechoic chamber, which enables monitoring and optimization of the electromagnetic performance of devices throughout the entire design cycle.

This strategic asset significantly reduces intervention times and eliminates the need to send prototypes to external laboratories, improving both efficiency and quality control.

PRODUCTION

IN-HOUSE PRODUCTION: EFFICIENCY, CONTROL, AND QUALITY

ASEM internally manufactures and assembles all of its systems, including electronic boards, thanks to three complete SMT lines that ensure maximum flexibility and full control over the entire production process. Each board undergoes functional and burn-in testing for a minimum of 8 hours, ensuring long-term stability and reliability.

The systems are then mechanically and electronically assembled according to strict quality standards.

The process concludes with functional tests that certify the performance and compliance of each product. This integrated approach allows ASEM to maintain full control over every production phase, reduce time-to-market, and deliver reliable technological solutions that meet international standards.



CORPORATE SOCIAL RESPONSIBILITY

ASEM, part of the Rockwell Automation group, promotes sustainable business growth grounded in environmental, social, and ethical responsibility. In terms of governance, ASEM adheres to ISO 9001 certification and a shared Code of Ethics, fostering transparency, integrity, and inclusion in alignment with Rockwell Automation’s global standards—recognized among the world’s most ethical companies.

On the social front, ASEM has achieved ISO 45001, ensuring a safe and healthy work environment. The company puts people first, offering concrete programs that support physical and mental well-being, work-life balance, continuous learning, and mental health support.

ENVIRONMENT

SOCIAL

GOVERNANCE



The company has obtained **ISO 14001** certification for its environmental management system and is expanding its Artegna facility following principles of energy efficiency, the use of renewable **energy sources**, and **low-impact materials**, contributing to the reduction of its carbon footprint. Its alignment with Rockwell Automation’s environmental goals, including achieving carbon neutrality by 2030, further reinforces this commitment.



ASEM PEOPLE



< Company Party to Celebrate the Start of the New Fiscal Year – Industrial PC Assembly Challenge



< ASEM Opens Its Doors to Employees’ Families

Working at ASEM means being part of a great team striving toward a shared goal. Throughout the year, we organize parties, events, initiatives, and presentations — from traditional Christmas celebrations to the kickoff of the new fiscal year.

ASEM SUPPORTING LOCAL COMMUNITY

ASEM is committed to supporting the community, contributing to the local area, and helping those associations that have always played a key role in promoting social inclusion and togetherness.



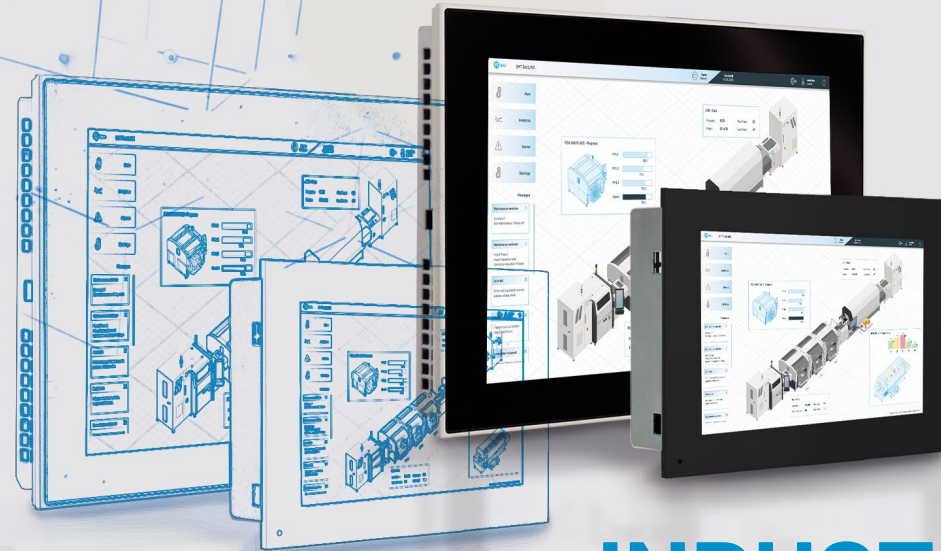
< ASEM Meets Federico Faggin: A Conversation with the Inventor of the Microprocessor



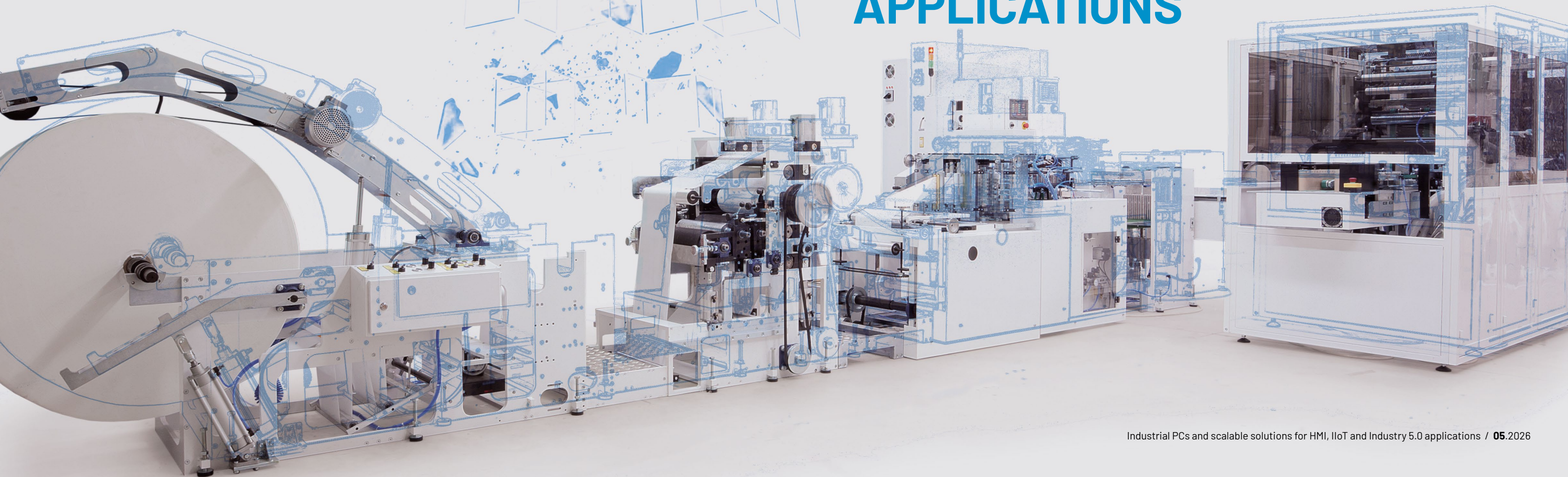
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ASEM Lab Officially Opens at ITS Malignani >



INDUSTRIAL PCS AND SCALABLE SOLUTIONS FOR HMI, IIOT AND INDUSTRY 5.0 APPLICATIONS

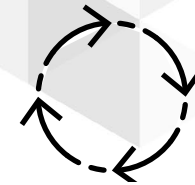


All IPCs integrate UBIQUITY software for remote assistance and can optionally include FactoryTalk® Optix™ software to develop modern HMIs, IIoT gateways, and Industry 4.0 applications, or CODESYS software, which transforms ASEM systems into powerful controllers.



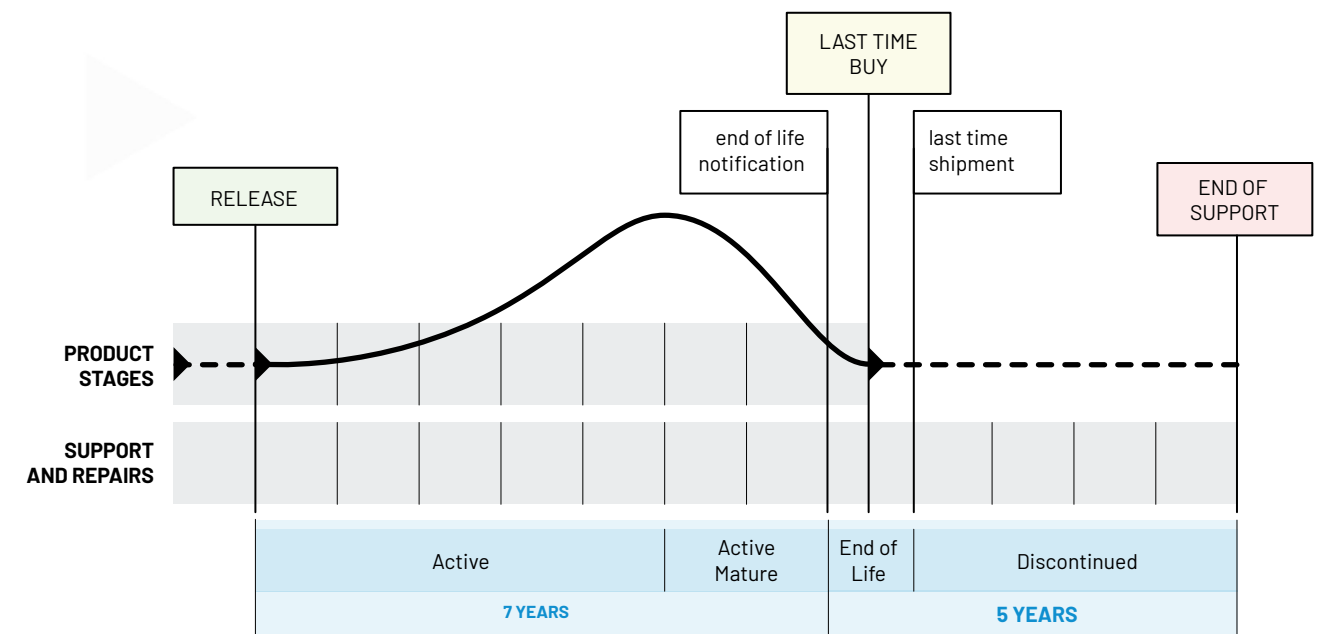
The system motherboards offer multiple levels of expandability in terms of communication interfaces and expansion slots, while minimizing cabling and internal connections. This design enhances overall reliability and ensures greater resistance to vibrations typically found in industrial environments.

To address the wide range of industrial applications, the need for communication between industrial and IT networks, and the latest requirements driven by the Industry 4.0 revolution—with increasingly connected and automated smart factories requiring advanced connectivity between MES, ERP systems, and production machinery—ASEM offers, in addition to traditional wired networking, systems equipped with wireless connectivity through combined Wi-Fi 5 and Bluetooth modules, as well as a global 4G modem. In addition, TSN technology is integrated into the systems to ensure ultra-reliable, low-latency machine-to-machine communication at Gigabit speeds, significantly contributing to improved performance and efficiency in real-time processes.



PRODUCT LIFECYCLE

ASEM's expertise in design and manufacturing processes, combined with close collaboration with leading technology trendsetters, enables the company to ensure a minimum system lifecycle of 7 years and their repairability, with spare parts availability guaranteed for at least an additional 5 years. End of Life, Last Time Buy, and Last Time Shipment procedures are implemented 6 months before the end of each product's lifecycle.



Active	Most current offering within a product category.
Active Mature	Product is fully supported, but a newer product or family exists. Gain value by migrating.
End of Life	Discontinued date announced – actively execute migrations and last time buys. Product generally orderable until the discontinued date.
Discontinued	New product no longer manufactured or procured. Repair/exchange services will be available for a limited period of time.

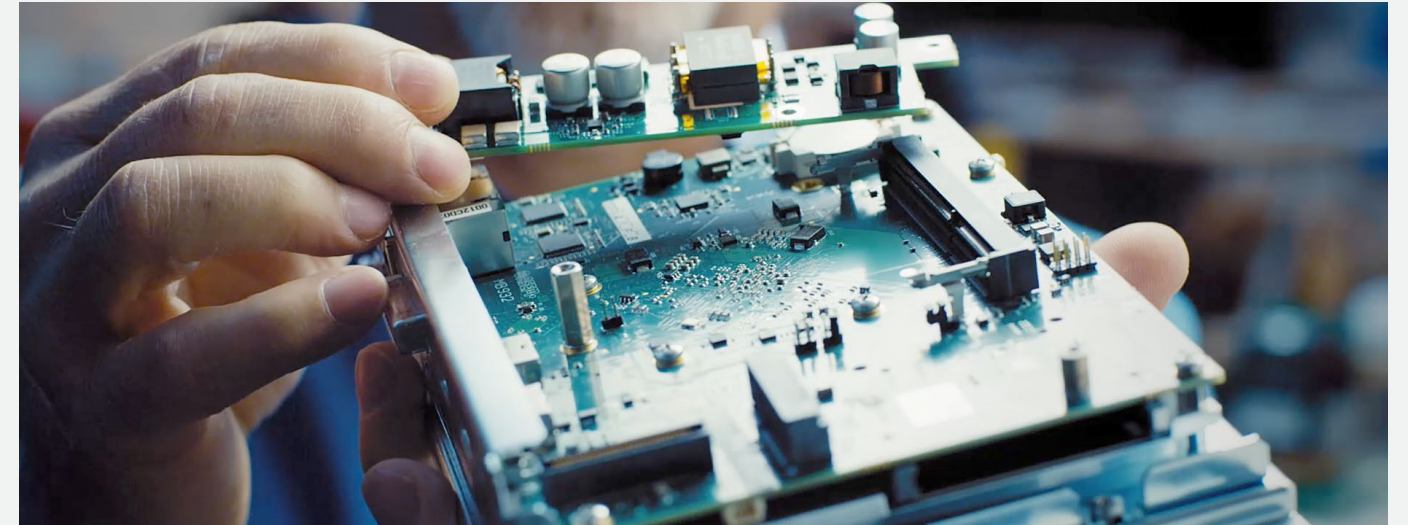
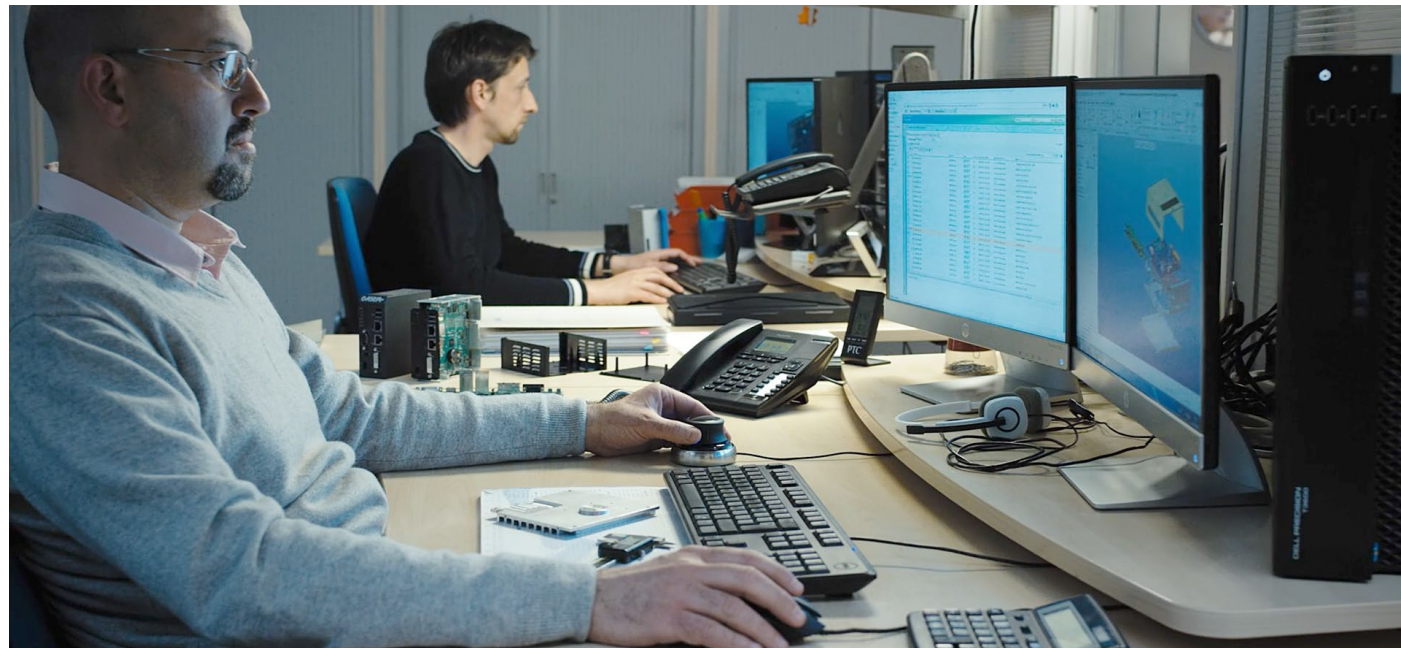
DESIGN, ERGONOMICS AND RELIABILITY

Full control over every stage of the production process, combined with over 40 years of experience in mechanical design and industrialization, enables ASEM to manufacture industrial PCs and monitors with a refined design, typical of Made in Italy, meticulously crafted in every detail, ensuring high reliability and long-lasting durability.

The chassis are typically made of galvanized steel, aluminum, or stainless steel, and are the result of an industrialization process based on perfect integration between electronic boards and mechanical components, supported by accurate thermodynamic and fluid dynamic analyses.

Advanced expertise in heat dissipation technologies allows ASEM to develop high-performance, silent fanless systems ideally suited for dusty industrial environments.

Fanless systems also require less maintenance and offer greater flexibility in installation.



SYSTEM TRACEABILITY

ASEM systems integrate the "ASEM System Identity", a non-volatile memory that stores system identification data as well as any additional data useful to the customer, ensuring system traceability.

OPERATING SYSTEMS

Operating systems are continuously updated, and ASEM ensures full compatibility of its x86 systems with Windows operating systems and Linux distributions. The ASEM team also supports the implementation of customer-developed images and creates customized images to be deployed on its systems.





FRONT PANELS AND TOUCHSCREENS

All ASEM panel-mounted systems are designed to meet any requirement in terms of aesthetics, ergonomics, and ruggedness, ensuring a degree of protection up to IP69K, making them the ideal solution for any industrial application. LCDs are available with LED-backlit displays in 4:3, 5:4, and widescreen formats, ranging from 7" to 24", with resolutions up to Full HD.

The unique cut-outs ensure perfect interchangeability across panel IPC, monitor, and operator panel product families. Front panels with the QT cut-out differ from those with the HT cut-out thanks to a minimized frame, featuring a more modern and refined design.





ALUMINUM FRONT PANEL (AF*¹) AND RESISTIVE TOUCHSCREEN

Front panels made of anodized aluminum with an IP65 protection rating against dust and water jets. These panels integrate a 5-wire resistive touchscreen, ensuring high impact resistance and allowing operation not only with fingers, but also with other objects such as a stylus, achieving a very high level of precision.

Panels featuring the HT cut-out are equipped with a front-accessible USB interface.



TRUE FLAT ALUMINUM FRONT PANEL (AT*²) AND RESISTIVE TOUCHSCREEN

True Flat technology ensures a completely flat surface, without recesses, fully isolated from external agents and allowing easier panel cleaning.

This technology enables perfect integration between the touchscreen and the frame, making the front panel more pleasant both to the touch and to the eye. These panels are manufactured using a dedicated production process inside a clean room to prevent environmental contamination such as airborne dust. The panels are completely dust-tight and protected against water jets thanks to the IP65 protection rating, and integrate a 5-wire resistive touchscreen.

As with AF panels, AT panels featuring the HT cut-out are equipped with a front-accessible USB interface.

*² previously: TF



TRUE FLAT ALUMINUM AND GLASS FRONT PANEL (GL*³) WITH PROJECTED CAPACITIVE MULTITOUCH TOUCHSCREEN

Wide-format front panels featuring a robust aluminum frame and a tempered glass surface with True Flat technology, ensuring maximum resistance to harsh environmental conditions and facilitating easy cleaning.

These panels integrate a projected capacitive touchscreen. The glass surface enhances brightness and image clarity, provides greater scratch resistance, and reduces wear over time. The user experience is more intuitive compared to resistive touchscreens, thanks to its high touch sensitivity.

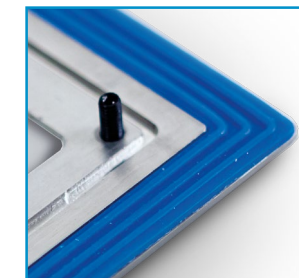
The capacitive touchscreen enables interaction with on-screen elements through typical mobile gestures such as zoom, swipe, and rotation, offering high responsiveness and precision. It supports up to 10 simultaneous touch points.

*³ previously: TFM



STAINLESS STEEL FRONT PANEL (SR*⁴) WITH RESISTIVE TOUCHSCREEN

Stainless steel front panels with IP66K and IP69K protection ratings, particularly suitable for the pharmaceutical and Food & Beverage industries, where maximum protection against high-pressure washdowns and dust ingress is required.



They are equipped with hygienic silicone gaskets, and the durable front film is specifically designed to withstand numerous washdown cycles.

SR front panels are available in widescreen, 4:3, and 5:4 formats and feature a resistive touchscreen.

*⁴ previously: TFX o TFK

*¹ previously: ALU

APPLICATION SOFTWARE

FOR REMOTE ASSISTANCE,
VISUALIZATION, IIOT,
INDUSTRY 5.0, AND CONTROL

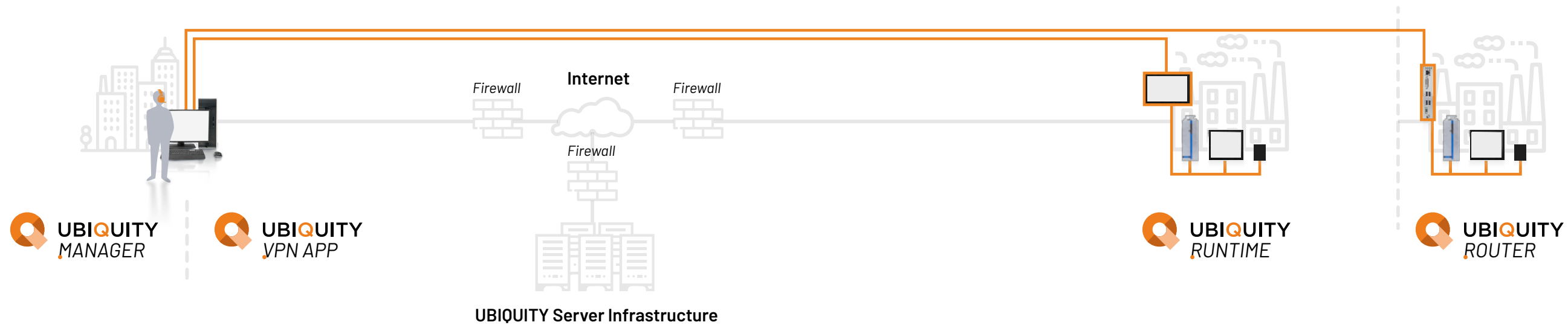




The UBIQUITY Runtime functionalities on products included in the Converged Roadmap are ensured through the use of FactoryTalk® Remote Access™ Runtime.

REMOTE ACCESS: SAFE, INTUITIVE, FLEXIBLE

The platform that intelligently and simply connects machines and systems, anywhere.



DISCOVER UBIQUITY
SOFTWARE SOLUTIONS
AND FEATURES

UBIQUITY is the IEC 62443-compliant ASEM platform designed to ensure secure and reliable remote assistance in any industrial scenario. It enables access to supervision and control systems, PLCs, and automation devices via a VPN optimized for industrial communications, with end-to-end connectivity ensuring low latency, high speed, and service continuity.

Installation is simple and does not require IT expertise or additional hardware: the solution is designed to be easy to configure and use, eliminating the need for NAT, proxy, firewall, public IP, or dedicated port configurations. Remote systems are managed transparently, as if they were connected to the corporate network, significantly reducing after-sales support costs and on-site interventions.

Thanks to multiple simultaneous connections, several technicians can operate on the same machine at the same time. The platform provides advanced user management with granular roles and permissions, flexible organization of devices and users, and detailed auditing of administrative activities, connections, and data traffic. Remote access includes features such as remote desktop, process management, file transfer, and chat, also available in local mode without Internet connectivity by leveraging the internal network.

The redundant cloud infrastructure ensures scalability, load balancing, and fault tolerance, while Web APIs enable seamless integration with proprietary applications. For organizations requiring maximum data control, UBIQUITY is also available as an on-premise Private Server, maintaining all platform functionalities.

UBIQUITY consists of four main elements.

UBIQUITY Manager, accessible via browser, is the central control hub used to establish VPN connections to plants, manage users, permissions and devices, and monitor activities and traffic. Alternatively, or for mobile use, the UBIQUITY VPN App for iOS and Android allows secure connections to be activated and devices to be managed directly from smartphones or tablets.

UBIQUITY Runtime enables access to the system itself and to the automation subnet.

It can be installed on Windows 10/11, Ubuntu 22, or as a Docker container, and is already integrated into OptixPanel and OptixEdge devices, as well as ASEM 6300 and ASEM Classic industrial PCs.

Finally, UBIQUITY Router is the hardware solution for plants without ASEM HMI/iPC or where Runtime cannot be installed, offering advanced networking features and, in dedicated models, Wi-Fi and 4G connectivity.





VISUALIZATION FOR VISIONARIES

The new collaborative, cloud-based platform for Edge, HMI, and SCADA applications that revolutionizes the world of visualization in the era of digital transformation.

It is the ideal software platform for developing modern, responsive Edge, HMI, and SCADA applications, featuring a user interface designed to adapt to different industrial environments.

Thanks to its modular and flexible architecture, based on cross-platform technologies, FT Optix™ enables the creation of applications compatible with both ARM and x86 platforms, running on Windows and Linux operating systems, giving designers maximum freedom to choose the most suitable environment.

In addition to traditional runtimes, a Docker container version is also available, designed for containerized environments and scalable architectures.

FT Optix™ is part of the cloud-based **FactoryTalk® Hub™ suite**, which allows design teams to collaborate on HMI application development through a distributed version control system, simplifying software management, increasing productivity, and accelerating time to market.



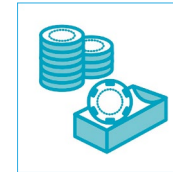
CLOUD-BASED EDITOR AND COLLABORATIVE DEVELOPMENT

It complements the traditional on-premise model by enabling users to access the development environment directly from a browser, anytime and anywhere, reducing management costs and ensuring constant access to the latest available version, as well as all previous versions, without the need for multiple local installations.

In addition, thanks to integration with distributed version control systems such as GitHub, developers can collaborate in parallel and independently, saving changes in the cloud and later sharing and merging them with others. The system automatically tracks who made which changes and when, simplifying conflict management without the need for a centralized private server.



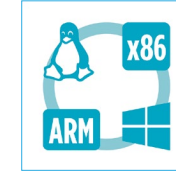
DISCOVER SOLUTIONS
AND FEATURES
OF THE SOFTWARE
FactoryTalk® Optix™



MODULAR, TOKEN-BASED LICENSING

Each FT Optix™ Runtime license includes a defined number of tokens, which the designer can use to enable the functionalities required for application development. Each function is assigned a token value, and some features are available free of charge, at no cost. Component and function selection is performed directly during the design phase with FT Optix™ Studio, where the project can be configured according to specific needs.

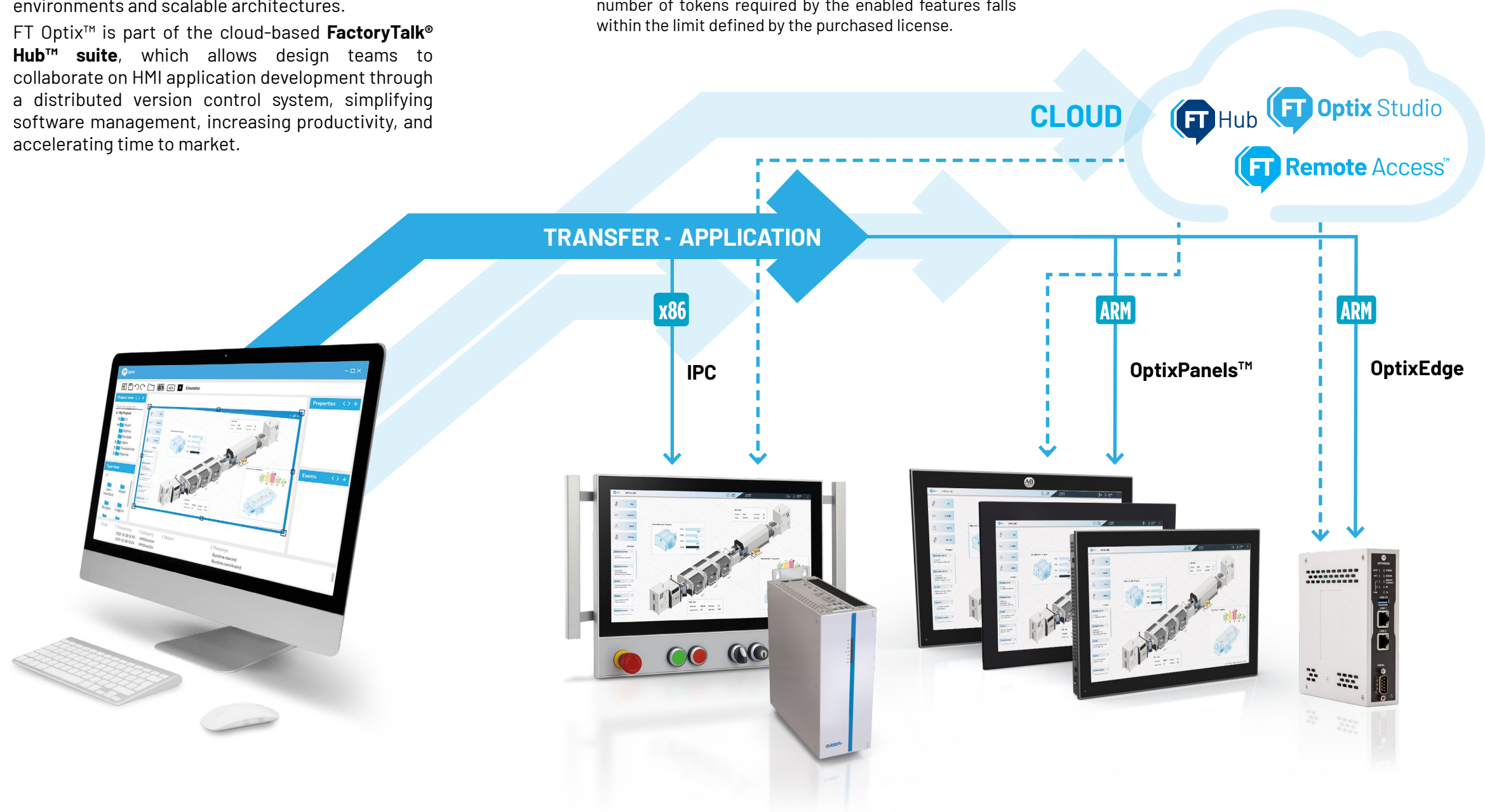
At runtime, FT Optix™ Runtime verifies that the total number of tokens required by the enabled features falls within the limit defined by the purchased license.



MULTI-PLATFORM SUPPORT

FT Optix Runtime is available:

- on OptixPanel and OptixEdge embedded devices
- for ASEM 6300 and ASEM Classic Industrial PCs with x86 architectures
- for third-party x86 platforms running Windows and Linux operating systems
- as a Docker container for containerized environments



REAL-TIME SOLUTIONS

PAC- PROGRAMMABLE AUTOMATION CONTROLLER

IPC-based automation

Programmable Automation Controllers (PACs) are compact controllers that combine the characteristics and functionalities of a PC-based system with those of a typical PLC, but with a more open and modular architecture. They are equipped with operating systems optimized for real-time control, capable of delivering low latency and a level of determinism suitable for use in critical tasks.

MODULARITY AND INTEROPERABILITY OF ASEM SOLUTIONS

SoftPLC and hardware scalability transform ASEM systems into powerful IEC 61131-3 controllers

Thanks to its outstanding expertise in hardware, firmware, and software development, ASEM delivers solutions designed with modular, object-oriented, and flexible development tools, with performance that scales according to the selected CPU.

ASEM also ensures data integration across its various automation software solutions, providing both visualization and control within a single platform. ASEM systems support PLC functionalities through the well-established and widely adopted CODESYS® SoftPLC, featuring a highly efficient implementation of version 3.5. This ensures deterministic execution of PLC control logic on Win64 and Linux operating systems, enabling full project portability across different operating systems and hardware platforms without requiring code modifications. SoftPLC systems therefore guarantee a high level of connectivity and interoperability for managing and storing large volumes of data.

Like all traditional PLCs, the CODESYS® platform includes a development environment for project creation, with execution handled by the runtime, and supports the most widely used industrial fieldbuses for communication with field devices.



READY-TO-AUTOMATION SYSTEMS

Several ASEM systems can implement real-time logic using development tools such as CODESYS® or other proprietary software, becoming true controllers based on ARM Cortex or x86 processors. In fact, ASEM systems include hardware and software components designed to support and optimize the use of SoftPLC or proprietary control applications.

Hardware components

MRAM: Non-volatile RAM using magnetoresistive technology to store retentive variables

μUPS: UPS based on supercapacitor technology to ensure sufficient power supply to save retentive values in MRAM

ECC Inbound: Ability to enable ECC mode on RAM to detect and correct bit-level errors during data reading and writing

Comandi HW: Run/stop/clear commands managed via hardware buttons

Diagnostics: RX/TX diagnostic LEDs for system status monitoring; RS232/422/485 ports dedicated to fieldbus communication

Fieldbus: The x86 motherboards of some ASEM systems feature an embedded slot for installing NetCoreX boards or other market-available boards (Master and Slave versions) to manage major industrial fieldbuses

Real-Time Systems: optimizations for industrial PCs Cache Allocation Technology (CAT)

ASEM has developed a Cache Allocation Technology (CAT) driver to optimize the use of the Last Level Cache (LLC). CAT allows exclusive assignment of cores and GPU to a portion of the cache, eliminating interference with cores used for real-time applications. The CAT driver developed by ASEM is available on Windows x86 systems. For Linux systems, ASEM provides the expertise needed to support native CAT configuration.



DOWNLOAD
Cache Allocation
Technology

Real-Time optimization in BIOS

All ASEM PCs based on Windows x86 include a default BIOS setting for real-time optimization.

With a simple click, the BIOS can be configured in seconds to minimize latency. ASEM also provides support for BIOS configuration on Linux operating systems.



DOWNLOAD
CAT and Real-Time
Optimization Effects

Remote Assistance

All ASEM industrial PCs and operator panels integrate UBIQUITY Runtime software for remote support. With UBIQUITY installed directly on the PC or HMI, it is possible to establish an end-to-end VPN connection optimized for industrial communications.

This enables remote access to the device running the SoftPLC, including full access to its desktop. Users can perform modifications, upload and download applications, and carry out support and maintenance activities from any remote location—resulting in significant savings in both time and costs compared to on-site interventions.

Visualization

ASEM operator panels integrate proprietary visualization software.

HMI software can also be optionally installed on all x86-based IPCs, ensuring maximum scalability in computing performance.

PORTFOLIO OVERVIEW



PANEL IPCS P. 34-51

Panel IPCs are low-power, high-performance systems, available with TFT displays ranging from 7" to 24" and various front panel options. The wide product range offers performance, configurability, and expandability to meet any industrial requirement.

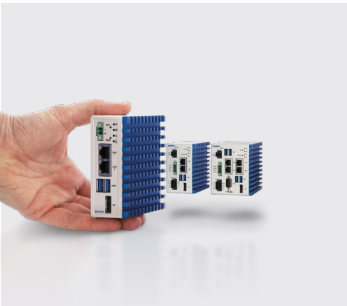
ASEM 6300P-SW2 p.38	ASEM 6300P-EW1 p.42	QT2250 & HT2250 p.44
QT2200 & HT2200 p.46	QT2150 & HT2150 p.50	



BOX IPCS P. 52-71

Box IPCs are systems designed for wall-mounted or book-style installations, engineered to deliver high performance while optimizing space. They offer extensive expandability thanks to a wide range of accessories and available interface cards.

ASEM 6300P-SW2 p.56	ASEM 6300P-EW1 p.60	BM3800 p.62	PB2250 & BM2250 p.66
PB2200 & BM2200 p.68	PB2150 & BM2150 p.70		



ULTRA-COMPACT IPCS P. 72-77

Ultra-compact IPCs are highly ergonomic and robust systems, ideal for applications in limited spaces where high processing capabilities are required. The product range offers extensive configurability to meet the requirements of a wide variety of IIoT scenarios.

BM1XY FAMILY p.76



COMPACT IPCS P. 78-83

A family of compact, fanless book-mounting IPCs with anodized aluminum chassis, ideal for applications in limited spaces that require high local data processing capabilities across multiple Industrial IoT scenarios.

ASEM 6300B-JB1 p.80



ARM/VESA MOUNTING IPCS P. 84-87

Arm-mounted IPCs are fanless, compact, and elegant systems that deliver excellent performance and are suitable for a wide range of industrial applications thanks to their high level of configurability. They are available with customizable control areas and a variety of accessories that enhance ergonomics, ensuring extensive personalization options.

VK3500 SERIES p.86

PRODUCT RATING

All products have been evaluated based on three parameters:

PERFORMANCE

EXPANDABILITY

CONFIGURABILITY



RACK MOUNTING IPCS P. 88-93

19" 4U rack-mounted IPCs deliver high processing capabilities and exceptional reliability, thanks to the use of heavy-duty motherboards designed for 24/7 industrial applications. They are available in both long and short versions.

PR4XXX p.90



INDUSTRIAL MONITORS P. 94-103

Industrial monitors feature the same robustness, reliability, and design as panel IPCs. They are available with different installation options, and some models offer the possibility to integrate a configurable control area along with various accessories. All monitors are equipped with RVL technology for the remote transmission of DVI-D and USB 2.0 signals up to 100 meters.

MQ200 & MH200 p.98	SERIE MK200 p.100	MX200 p.102
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OPERATOR PANELS P. 104-111

The collaboration between ASEM and Rockwell Automation has led to the creation of the new OptixPanel™ series, based on FactoryTalk® Optix™ software, delivering modern, ergonomic, and highly flexible HMI interfaces. OptixPanel™ also integrates FactoryTalk® Remote Access™ software for remote assistance.

OptixPanel™ Compact p.106	OptixPanel™ Standard p.108	LP80 p.110
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ROUTER & GATEWAY P. 112-117

Integrated solutions to connect, monitor, and optimize any system, ensuring secure remote access, data collection, and Industry 4.0 communication.

OptixEdge p.114	RK2X p.116
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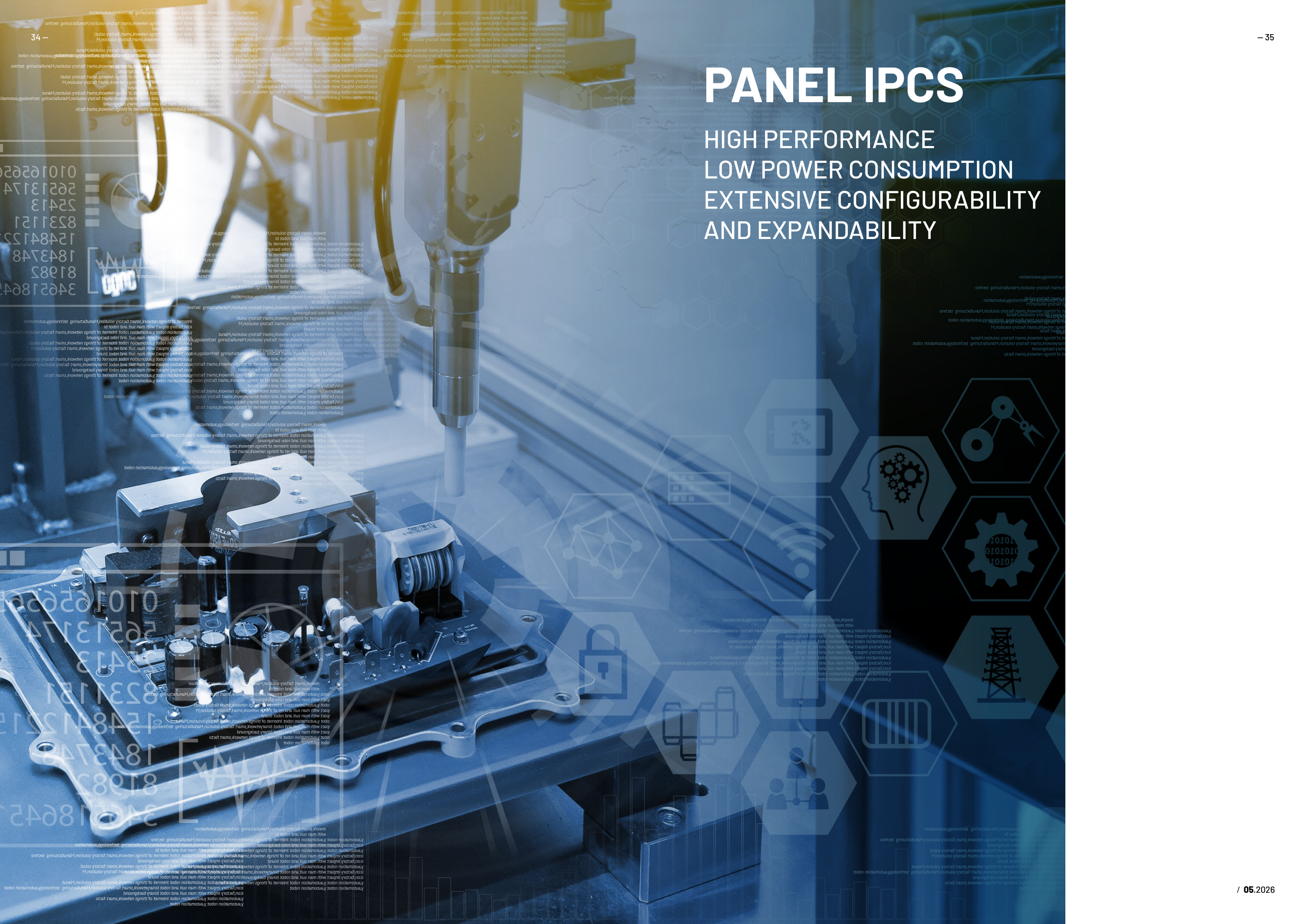
REAL-TIME SOLUTIONS P.118-123

Several ASEM systems can implement real-time logic through development tools, becoming true controllers. ASEM systems, in fact, include hardware and software components designed to support and optimize the use of SoftPLC or proprietary control applications.

REAL-TIME SOLUTIONS p.120

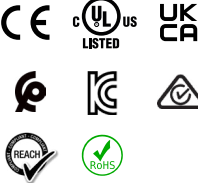
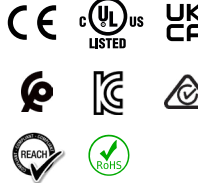
PANEL IPCS

HIGH PERFORMANCE
LOW POWER CONSUMPTION
EXTENSIVE CONFIGURABILITY
AND EXPANDABILITY

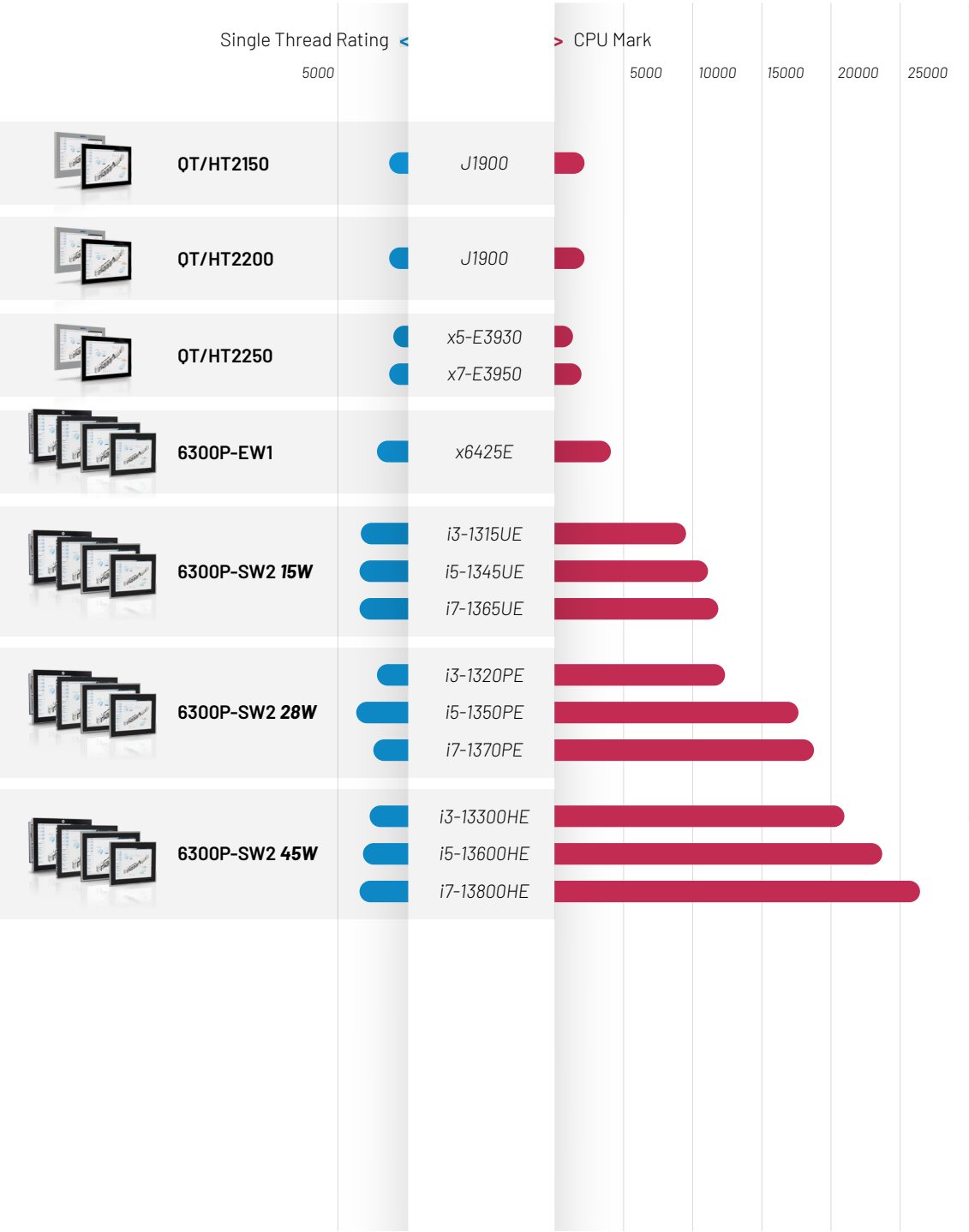


COMPARISON TABLE



		ASEM6300P-SW2	ASEM 6300P-EW1	QT2250 & HT2250	QT2200 & HT2200	QT2150 & HT2150
FANLESS		✓	✓	✓	✓	✓
FRONT PANELS	Wide sizes	12,1", 15,6", 18,5", 21,5", 24"	12,1", 15,6", 18,5", 21,5", 24"	7", 10,1", 12,1", 15,6", 18,5", 21,5", 24"	10,1", 12,1", 15,6", 18,5", 21,5", 24"	7", 10,1", 12,1", 15,6"
	Narrow sizes	12,1", 15", 17", 19"	10,4", 12,1", 15", 17", 19"	10,4", 12,1", 15", 17", 19"	10,4", 12,1", 15", 17", 19"	8,4", 10,4", 12,1", 15"
	Types	AF, GL, SR, AT	AF, GL, SR, AT	ALU, TF, TFM, TFK	ALU, TF, TFM, TFX	ALU, TF, TFM
	Touchscreen technology	Resistive Multitouch	Resistive Multitouch	Resistive Multitouch	Resistive Multitouch	Resistive Multitouch
PROCESSORS	Model	15W/28W/45W: Intel® Core™ i3-1315UE/ 1320PE/ 13300HE Intel® Core™ i5-1345UE/1350PE/ 13600HE Intel® Core™ i7-1365UE/1370PE/ 13800HE	Intel Atom® x6425E	Intel Atom® x5-E3930 Intel Atom® x7-E3950	Intel® Celeron® J1900	Intel® Celeron® J1900
	Generation	Intel® Raptor Lake	Intel® Elkhart Lake	Intel® Apollo Lake	Intel® Bay Trail	Intel® Bay Trail
SYSTEM MEMORY		Up to 48GB	Up to 16GB	Up to 8GB	Up to 8GB	Up to 8GB
INTERFACES	LAN	4x 2.5G Ethernet (RJ45)	1x 2.5 RJ45 • 2x RJ45	2x RJ45	2x RJ45	2x RJ45
	USB	4x USB 3.2	4x USB 3.2	3x USB 3.0	2x USB 2.0 • 1x USB 3.0	1x USB 3.0 • 1x USB 2.0
	Serial	1x RS232/422/485 (DB9M)	1x RS232/422/485 (DB9M)	-	1x RS232 (DB9M)	-
	Video	1x DisplayPort++ V1.4a	1x DisplayPort++ V1.4a	1x DisplayPort++ V1.2	1x DVI-D	-
EXPANSION SLOTS PCI/PCIe		Up to 1 PCIe	Up to 1	-	Up to 1	-
INTERNAL SSD/HDD		Up to 3	Up to 2	-	Up to 1	-
EXTRACTABLE SSD/HDD		Up to 2	-	-	-	-
POWER SUPPLY INPUT		24VDC	24VDC	24VDC	24VDC	24VDC
OPERATING SYSTEMS		Microsoft Windows 10 IoT Enterprise LTSC 2021 64bit Microsoft Windows 11 IoT Enterprise LTSC 2024 64bit	Microsoft Windows 10 IoT Enterprise LTSC 2021 64bit Microsoft Windows 11 IoT Enterprise LTSC 2024 64bit	Microsoft Windows 10 IoT Enterprise 2019/2021 64 bit	Microsoft Windows 10 IoT Enterprise 2016/2019 64bit	Microsoft Windows 10 IoT Enterprise 2016/2019 64 bit
PAC VERSION *		✗	✗	✗	✓	✗
CERTIFICATIONS						

* with UPS + 512kB MRAM for retentive data management and Codesys software
** only for QT-TFM



ASEM 6300P-SW2



● Active

 12.1"-24"

 ★★★★★

 ★★★★★

 ★★★★★



DOWNLOAD THE DATASHEET

 Remote Access[®] **OPTIONAL**
compatible with **UBIQUITY**

 Optix[®] **OPTIONAL**

 **Windows 11 IoT**

 **COMPATIBLE with Smart UPS**

 **IP69K**

(only SR frontal)

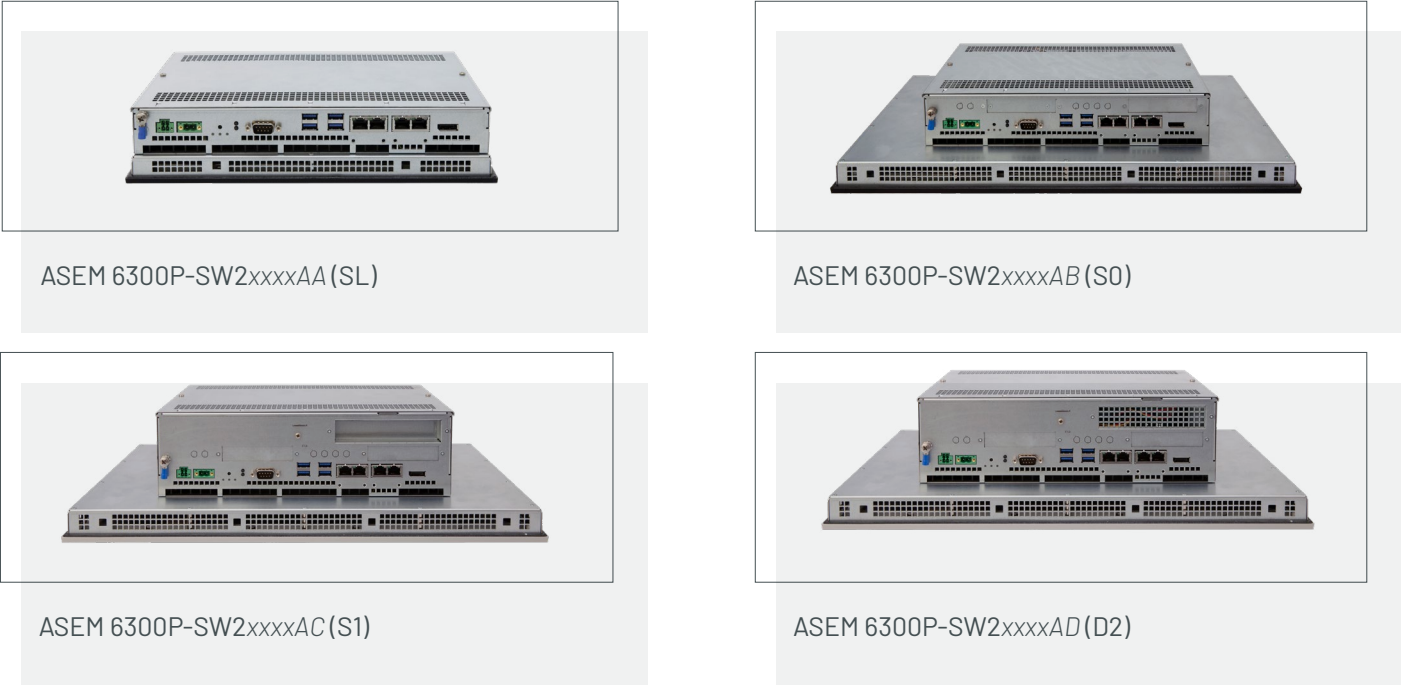
 **DESIGN FOR SECURITY**

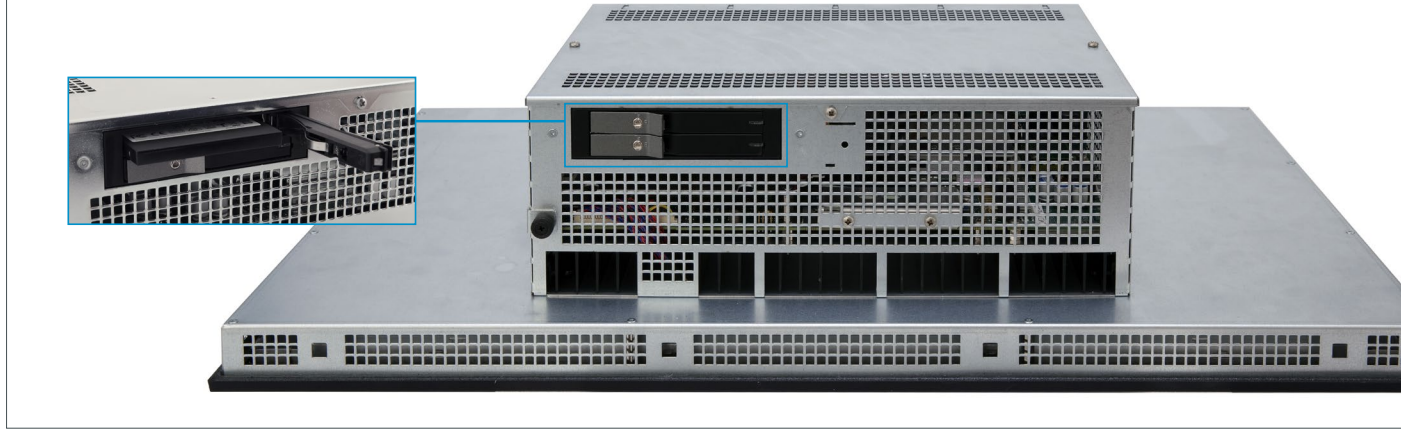
- TFT LCDs available in 12.1" and 15" (4:3 format), 17" and 19" (5:4 format), and 12.1", 15.6", 18.5", 21.5", and 24" (wide format), with resolutions up to Full HD
- Front panels in aluminum (AF), True Flat aluminum (AT), and True Flat stainless steel (SR) with resistive touchscreen
- Front panels in aluminum and glass True Flat with projected capacitive multitouch touchscreen (GL)
- Intel® processors based on SoC Raptor Lake PCH generation
- Up to 48 GB RAM with ECC support (for industrial processors)
- Up to three simultaneous storage options: M.2 SSD, 2.5" SSD, and CFast
- Fanless IPC, ensuring operation between 0 and 50 °C without mechanical ventilation
- ATX functionality for remote power-on and native support for our new Smart UPS
- 512 kB MRAM for storing retentive variables (optional)
- Available in SL version with reduced depth, S0 version with additional interface capability, S1 version with one PCIe expansion slot, and D2 version with two removable SSD slots
- ThinManager®-ready BIOS preinstalled

IMAGE GALLERY



DETAIL - REMOVABLE DRIVE SLOTS

Removable drive slots available only on the D2 version



ASEM 6300P-SW2

TECHNICAL DATA

		6300P-SW2				
LED backlight TFT LCD		12.1" W - 1280x800 (16:10) 15.6" W - 1920x1080 (16:9) 18.5" W - 1920x1080 (16:9) 21.5" W - 1920x1080 (16:9) 24" W - 1920x1080 (16:9)			12.1" - 1024x768 (4:3) 15" - 1024x768 (4:3) 17" - 1280x1024 (5:4) 19" - 1280x1024 (5:4)	
CUT-OUT		QT			HT	
FRONT USB		-			1x USB 2.0 (Type-A), protected	
FRONT PANEL	Design	Aluminum Frame (AF)	Glass (GL)	Stainless Steel (SR)	Aluminum Frame (AF)	Aluminum TrueFlat (AT)
	Touchscreen	Resistive 5 wires	P-CAP Multitouch	Resistive 5 wires		
	Logo	AB or brandless				
PROTECTION GRADE	IP rating	IP65 - frontal		IP69K - frontal	IP65 - frontal	
	NEMA rating	UL Type 1, 4x (indoor only)		UL Type 1, 4x (indoor only) and 12		
CASE	Installation	Panel mounting				
	Material	Zinc-coated skin pass steel				
PROCESSOR (soldered on-board)	15W (SL/S0 versions)	Intel® Core™ i3-1315UE Intel® Core™ i3-1315URE	1.20GHz (4.50GHz max turbo frequency) • 6cores/8threads • 10MB Intel® Smart Cache			
		Intel® Core™ i5-1345UE Intel® Core™ i5-1345URE	1.25 GHz (4.60GHz max turbo frequency) • 10cores/12threads • 12MB Intel® Smart Cache			
		Intel® Core™ i7-1365UE Intel® Core™ i7-1365URE	1.30GHz (4.90GHz max turbo frequency) • 10cores/12threads • 12MB Intel® Smart Cache			
	28W (S0/S1/D2 versions)	Intel® Core™ i3-1320PE	1.70GHz (4.50GHz max turbo frequency) • 8cores/12threads • 12MB Intel® Smart Cache			
		Intel® Core™ i5-1350PE	1.80GHz (4.60GHz max turbo frequency) • 12cores/16threads • 12MB Intel® Smart Cache			
		Intel® Core™ i7-1370PE	1.90GHz (4.80GHz max turbo frequency) • 14cores/20threads • 24MB Intel® Smart Cache			
	45W (S0/S1/D2 versions)	Intel® Core™ i3-13300HE Intel® Core™ i3-13300HRE	2.10GHz (4.60GHz max turbo frequency) • 8cores/12threads • 12 MB Intel® Smart Cache			
		Intel® Core™ i5-13600HE Intel® Core™ i5-13600HRE	2.70GHz (4.80GHz max turbo frequency) • 12cores/16threads • 18 MB Intel® Smart Cache			
		Intel® Core™ i7-13800HE Intel® Core™ i7-13800HRE	2.50GHz (5.00 GHz max turbo frequency) • 14cores/20threads • 24 MB Intel® Smart Cache			
	Chipset		Intel® Raptor Lake PCH (Platform Controller Hub) • Included into processor chip (SoC)			
	Video Controller		Intel® UHD Graphics integrated in Intel® Core™ i3 Intel® Iris® X® Graphics integrated in Intel® Core™ i5 and i7			
TPM		Intel® PTT (TPM integrated) Discrete TPM (optional)				
SYSTEM MEMORY RAM		8GB (DDR5-5200) 16GB (DDR5-5200) 32GB (DDR5-5200) 48GB (DDR5-5200)				
MASS STORAGE	CFast	1x bootable CFast SATA III slot onboard with external access (up to 240GB)				
	M.2 SSD	1x onboard connector for direct insertion of M.2 NVMe PCIe SSD (up to 2TB)				
	2.5 SATA SSD	1x onboard connector for 2.5 SATA III SSD with internal installation kit (up to 1TB) *SL only 2x onboard connector for 2.5 SATA III SSD with external installation kit (up to 1TB) *S0/S1/D2 only				
RAID		RAID 1				

TECHNICAL DATA

6300P-SW2		
INTERFACES	LAN	4x 2.5 Gigabit Ethernet (RJ45)
	USB	4x USB 3.2 Gen2 (Type-A) 10 Gbps
	SERIAL	1x RS232/RS422/RS485 (DB9M) isolated
	VIDEO	1x DisplayPort++ v1.4a
ADD-ON INTERFACES (optional) not available for SL version	Position A (max 1) 60pin	1x 2.5G Ethernet + 1x USB 2.0 (Type-A) 2x Isolated Serial Multistandard RS232/RS422/RS485 (DB9M) 2x USB 2.0 (Type-A)
	Position B (max 1) 26 pin	1x 2.5 Gigabit Ethernet (RJ45) 1x RVL (remote video link RJ45) 2x RVL (remote video link RJ45) 2x DisplayPort++ v1.4a 2x USB 3.2 (Type-C)
EXPANSION SLOTS only S1 version		1x PCIe x4, on riser card
NOVRAM (optional)		512kB MRAM module for retentive variables
POWER SUPPLY INPUT		24VDC (18+32VDC) isolated
POWER SUPPLY ADD-ON FUNCTIONS (selectable from BIOS)		Remote Power Button 1x output signal Power Status + 1x input signal System Off
BATTERY		1x CR2032 Internal access
O.S. CERTIFIED		Microsoft Windows 10 IoT Enterprise LTSC 2021 64bit Microsoft Windows 11 IoT Enterprise LTSC 2024 64bit
OPERATING TEMPERATURE		0°C ÷ 50°C
STORAGE TEMPERATURE		-20°C ÷ 65°C
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)
MAX. ALTITUDE, OPERATING		2000 m (6562 ft)
VIBRATION	Frequency range	10.00 Hz to 500.00 Hz
	Sweep rate	1 octave / min
	Number of sweep cycles	5 / axis (56°27")
	Displacement	0.3048 mm p-p (10.00 Hz to 57 Hz)
	Acceleration	0-p: 2.0 g (57 Hz to 500.00 Hz)
SHOCK	Operating	15 g (acceleration) at 11 ms (duration)
	Non Operating	30 g (acceleration) at 11 ms (duration)
Pollution Degree		2
APPROVALS		CE FCC UKCA cULus Listed Cmim - Morocco KCC - Korea RCM - Australia and New Zealand REACH RoHS compliant

QT2250 & HT2250



● Active

 7"-24"

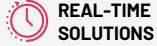




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THE DATASHEET







FANLESS

IP69K
(only TFK frontal)





- TFT LCDs available in 10.4", 12.1", and 15" (4:3 format), 17" and 19" (5:4 format), and 7", 10.1", 12.1", 15.6", 18.5", 21.5", and 24" (wide format)
- Front panels in aluminum (ALU) and True Flat aluminum (TF) with resistive touchscreen
- Front panels in aluminum and glass True Flat with projected capacitive multitouch touchscreen (TFM)
- Front panels in True Flat stainless steel (AISI 304L) (TFK) with resistive touchscreen
- Intel Atom® x5 and x7 processors based on the SoC Apollo Lake generation
- Up to 8 GB RAM
- Available in SL version with reduced depth and S0 version with the option to install additional interfaces

TECHNICAL DATA

	QT2250-ALU	QT2250-TFM	QT2250-TFK	HT2250-ALU	HT2250-TF				
LED BACKLIGHT TFT LCD	7" W - 800x480 10.1" W - 1280x800 12.1" W - 1280x800 15.6" W - 1366x768 15.6" W - 1920x1080 18.5" W - 1366x768 18.5" W - 1920x1080 21.5" W - 1920x1080 24" W - 1920x1080		10.1" W - 1280x800 12.1" W - 1280x800 15.6" W - 1366x768 15.6" W - 1920x1080 18.5" W - 1366x768 18.5" W - 1920x1080 21.5" W - 1920x1080 24" W - 1920x1080	10.4" - 800x600 12.1" - 800x600 12.1" - 1024x768 15" - 1024x768 17" - 1280x1024 19" - 1280x1024					
CUT-OUT	QT			HT					
FRONT USB	-			1x USB 2.0 (Type-A), protected					
TOUCHSCREEN	Resistive 5 wires	P-CAP Multitouch	Resistive 5 wires						
FRONT PANEL	Material	Aluminum	True Flat Aluminum	True Flat Stainless Steel					
	ASEM Logo	-			Adhesive label / Silk screen printed				
PROTECTION GRADE	IP rating	IP65 - frontal		IP69K - frontal					
	NEMA rating	UL Type 1, 4x (indoor only)			UL Type 1, 4x (indoor only) and 12				
CASE	Installation	Panel mounting							
	Material	Zinc-coated skin pass steel							
PROCESSOR (soldered on-board)	Intel Atom® x5-E3930 1.30Ghz (1.80Ghz Burst) • 64bit • 2 cores / 2 threads • 2MB L2 cache • 14nm Intel Atom® x7-E3950 1.60Ghz (2.00Ghz Burst) • 64bit • 4 cores / 4 threads • 2MB L2 cache • 14nm								
CHIPSET	Intel® Apollo Lake • Included into processor chip (SoC)								
VIDEO CONTROLLER	Intel® HD Graphics 500 integrated in x5-E3930 processor • 400MHz/550MHZ Intel® HD Graphics 505 integrated in x7-E3950 processor • 500MHz/650MHZ								
TPM	Intel® PTT (TPM integrated) • Discrete TPM 2.0 module (optional)								
SYSTEM MEMORY RAM	with x5-E3930	4GB LP-DDR4 module							
	with x7-E3950	4GB or 8GB LP-DDR4 module							
MASS STORAGE	CFast	1x bootable CFast SATA III slot onboard with external access (up to 240GB)							
	M.2 SSD	1x onboard connector for direct insertion of M.2 2242 SATA III SSD (up to 480GB)							
INTERFACES	LAN	2x Gigabit Ethernet (RJ45)							
	USB	3x USB 3.0 (Type-A)							
	VIDEO	1x DisplayPort++ V1.2							
ADD-ON INTERFACES (optional)	Position A (max 1) only S0 version and BM	2x RS232/422/485 (DB9M) 2x RS232/422/485 optoisolated (DB9M) 1x RS232/422/485 (DB15M) + 1x USB 2.0 (Type-A) 1x RS232/422/485 (DB15M) isolated + 1x USB 2.0 (Type-A) 2x USB 2.0 (Type-A) 1x Gigabit Ethernet (RJ45) + 1x USB 2.0 (Type-A)							
POWER SUPPLY INPUT	24VDC (18÷32VDC) isolated								
POWER SUPPLY (optional)	UPS	UPS with external battery pack (NiMH • 12V/2,5Ah) (backside or separate mounting)							
	ATX only S0 version and BM	Kit for ATX mode power supply (push button, internal cable and connector for remote control)							
BATTERY	1x CR2032 Internal access								
O.S. CERTIFIED	Microsoft Windows 10 IoT Enterprise LTSC 2021 Microsoft Windows 10 IoT Enterprise 2019 64 bit								
OPERATING TEMPERATURE	0°C ÷ 50°C								
STORAGE TEMPERATURE	-5°C ÷ 60°C								
OPERATING/STORAGE RELATIVE HUMIDITY	20% ÷ 90% RH (non-condensing)								
APPROVALS	CE RoHS UKCA cULus Listed								

Industrial PCs and scalable solutions for HMI, IIoT and Industry 5.0 applications / 05.2026

QT2200 & HT2200



● Active mature

 10.1"-24"

 ★★★★★

 ★★★★★

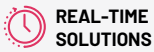
 ★★★★★



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 UBIQUITY INSIDE

 FT Optix[®] OPTIONAL

 REAL-TIME SOLUTIONS

FANLESS



IP66K



(only TFX frontal)

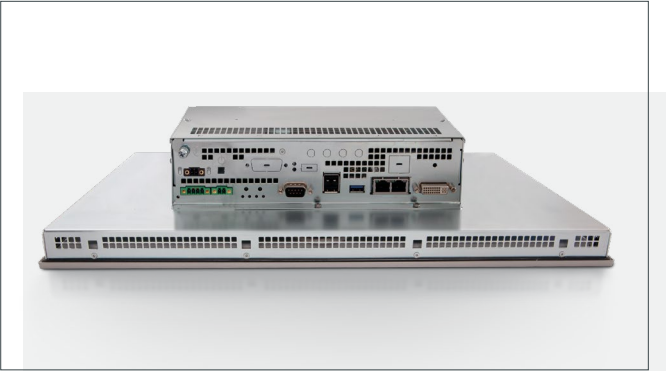
*only TFM frontal

- TFT LCDs available in 10.4", 12.1", and 15" (4:3 format), 17" and 19" (5:4 format), and 10.1", 12.1", 15.6", 18.5", 21.5", and 24" (wide format)
- Front panels in aluminum (ALU), True Flat aluminum (TF), and True Flat stainless steel (TFX) with resistive touchscreen
- Front panels in aluminum and glass True Flat with projected capacitive multitouch touchscreen (TFM)
- Intel® Celeron® processors based on the SoC Bay Trail generation
- Up to 8 GB RAM
- Integrated UPS with external battery kit (optional)
- Integrated supercapacitor-based μUPS, with 512 kB MRAM for storing retentive variables (optional)
- Available in SL version with reduced depth, S0 version with the option to install additional interfaces, and S1 version with one PCI or PCIe expansion slot

IMAGE GALLERY



QT2200 & HT2200 - (SL Version)

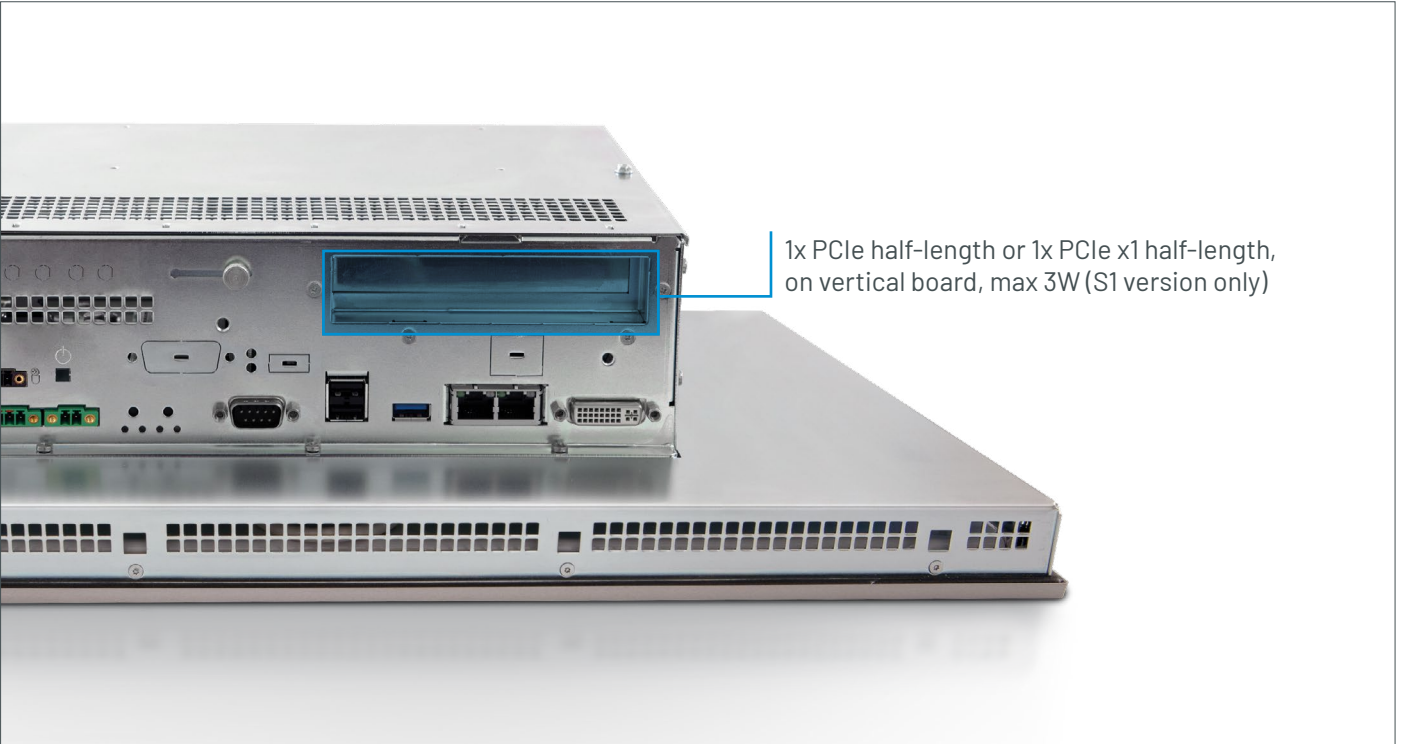


QT2200 & HT2200 - (S0 Version)



QT2200 & HT2200 - (S1 Version)

DETAIL - EXPANSION SLOTS



QT2200 & HT2200

TECHNICAL DATA

		QT2200 -ALU	QT2200 -TFM	HT2200 -ALU	HT2200 -TF	HT2200 -TFX
LED BACKLIGHT TFT LCD		12.1" W - 1280x800 15.6" W - 1366x768 15.6" W - 1920x1080 18.5" W - 1366x768 18.5" W - 1920x1080 21.5" W - 1920x1080 24"W - 1920x1080		10.1" W - 1280x800 (only SL) 10.4" - 800x600 12.1" - 800x600 12.1" - 1024x768 12.1" W - 1280x800 15.0" - 1024x768 15.6" W - 1366x768 15.6" W - 1920x1080 17" - 1280x1024 18.5" W - 1366x768 18.5" W - 1920x1080 19" - 1280x1024 21.5" W - 1920x1080 (only ALU version) 24"W - 1920x1080		12.1" - 800x600 12.1" - 1024x768 15.0" - 1024x768 17" - 1280x1024 19" - 1280x1024
CUT-OUT		QT		HT		
FRONT USB		-		1x USB 2.0 (Type-A), protected		-
TOUCHSCREEN		Resistive 5 wires	P-CAP Multitouch	Resistive 5 wires		
FRONT PANEL	Material	Aluminum	True Flat Aluminum	Aluminum	True Flat Aluminum	True Flat Stailness Steel
	ASEM Logo	-		Adhesive label	Silk-screen printed	
PROTECTION GRADE	IP rating	IP65 - frontal				IP66K - frontal
	NEMA rating	UL Type 1, 4x (indoor only)		UL Type 1, 4x (indoor only) and 12		
CASE	Installation	Panel mounting				
	Material	Zinc-coated skin pass steel				
PROCESSOR (soldered on-board)		Intel® Celeron® J1900 2.00GHz (2.42GHz Burst) • 64bit • 4 cores / 4 threads • 2MB L2 cache • 22nm				
CHIPSET		Intel® Bay Trail • Included into processor chip (SoC)				
VIDEO CONTROLLER		Intel® HD Graphics for Intel Atom® processor Z3700 series • 688MHz/854MHz				
WATCHDOG		Programmable time period				
TPM		Discrete TPM 2.0 module (optional)				
SYSTEM MEMORY RAM		1GB or 2GB or 4GB or 8GB (1x SODIMM DDR3L module)				
MASS STORAGE (SSD mSATA and SSD/ HDD are alternative to each other)	Cfast	1x bootable CFast SATA II slot onboard with external access (up to 240GB)				
	SSD mSATA	1x onboard connector for direct insertion of SSD mSATA SATA II (up to 960GB)				
	SSD/HDD only S0/S1 versions	1x onboard connectors for SSDs/HDDs 2.5" SATA II with internal installation kit				
INTERFACES	LAN	2x Gigabit Ethernet (RJ45)				
	USB	2x USB 2.0 (Type-A) • 1x USB 3.0 (Type-A)				
	SERIAL	1x RS232 (DB9M)				
	VIDEO	1x DVI-I (Resolution up to 1920x1080 • VGA adapter included)				
ADD-ON INTERFACES (optional) not available for SL version	Position A (max 1)	1x RS232/422/485 (DB15M) + 1x USB 2.0 (Type-A) 1x RS232/422/485 (DB15M) isolated + 1x USB 2.0 (Type-A) 2x RS232 (DB9M) 2x USB 2.0 (Type-A)				
	Position B (max 1)	1x Gigabit Ethernet (RJ45)				
EXPANSION SLOTS	only S1 version	1x PCI half-length or 1x PCIe x1 half-length, on riser card, max 3W				
POWER SUPPLY INPUT		24VDC (18+32VDC) isolated				
POWER SUPPLY (optional)	UPS Backside mounting not available for SL version	UPS with external battery pack (Pb • 12V/2,5Ah) (backside or separate mounting)				
	UPS + 512kB MRAM Backside mounting not available for SL version	UPS with external battery pack (Pb • 12V/2,5Ah) + 256kB MRAM (backside or separate mounting)				
	μUPS + 512kB MRAM	Supercapacitors μUPS + 512kB MRAM				
	ATX only S0/S1 versions	Kit for ATX mode power supply (push button, internal cable and connector for remote control)				

TECHNICAL DATA

	QT2200 -ALU	QT2200 -TFM	HT2200 -ALU	HT2200 -TF	HT2200 -TFX
BATTERY	1x CR2032 Internal access				
O.S. CERTIFIED	Microsoft Windows 10 IoT Enterprise 2016/2019 64bit (2019 version not compatible with CODESYS)				
OPERATING TEMPERATURE	0°C ÷ 50°C 0°C ÷ 45°C (24x7 HDD or Intel® Core™ i7 processor) 5°C ÷ 45°C (Standard HDD)				
STORAGE TEMPERATURE	-10°C ÷ 60°C				
OPERATING/STORAGE RELATIVE HUMIDITY	20% ÷ 90% RH (non-condensing)				
APPROVALS	CE RoHS UKCA UL 508	CE RoHS UKCA UL 508 ATEX zone 2/22 ¹	CE RoHS UKCA UL 508		

1. ATEX certification is ensured only without UPS, microUPS, power supply variants, UPS battery kit options and wireless modules

QT2150 & HT2150



● Active mature

7"-15.6"



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- TFT LCDs available in 8.4", 10.4", 12.1", and 15" (4:3 format) and 7", 10.1", 12.1", and 15.6" (wide format), with resolutions up to Full HD
- Front panels in aluminum (ALU) and True Flat aluminum (TF) with resistive touchscreen
- Front panels in aluminum and glass True Flat with projected capacitive multitouch touchscreen (TFM)
- Intel® Celeron® J1900 quad-core processors at 2.00 GHz, based on the SoC Bay Trail generation
- Up to 8 GB RAM
- Integrated UPS with external battery kit (optional)
- Available in SL version with reduced depth and S0 version with the option to install additional interfaces
- Integrated UBIQUITY software for remote assistance via end-to-end VPN connection
- FactoryTalk® Optix™ software for HMI and Edge Computing applications (optional)

UBIQUITY INSIDE

FT Optix™ OPTIONAL

FANLESS

REAL-TIME SOLUTIONS



TECHNICAL DATA

		QT2150-ALU	QT2150-TFM	HT2150-ALU	HT2150-TF
LED BACKLIGHT TFT LCD		7" W - 800x480 10.1" W - 1280x800 12.1" W - 1280x800 15.6" W - 1366x768		7" W - 800x480 8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1" - 800x600 12.1" - 1024x768 12.1" W - 1280x800 15" - 1024x768 15.6" W - 1366x768	
CUT-OUT		QT		HT	
FRONT USB		-		1x USB 2.0 (Type-A), protected	
TOUCHSCREEN		Resistive 5 wires	P-CAP Multitouch	Resistive 5 wires	
FRONT PANEL	Material	Aluminum	True Flat Aluminum	Aluminum	True Flat Aluminum
	ASEM Logo	-		Adhesive label	Silk screen printed
PROTECTION GRADE	IP rating	IP65 - frontal			
	NEMA rating	UL Type 1, 4x(indoor only)		UL Type 1, 4x(indoor only) and 12	
CASE	Installation	Panel mounting			
	Material	Zinc-coated skin pass steel			
PROCESSOR (soldered on-board)		Intel® Celeron® J1900 2.00Ghz (2.30GHz Burst) • 4 cores / 4 threads • 2MB L2 cache • 22nm			
CHIPSET		Intel® Bay Trail • Included into processor chip (SoC)			
VIDEO CONTROLLER		Intel® HD Graphics for Intel Atom® processor Z3700 series • 688MHz/854MHZ			
SYSTEM MEMORY RAM		1GB or 2GB or 4GB or 8GB SODIMM DDR3L module			
MASS STORAGE	CFast	1x bootable CFast SATA II slot onboard with external access (up to 240GB)			
	SSD mSATA	1x onboard connector for direct insertion of mSATA SSD SATA II (up to 960GB)			
INTERFACES	LAN	2x Gigabit Ethernet (RJ45)			
	USB	1x USB 3.0 (Type-A) • 1x USB 2.0 (Type-A)			
	VIDEO	-			
ADD-ON INTERFACES (optional)	Position A (max 1) only S0 version and BM	1x RS232/422/485 (DB15M) + 1x USB 2.0 (Type-A) 1x RS232/422/485 (DB15M) isolated + 1x USB 2.0 (Type-A) 2x RS232 (DB9M) 1x USB 2.0 (Type-A) 2x USB 2.0 (Type-A) 1x Gigabit Ethernet (RJ45) + 1x USB 2.0 (Type-A)			
POWER SUPPLY INPUT		24VDC (18÷32VDC) isolated			
POWER SUPPLY (optional)	UPS	UPS with external battery pack (Pb • 12V/2,5Ah) (separate mounting)			
	ATX only S0 version and BM w/o UPS	Kit for ATX mode power supply (push button, internal cable and connector for remote control)			
	ATX only BM w/ UPS	-			
BATTERY		1x CR2032 Internal access			
O.S. CERTIFIED		Microsoft Windows 10 IoT Enterprise 2016/2019 64 bit			
OPERATING TEMPERATURE		0°C ÷ 50°C			
STORAGE TEMPERATURE		-5°C ÷ 60°C			
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)			
APPROVALS		CE RoHS UKCA cULus Listed			

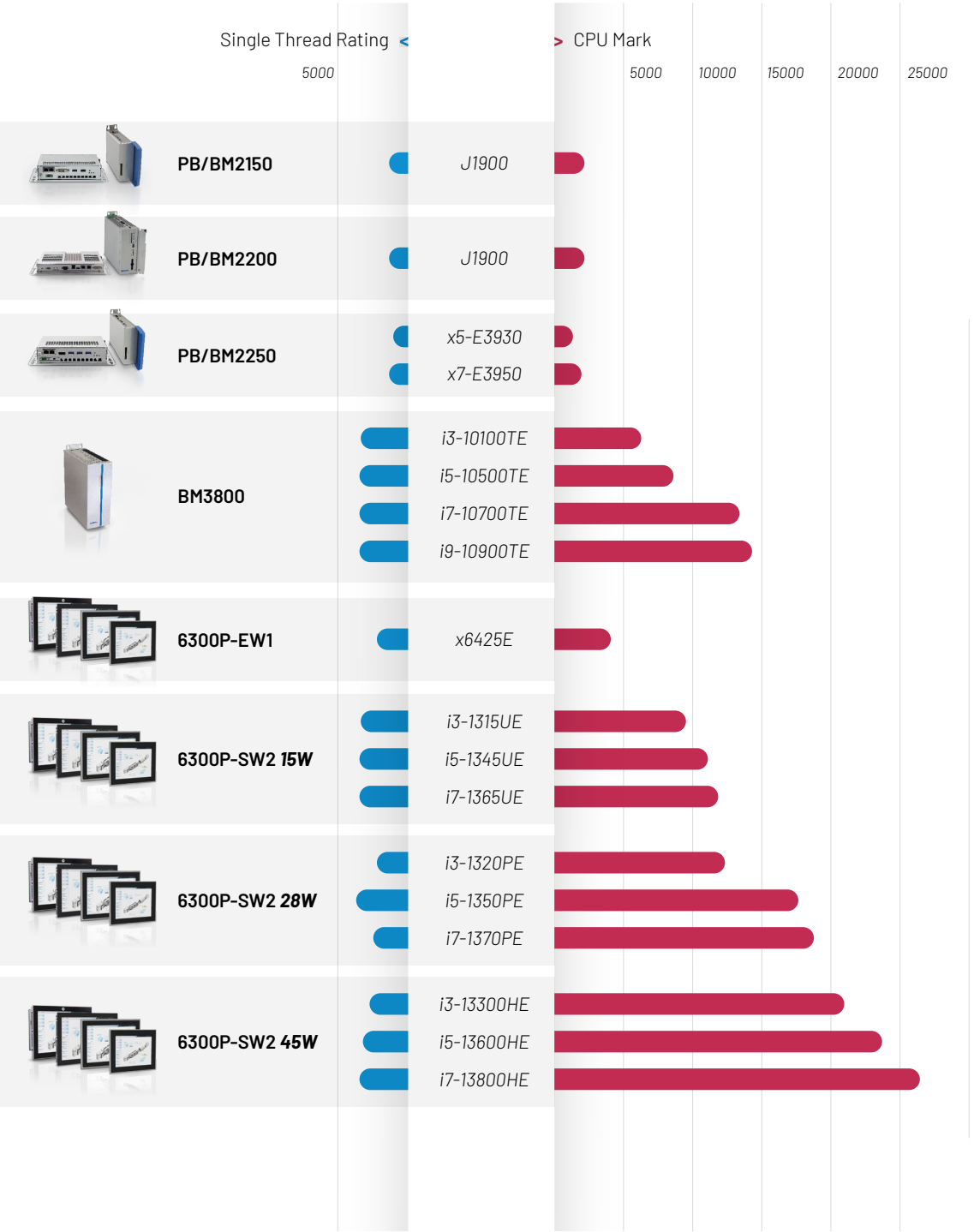
BOX IPCS

HIGH PERFORMANCE
EXTENSIVE CONFIGURABILITY
ERGONOMIC AND ROBUST
DESIGN

COMPARISON TABLE

						
	ASEM 6300B-SW2	ASEM 6300B-EW1	BM3800	PB2250 & BM2250	PB2200 & BM2200	PB2150 & BM2150
FANLESS	✓	✓	✓	✓	✓	✓
INSTALLATION	Wall mounting	Wall mounting	Book mounting	PB - Wall mounting BM - Book/DIN mounting	PB - Wall mounting BM - Book mounting	PB - Wall mounting BM - Book/DIN mounting
PROCESSORS	Model	15W/28W/45W: Intel® Core™ i3-1315UE/ 1320PE/ 13300HE Intel® Core™ i5-1345UE/1350PE/ 13600HE Intel® Core™ i7-1365UE/1370PE/ 13800HE	Intel Atom® x6425E	Intel® Core™ i3-10100TE Intel® Core™ i5-10500TE Intel® Core™ i7-10700TE Intel® Core™ i9-10900TE	Intel Atom® x5-E3930 Intel Atom® x7-E3950	Intel® Celeron® J1900
	Generation	Intel® Raptor Lake	Intel® Elkhart Lake	Intel® Comet Lake S	Intel® Apollo Lake	Intel® Bay Trail
SYSTEM MEMORY	Up to 48GB	Up to 16GB	Up to 32GB	Up to 8GB	Up to 8GB	Up to 8GB
INTERFACES	LAN	4x 2.5G Ethernet (RJ45)	1x 2.5 RJ45 • 2x RJ45	2x RJ45 (2,5G Ethernet) • 3xRJ45	2x RJ45	2x RJ45
	USB	4x USB 3.2	4x USB 3.2	2x USB 3.1Gen2 • 4x USB 3.1Gen1 • 1x USB 3.1Gen1	3x USB 3.0	2x USB 2.0 • 1x USB 3.0
	Serial	1x RS232/422/485 (DB9M)	1x RS232/422/485 (DB9M)	-	1x RS232 (DB9M) (PB only)	-
	Video	1x DisplayPort++ V1.4a	1x DisplayPort++ V1.4a	1x DisplayPort++ V1.2	1x DVI-I	1x DVI-D
EXPANSION SLOTS PCI/PCIe	Up to 1 PCIe	Up to 1	Up to 5	-	Up to 1 (PB only)	-
INTERNAL SSD/HDD	Up to 3	Up to 2	Up to 2	-	Up to 1	-
EXTRACTABLE SSD/HDD	Up to 2	-	Up to 2	-	-	-
POWER SUPPLY INPUT	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC
OPERATING SYSTEMS	Microsoft Windows 10 IoT Enterprise LTSC 2021 64bit Microsoft Windows 11 IoT Enterprise LTSC 2024 64bit	Microsoft Windows 10 IoT Enterprise LTSC 2021 64bit Microsoft Windows 11 IoT Enterprise LTSC 2024 64bit	Microsoft Windows 10 IoT Enterprise LTSC 2021 64bit	Microsoft Windows 10 IoT Enterprise 2019/2021 64 bit	Microsoft Windows 10 IoT Enterprise 2016/2019 64bit	Microsoft Windows 10 IoT Enterprise 2016/2019 64bit
PAC VERSION *	X	X	X	X	✓	X
CERTIFICATIONS						

* with UPS + 512kB MRAM for retentive data management and Codesys software



ASEM 6300B-SW2



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● Active

★★★★★

★★★★★

★★★★★

- Intel® processors based on SoC Raptor Lake PCH generation
- Up to 48 GB RAM with ECC support (for industrial processors)
- Up to three simultaneous storage options: M.2 SSD, 2.5" SSD, and CFast
- Fanless IPC, ensuring operation between 0 and 50 °C without mechanical ventilation
- ATX functionality for remote power-on and native support for our new Smart UPS
- 512 kB MRAM for storing retentive variables (optional)
- Available in SL version with reduced depth, S0 version with the option to install additional interfaces, S1 version with one PCIe expansion slot, and D2 version with two removable SSD slots
- ThinManager®-ready BIOS preinstalled

 Remote Access™ **OPTIONAL**
compatible with **UBIQUITY**

 Optix™ **OPTIONAL**

 **Windows 11 IoT**

 **COMPATIBLE**
with Smart UPS

FANLESS 

 **DESIGN
FOR
SECURITY**

IMAGE GALLERY



ASEM 6300B-SW2AA (SL)



ASEM 6300B-SW2AB (S0)



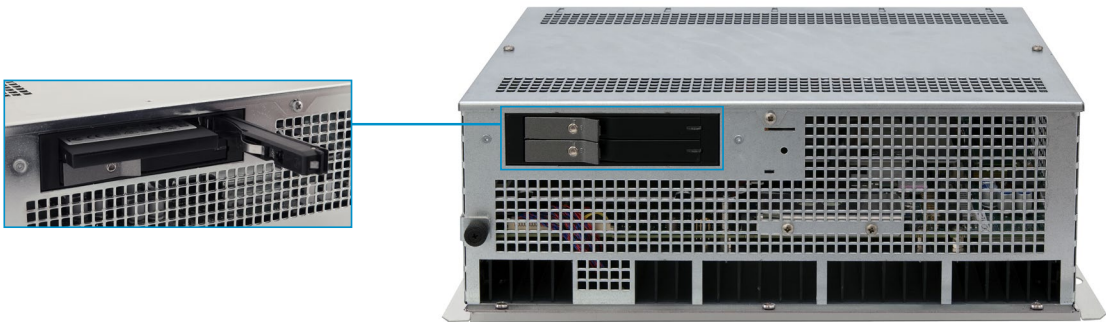
ASEM 6300B-SW2AC (S1)



ASEM 6300B-SW2AD (D2)

DETAIL - REMOVABLE DRIVE SLOTS

Removable drive slots available only on the D2 version



ASEM 6300B-SW2

TECHNICAL DATA

		6300B-SW2
PROTECTION GRADE	IP rating	IP20
	NEMA rating	-
CASE	Installation	Wall mounting
	Material	Zinc-coated skin pass steel
PROCESSOR (soldered on-board)	15W (SL/S0 ver-sions)	Intel® Core™ i3-1315UE Intel® Core™ i3-1315URE 1.20GHz (4.50GHz max turbo frequency) • 6cores/8threads • 10MB Intel® Smart Cache
		Intel® Core™ i5-1345UE Intel® Core™ i5-1345URE 1.25 GHz (4.60GHz max turbo frequency) • 10cores/12threads • 12MB Intel® Smart Cache
		Intel® Core™ i7-1365UE Intel® Core™ i7-1365URE 1.30GHz (4.90GHz max turbo frequency) • 10cores/12threads • 12MB Intel® Smart Cache
	28W (S0/S1/D2 ver-sions)	Intel® Core™ i3-1320PE 1.70GHz (4.50GHz max turbo frequency) • 8cores/12threads • 12MB Intel® Smart Cache
		Intel® Core™ i5-1350PE 1.80GHz (4.60GHz max turbo frequency) • 12cores/16threads • 12MB Intel® Smart Cache
		Intel® Core™ i7-1370PE 1.90GHz (4.80GHz max turbo frequency) • 14cores/20threads • 24MB Intel® Smart Cache
	45W (S0/S1/D2 ver-sions)	Intel® Core™ i3-13300HE Intel® Core™ i3-13300HRE 2.10GHz (4.60GHz max turbo frequency) • 8cores/12threads • 12 MB Intel® Smart Cache
		Intel® Core™ i5-13600HE Intel® Core™ i5-13600HRE 2.70GHz (4.80GHz max turbo frequency) • 12cores/16threads • 18 MB Intel® Smart Cache
		Intel® Core™ i7-13800HE Intel® Core™ i7-13800HRE 2.50GHz (5.00 GHz max turbo frequency) • 14cores/20threads • 24 MB Intel® Smart Cache
	Chipset	
Video Controller		Intel® UHD Graphics integrated in Intel® Core™ i3 Intel® Iris® X® Graphics integrated in Intel® Core™ i5 and i7
TPM		Intel® PTT (TPM integrated) Discrete TPM (optional)
SYSTEM MEMORY RAM		8GB (DDR5-5200) 16GB (DDR5-5200) 32GB (DDR5-5200) 48GB (DDR5-5200)
MASS STORAGE	CFast	1x bootable CFast SATA III slot onboard with external access (up to 240GB)
	M.2 SSD	1x onboard connector for direct insertion of M.2 NVMe PCIe SSD (up to 2TB)
	2.5 SATA SSD	1x onboard connector for 2.5 SATA III SSD with internal installation kit (up to 1TB) *SL only 2x onboard connector for 2.5 SATA III SSD with external installation kit (up to 1TB) *S0/S1/D2 only
RAID		RAID 1
INTERFACES	LAN	4x 2.5 Gigabit Ethernet (RJ45)
	USB	4x USB 3.2 Gen2 (Type-A) 10 Gbps
	SERIAL	1x RS232/RS422/RS485 (DB9M) isolated
	VIDEO	1x DisplayPort++ v1.4a
ADD-ON INTERFACES (optional) not available for SL version	Position A (max 1) 60pin	1x 2.5G Ethernet + 1x USB 2.0 (Type-A) 2x Isolated Serial Multistandard RS232/RS422/RS485 (DB9M) 2x USB 2.0 (Type-A)
	Position B (max 1) 26 pin	1x 2.5 Gigabit Ethernet (RJ45) 1x RVL (remote video link RJ45) 2x RVL (remote video link RJ45) 2x DisplayPort++ v1.4a 2x USB 3.2 (Type-C)

TECHNICAL DATA

		6300B-SW2
EXPANSION SLOTS	only S1 version	1x PCIe x4, on riser card
NOVRAM (optional)		512kB MRAM module for retentive variables
POWER SUPPLY INPUT		24VDC (18÷32VDC) isolated
POWER SUPPLY ADD-ON FUNCTIONS (selectable from BIOS)		Remote Power Button 1x output signal Power Status + 1x input signal System Off
BATTERY		1x CR2032 Internal access
O.S. CERTIFIED		Microsoft Windows 10 IoT Enterprise LTSC 2021 64bit Microsoft Windows 11 IoT Enterprise LTSC 2024 64bit
OPERATING TEMPERATURE		0°C ÷ 50°C
STORAGE TEMPERATURE		-20°C ÷ 65°C
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)
APPROVALS		CE FCC UKCA cULus Listed Cmim - Morocco KCC - Korea RCM - Australia and New Zealand REACH RoHS compliant

ASEM 6300B-EW1



- Intel Atom® x6425E quad-core processor at 2.00 GHz, based on SoC Elkhart Lake PCH generation, delivering over 300% higher performance compared to our previous QT/HT/PB/BM2200 family
- Up to 16 GB RAM with ECC support
- Up to three simultaneous storage options: M.2 SSD, 2.5" SSD, and CFast
- Fanless IPC, ensuring operation between 0 and 50 °C without mechanical ventilation
- ATX functionality for remote power-on and native support for our new Smart UPS
- 512 kB MRAM for storing retentive variables (optional)
- Available in SL version with reduced depth, S0 version with the option to install additional interfaces, and S1 version with one PCI or PCIe expansion slot
- ThinManager®-ready BIOS preinstalled
- FactoryTalk® Remote Access™ software included for remote assistance (compatible with UBIQUITY)
- FactoryTalk® Optix™ software for HMI and Edge Computing applications (optional)

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FT Remote Access™ **OPTIONAL**
compatible with UBIQUITY

FT Optix™ **OPTIONAL**

Windows 11 IoT

COMPATIBLE with Smart UPS

FANLESS

DESIGN FOR SECURITY

CE, UL LISTED, UKCA, RoHS, REACH

TECHNICAL DATA

		6300B-EW1
PROTECTION GRADE	IP rating	IP20
	NEMA rating	-
CASE	Installation	Wall mounting
	Material	Zinc-coated skin pass steel
PROCESSOR (soldered on-board)	CPU	Intel Atom® x6425E 2.00GHz (3.00GHz Burst) • 4 cores / 4 threads • 1.5MB L2 cache • 10nm
	Chipset	Intel® Elkhart Lake PCH (Platform Controller Hub) • Included into processor chip (SoC)
	Video Controller	Intel® UHD Graphics integrated
TPM	Intel® PTT (TPM integrated) Discrete TPM (optional)	
SYSTEM MEMORY RAM	4GB (LPDDR4x) 8GB (LPDDR4x) 16GB (LPDDR4x)	
MASS STORAGE	CFast	1x bootable CFast SATA III slot onboard with external access (up to 240GB)
	M.2 SSD	1x onboard connector for direct insertion of M.2 NVMe PCIe x2 SSD (up to 1TB)
	2.5" SATA SSD only S0/S1 versions	1x onboard connector for 2.5" SATA III SSD with internal installation kit
INTERFACES	LAN	1x 2.5 Gigabit Ethernet (RJ45) + 2x Gigabit Ethernet (RJ45)
	USB	4x USB 3.2 Gen2 (Type-A) 10Gbps
	SERIAL	1x RS232/422/485 (DB9M)
	VIDEO	1x DisplayPort++ v1.4a
ADD-ON INTERFACES (optional) not available for SL version	Position A (max 1)	2x RS232/422/485 isolated (DB9M) 2x USB 2.0 (Type-A) 1x 2.5 Gigabit Ethernet (RJ45) + 1x USB 2.0 (Type-A)
	Position B (max 1)	1x 2.5 Gigabit Ethernet (RJ45) 1x RVL (remote video link RJ45) 1x DisplayPort++ v1.4a
EXPANSION SLOTS	only S1 version	1x PCI half-length or 1x PCIe x4* half-length, on riser card
NOVRAM (optional)	512kB MRAM module for retentive variables	
POWER SUPPLY INPUT	24VDC (18÷32VDC) isolated	
POWER SUPPLY ADD-ON FUNCTIONS (selectable from BIOS)	Remote Power Button 1x output signal Power Status + 1x input signal System Off	
BATTERY	1x CR2032 external access	
O.S. CERTIFIED	Microsoft Windows 11 IoT Enterprise LTSC 2024 64bit Microsoft Windows 10 IoT Enterprise LTSC 2021	
OPERATING TEMPERATURE	0°C ÷ 50°C	
STORAGE TEMPERATURE	-10°C ÷ 60°C	
OPERATING/STORAGE RELATIVE HUMIDITY	20% ÷ 90% RH (non-condensing)	
APPROVALS	CE UKCA cULus Listed Cmim - Morocco KCC - Korea RCM - Australia and New Zealand REACH RoHS compliant	

*x4 mechanical, x2 electrical

BM3800



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UBIQUITY INSIDE

FT Optix[®] OPTIONAL

REAL-TIME SOLUTIONS

COMPATIBLE with Smart UPS

FANLESS

RVL 100m OPTIONAL



- Intel® Core™ processors based on the 35W Comet Lake S generation
- Up to 32 GB RAM
- Expandable with additional interfaces starting from the S0 version and with PCIe cards in the S2 and S5 versions
- Optimized SSD/HDD management thanks to single or dual removable drive bays in the D1 and D2 versions
- Display support up to 100 m via the RVL interface for remote transmission of DVI-D and USB 2.0 signals

IMAGE GALLERY



BM3800 - (S0 Version)



BM3800 - (S2 Version)



BM3800 - (S5 Version)



BM3800

TECHNICAL DATA

		BM 3800(35W)		
		S0	S2	S5
PROTECTION GRADE		IP20		
CASE	Installation	Book mounting		
	Material	Aluminum alloy		
PROCESSOR (soldered on-board)		Intel® Core™ i3-10100TE 2.30GHz (3.60GHz Turbo) 64bit • 4 cores / 8 threads • 6MB Smart cache • 14nm Intel® Core™ i5-10500TE 2.30GHz (3.70GHz Turbo) 64bit • 6 cores / 12 threads • 12MB Smart cache • 14nm Intel® Core™ i7-10700TE 2.00GHz (4.40GHz Turbo) 64bit • 8 cores / 16 threads • 16MB Smart cache • 14nm Intel® Core™ i9-10900TE 1.80GHz (4.50GHz Turbo) 64bit • 10 cores / 20 threads • 20MB Smart cache • 14nm		
CHIPSET		Intel® W480E PCH (Platform Controller Hub) with integrated RAID controller		
VIDEO CONTROLLER		Intel® UHD Graphics 630 integrated in Intel® Core™ i3 processor • 350MHz/1.1GHz Intel® UHD Graphics 630 integrated in Intel® Core™ i5 and i7 processors • 350MHz/1.15GHz Intel® UHD Graphics 630 integrated in Intel® Core™ i9 processor • 350MHz/1.20GHz		
TPM		Intel® PTT (integrated TPM)		
SYSTEM MEMORY RAM (soldered)		4GB (1x 4GB SODIMM DDR4 module) 8GB (2x 4GB SODIMM DDR4 module) 16GB (2x 8GB SODIMM DDR4 module) 32GB (2x 16GB SODIMM DDR4 module)		
MASS STORAGE	Cfast	1x bootable CFast SATA III slot onboard with external access (up to 240GB)		
	M.2 SSD	1x onboard connector for direct insertion of M.2 2280 NVMe PCIe x4 SSD (up to 512GB) or M.2 2242 SATA III SSD (up to 480GB)		
	SSD/HDD	1x onboard connectors for SSDs/ HDDs 2,5" SATA III with internal installation kit	1x or 2x onboard connectors for SSDs/HDDs 2,5" SATA III with internal installation kit	
EXTRACTABLE MASS STORAGE (optional)		1x or 2x extractable SSDs/HDDs 2.5" SATA III units		
RAID		RAID 0, 1		
INTERFACES	LAN	2x Multi-Gig 2.5G Ethernet (RJ45) • 3x Gigabit Ethernet (RJ45)		
	USB	2x USB 3.1 Gen2 (Type-A) • 4x USB 3.1 Gen1 (Type-A) • 1x USB 3.1 Gen1 (Type-A) front		
	VIDEO	1x DisplayPort++ V1.2		
ADD-ON INTERFACES (optional)	Position A (max 1)	1x RS232/422/485 (DB15M) + 1x USB 2.0 (Type-A) 1x RS232/422/485 (DB15M) isolated + 1x USB 2.0 (Type-A) 2x RS232/422/485 (DB9M) 2x RS232/422/485 optoisolated (DB9M) 2x USB 2.0 (Type-A) 1x Gigabit Ethernet (RJ45) + 1x USB 2.0 (Type-A)		
	Position B (max 1)	1x or 2x RJ45 connectors for RVL (2x not available for S0 D2 version) 2x DisplayPort++ V1.2		
EXPANSION SLOTS		-	1x PCIe x16 half-length + 1x PCIe x4 half-length or 1xPCIe x4 half-length + 1x PCIe x1 half-length, on riser card, max 10W total	2x PCIe x8 half-length + 2x PCIe x4 half-length + 1x PCIe x1 half-length, on riser card, max 10W total
POWER SUPPLY INPUT		24VDC (18÷32VDC) isolated		
POWER SUPPLY	ATX	1x output signal Power Status + 1x input signal System Off		
BATTERY		1x CR2032 Removable front access		
O.S. CERTIFIED		Microsoft Windows 10 IoT Enterprise 2021 64 bit		
OPERATING TEMPERATURE	without forced ventilation	0°C ÷ 50°C 0°C ÷ 45°C (24x7 HDD) 5°C ÷ 45°C (Standard HDD)		
	with forced ventilation	0°C ÷ 50°C 0°C ÷ 50°C (24x7 HDD) 5°C ÷ 45°C (Standard HDD)		
STORAGE TEMPERATURE		-20°C ÷ 70°C		
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)		

TECHNICAL DATA

		BM 3800 (35W)		
		S0	S2	S5
FORCED VENTILATION (optional)		-	Forced ventilation (2x tachometric fans 40x40x20 mm), required to ensure: - operating temperature 0°C + 50°C (24x7 HDD) - use of expansion cards up to a maximum of 20W total	Forced ventilation (1x tachomet-ric fan 92x92x20 mm), required to ensure: - operating temperature 0°C + 50°C (24x7 HDD) - use of expansion cards up to a maximum of 20W total
APPROVALS		CE RoHS UKCA cULus Listed		

PB2250 & BM2250



● Active





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FANLESS



- Intel Atom® x5 and x7 processors based on the SoC Apollo Lake generation
- Up to 8 GB RAM
- DIN rail mounting available (BM2250 only)
- Available in SL version with reduced depth and S0 version with the option to install additional interfaces (PB2250 only)

TECHNICAL DATA

		PB2250	BM2250
PROTECTION GRADE	IP rating	IP20	
	NEMA rating	-	
CASE	Installation	Wall mounting	Book/DIN mounting
	Material	Zinc-coated skin pass steel	Aluminum alloy
PROCESSOR (soldered on-board)		Intel Atom® x5-E3930 1.30Ghz (1.80Ghz Burst) • 64bit • 2 cores / 2 threads • 2MB L2 cache • 14nm Intel Atom® x7-E3950 1.60Ghz (2.00Ghz Burst) • 64bit • 4 cores / 4 threads • 2MB L2 cache • 14nm	
CHIPSET		Intel® Apollo Lake • Included into processor chip (SoC)	
VIDEO CONTROLLER		Intel® HD Graphics 500 integrated in x5-E3930 processor • 400MHz/550MHZ Intel® HD Graphics 505 integrated in x7-E3950 processor • 500MHz/650MHZ	
TPM		Intel® PTT (TPM integrated) • Discrete TPM 2.0 module (optional)	
SYSTEM MEMORY RAM	with x5-E3930	4GB LP-DDR4 module	
	with x7-E3950	4GB or 8GB LP-DDR4 module	
MASS STORAGE	CFast	1x bootable CFast SATA III slot onboard with external access (up to 240GB)	
	M.2 SSD	1x onboard connector for direct insertion of M.2 2242 SATA III SSD (up to 480GB)	
INTERFACES	LAN	2x Gigabit Ethernet (RJ45)	
	USB	3x USB 3.0 (Type-A)	
	VIDEO	1x DisplayPort++ V1.2	
ADD-ON INTERFACES (optional)	Position A (max 1) only S0 version and BM	2x RS232/422/485 (DB9M) 2x RS232/422/485 optoisolated (DB9M) 1x RS232/422/485 (DB15M) + 1x USB 2.0 (Type-A) 1x RS232/422/485 (DB15M) isolated + 1x USB 2.0 (Type-A) 2x USB 2.0 (Type-A) 1x Gigabit Ethernet (RJ45) + 1x USB 2.0 (Type-A)	
POWER SUPPLY INPUT		24VDC (18÷32VDC) isolated	
POWER SUPPLY (optional)	UPS	UPS with external battery pack (NiMH • 12V/2,5Ah) (backside or separate mounting)	UPS with external battery pack (NiMH • 12V/2,5Ah) (separate mounting)
	ATX only S0 version and BM	Kit for ATX mode power supply (push button, inter- nal cable and connector for remote control)	Kit for ATX mode power supply (connector for remote control)
BATTERY		1x CR2032 Internal access	
O.S. CERTIFIED		Microsoft Windows 10 IoT Enterprise 2019/2021 64 bit	
OPERATING TEMPERATURE		0°C ÷ 50°C	
STORAGE TEMPERATURE		-5°C ÷ 60°C	
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)	
APPROVALS		CE RoHS UKCA cULus Listed	

PB2200 & BM2200



● Active mature









DOWNLOAD THE DATASHEET

UBIQUITY INSIDE

FT Optix[®] OPTIONAL

REAL-TIME SOLUTIONS

FANLESS

REMOTE VIDEO LINK





- Intel® Celeron® processors based on the SoC Bay Trail generation
- Up to 8 GB RAM
- Integrated UPS with external battery kit (optional)
- Integrated supercapacitor-based μUPS, with 512 kB MRAM for storing retentive variables (optional)
- Available in SL version with reduced depth, S0 version with the option to install additional interfaces, and S1 version with one PCI or PCIe expansion slot (PB2200 only)
- Available in the RVL version (BM2200 RVL) for remote transmission of DVI-D and USB 2.0 signals up to 100 m

TECHNICAL DATA

		PB2200	BM2200
PROTECTION GRADE	IP rating	IP20	
	NEMA rating	-	
CASE	Installation	Wall mounting	Book mounting
	Material	Zinc-coated skin pass steel	Aluminum alloy
PROCESSOR (soldered on-board)		Intel® Celeron® J1900 2.00GHz (2.42GHz Burst) • 64bit • 4 cores / 4 threads • 2MB L2 cache • 22nm	
CHIPSET		Intel® Bay Trail • Included into processor chip (SoC)	
VIDEO CONTROLLER		Intel® HD Graphics for Intel Atom® processor Z3700 series • 688MHz/854MHz	
WATCHDOG		Programmable time period	
TPM		Discrete TPM 2.0 module (optional)	
SYSTEM MEMORY RAM		1GB or 2GB or 4GB or 8GB (1x SODIMM DDR3L module)	2GB or 4GB or 8GB (1x SODIMM DDR3L module)
MASS STORAGE (SSD mSATA and SSD/HDD are alternative to each other)	Cfast	1x bootable CFast SATA II slot onboard with external access (up to 240GB)	
	SSD mSATA	1x onboard connector for direct insertion of SSD mSATA SATA II (up to 960GB)	
	SSD/HDD only S0/S1 versions	1x onboard connectors for SSDs/HDDs 2.5" SATA II with internal installation kit	
INTERFACES	LAN	2x Gigabit Ethernet (RJ45)	
	USB	2x USB 2.0 (Type-A) • 1x USB 3.0 (Type-A)	2x USB 2.0 (Type-A) • 1x USB 3.0 (Type-A) front
	SERIAL	1x RS232 (DB9M)	
	VIDEO	1x DVI-I (Resolution up to 1920x1080 • VGA adapter included)	1x DVI-I (Resolution up to 1920x1080 • VGA adapter included) or 1x RJ45 connector for RVL
ADD-ON INTERFACES (optional) not available for SL version	Position A (max 1)	1x RS232/422/485 (DB15M) + 1x USB 2.0 (Type-A) 1x RS232/422/485 (DB15M) isolated + 1x USB 2.0 (Type-A) 2x RS232 (DB9M) 2x USB 2.0 (Type-A)	1x RS232/422/485 (DB15M) isolated + 2x RS232(DB9M) 1x RS232/422/485 (DB15M) isolated + 1x Gigabit Ethernet (RJ45)
	Position B (max 1)	1x Gigabit Ethernet (RJ45)	-
EXPANSION SLOTS	only S1 version	1x PCI half-length or 1x PCIe x1 half-length, on riser card, max 3W	-
POWER SUPPLY INPUT		24VDC (18÷32VDC) isolated	
POWER SUPPLY (optional)	UPS Backside mounting not available for SL version	UPS with external battery pack (Pb • 12V/2,5Ah) (backside or separate mounting)	UPS with external battery pack (Pb • 12V/2,5Ah) (separate mounting)
	UPS + 512kB MRAM Backside mounting not available for SL version	UPS with external battery pack (Pb • 12V/2,5Ah) + 512kB MRAM (backside or separate mounting)	UPS with external battery pack (Pb • 12V/2,5Ah) + 512kB MRAM (separate mounting)
	μUPS + 512kB MRAM	Supercapacitors μUPS + 512kB MRAM	
	ATX only S0/S1 versions	Kit for ATX mode power supply (push button, internal cable and connector for remote control)	-
BATTERY		1x CR2032 Internal access	1x CR2032 Removable front access
O.S. CERTIFIED		Microsoft Windows 10 IoT Enterprise 2016/2019 64bit (2019 version not compatible with CODESYS)	
OPERATING TEMPERATURE		0°C ÷ 50°C 0°C ÷ 45°C (24x7 HDD or Intel® Core™ i7 processor) 5°C ÷ 45°C (Standard HDD)	
STORAGE TEMPERATURE		-10°C ÷ 60°C	
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)	
APPROVALS		CE RoHS UKCA UL 508	CE RoHS UKCA cULus Listed

Industrial PCs and scalable solutions for HMI, IIoT and Industry 5.0 applications / 05.2026

PB2150 & BM2150



● Active mature









DOWNLOAD
THE DATASHEET

 UBIQUITY INSIDE

 FT Optix[®] OPTIONAL

FANLESS



- Intel® Celeron® processors based on the SoC Bay Trail generation
- Up to 8 GB RAM
- DIN rail mounting available (BM2150 only)
- Integrated UPS with external battery kit (optional)
- Available in SL version with reduced depth and S0 version with the option to install additional interfaces (PB2150 only)

– 71

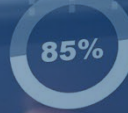
TECHNICAL DATA

		PB2150	BM2150
PROTECTION GRADE	IP rating	IP20	
	NEMA rating	-	
CASE	Installation	Wall mounting	Book/DIN mounting
	Material	Zinc-coated skin pass steel	Aluminum alloy
PROCESSOR (soldered on-board)		Intel® Celeron® J1900 2.00Ghz (2.30GHz Burst) • 4 cores / 4 threads • 2MB L2 cache • 22nm	
CHIPSET		Intel® Bay Trail • Included into processor chip (SoC)	
VIDEO CONTROLLER		Intel® HD Graphics for Intel Atom® processor Z3700 series • 688MHz/854MHZ	
SYSTEM MEMORY RAM		1GB or 2GB or 4GB or 8GB SODIMM DDR3L module	
MASS STORAGE	CFast	1x bootable CFast SATA II slot onboard with external access (up to 240GB)	
	SSD mSATA	1x onboard connector for direct insertion of mSATA SSD SATA II (up to 960GB)	
INTERFACES	LAN	2x Gigabit Ethernet (RJ45)	
	USB	1x USB 3.0 (Type-A) • 1x USB 2.0 (Type-A)	
	VIDEO	1x DVI-D (Resolution up to 1920x1080)	
ADD-ON INTERFACES (optional)	Position A (max 1) only S0 version and BM	1x RS232/422/485 (DB15M) + 1x USB 2.0 (Type-A) 1x RS232/422/485 (DB15M) isolated + 1x USB 2.0 (Type-A) 2x RS232 (DB9M) 1x USB 2.0 (Type-A) 2x USB 2.0 (Type-A)	
POWER SUPPLY INPUT		24VDC (18÷32VDC) isolated	
POWER SUPPLY (optional)	UPS	UPS with external battery pack (Pb • 12V/2,5Ah) (separate mounting)	
	ATX only S0 version and BM w/o UPS	Kit for ATX mode power supply (push button, internal cable and connector for remote control)	
	ATX only BM w/ UPS	-	Kit for ATX mode power supply (connector for remote control)
BATTERY		1x CR2032 Internal access	
O.S. CERTIFIED		Microsoft Windows 10 IoT Enterprise 2016/2019 64 bit	
OPERATING TEMPERATURE		0°C ÷ 50°C	
STORAGE TEMPERATURE		-5°C ÷ 60°C	
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)	
APPROVALS		CE RoHS cULus Listed	

Industrial PCs and scalable solutions for HMI, IIoT and Industry 5.0 applications / 05.2026

ULTRA- COMPACT IPCS

HIGH PROCESSING
CAPABILITIES
COMPACT DESIGN
ERGONOMIC DESIGN



COMPARISON TABLE

				
	BM100	BM110	BM120	BM121
INSTALLATION	Book/ DIN rail/ Wall mounting	Book/ DIN rail mounting	Book/ DIN rail mounting	Book/ DIN rail mounting
PROCESSORS	Model	Intel Atom® x5-E3930 Intel Atom® x7-E3950	Intel Atom® x5-E3930 Intel Atom® x7-E3950	Intel Atom® x5-E3930 Intel Atom® x7-E3950
	Generation	Intel® Apollo Lake	Intel® Apollo Lake	Intel® Apollo Lake
SYSTEM MEMORY		Up to 8GB	Up to 8GB	Up to 8GB
INTERFACES	LAN	2x RJ45	2x RJ45	4x RJ45
	LAN switch	-	-	1x Unmanaged Gigabit Switch (4x RJ45)
	USB	2x USB 3.0	2x USB 3.0	4x USB 3.0
	Serial	-	-	1x RS232/422/485 (DB9M)
	Video	1x DisplayPort++ V1.2	1x DisplayPort++ V1.2	1x DisplayPort++ V1.2
	Digital input	-	2	2
	Digital output	-	2	2
POWER SUPPLY INPUT		24VDC	24VDC	24VDC
OPERATING SYSTEMS		Microsoft Windows 10 IoT Enterprise 2019/2021 64 bit	Microsoft Windows 10 IoT Enterprise 2019/2021 64 bit	Microsoft Windows 10 IoT Enterprise 2019/2021 64 bit
CERTIFICATIONS	   	   	   	   

BM1XY FAMILY

● Active

- Compact design with anodized aluminum chassis
- Intel® Atom™ x5 and x7 processors, based on the SoC Apollo Lake generation
- Up to 8 GB RAM
- Available with 4-port Gigabit Ethernet switch (BM121 only)
- DIN rail mounting available
- Wall mounting available (BM100 only)
- Integrated UPS with external battery kit (optional)

DOWNLOAD THE DATASHEET

FANLESS

TECHNICAL DATA

		BM100	BM110	BM120	BM121
PROTECTION GRADE		IP rating	IP20		
CASE	Installation	Book / DIN rail / Wall Mounting	Book / DIN rail Mounting		
	Material	Anodized aluminum alloy			
	Dimensions (w/o mounting)	100x100x39,4mm	100x100x58,4mm	100x100x79mm	
PROCESSOR (soldered on-board)		Intel Atom® x5-E3930 1.3GHz (1.8 GHz Burst) • 2 cores / 2 threads • 2MB L2 cache • 14nm Intel Atom® x7-E3950 1.6GHz (2.0 GHz Burst) • 4 cores / 4 threads • 2MB L2 cache • 14nm			
CHIPSET		Intel® Apollo Lake • Included into processor chip (SoC)			
VIDEO CONTROLLER		Intel® HD Graphics 500 integrated in Intel Atom® x5-E3930 processor • 400MHz/550MHz Intel® HD Graphics 505 integrated in Intel Atom® x7-E3950 processor • 500MHz/650MHz			
TPM		Intel® PTT (TPM integrated)			
SYSTEM MEMORY RAM (soldered)	with x5-E3930	4GB SODIMM LP-DDR4 module			
	with x7-E3950	4GB or 8GB SODIMM LP-DDR4 module			
MASS STORAGE		SSD M.2	1x onboard connector for direct insertion of M.2 2242 SATA III SSD (up to 480GB)		
INTERFACES	LAN	2x Gigabit Ethernet (RJ45)		4x Gigabit Ethernet (RJ45)	2x Gigabit Ethernet (RJ45)
	LAN Switch	-			1x Unmanaged Gigabit Switch (4x RJ45)
	USB	2x USB 3.0 (Type-A)		4x USB 3.0 (Type-A)	
	SERIAL	-		1x RS232/422/485 (DB9M)	-
	VIDEO	1x DisplayPort++ V1.2			
	DIGITAL INPUT	-	2x Digital Input (0÷24V isolation 500V)		
	DIGITAL OUTPUT	-	2x Digital Output (N.O. max 200mA 24VDC)		
POWER SUPPLY INPUT		24VDC (18÷32VDC) isolated			
POWER SUPPLY (optional)	UPS	-	UPS with external battery pack (NiMH • 12V/2,5Ah) (separate mounting)		
BATTERY		1x CR2032 Internal access			
O.S. CERTIFIED		Microsoft Windows 10 IoT Enterprise 2019/2021 64 bit			
OPERATING TEMPERATURE	with x5-E3930	0°C ÷ 55°C	0°C ÷ 50°C		
	with x7-E3950	0°C ÷ 50°C			
STORAGE TEMPERATURE		-10°C ÷ 60°C			
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)			
APPROVALS		CE RoHS UKCA cULus Listed			

COMPACT ICPS

HIGH PROCESSING
CAPABILITIES
COMPACT DESIGN
REAL-TIME DATA PROCESSING



ASEM 6300B-JB1



- Intel® Celeron® and Core™ processors from the 11th Gen SoC Tiger Lake UP3 family, available in embedded and industrial versions, with support for real-time applications thanks to the reliability and data integrity ensured by ECC memory
- RAM configurable up to 32 GB
- ATX functionality for remote power-on and native support for our new Smart UPS
- Storage from 0 GB up to 2 TB with M.2 PCIe NVMe SSD for maximum read/write performance
- Up to four DisplayPort++ ports to meet any visualization requirement
- Connectivity ensured by four 2.5 Gigabit Ethernet ports
- Available in two versions to ensure maximum ergonomics
- ThinManager®-ready BIOS preinstalled

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FT Remote Access™ INCLUDED compatible with UBIGUITY

FT Optix™ OPTIONAL

Windows 11 IoT

ECC

COMPATIBLE with Smart UPS

DESIGN FOR SECURITY



VERSIONS



ASEM 6300B-JB1xxA



ASEM 6300B-JB1xxB

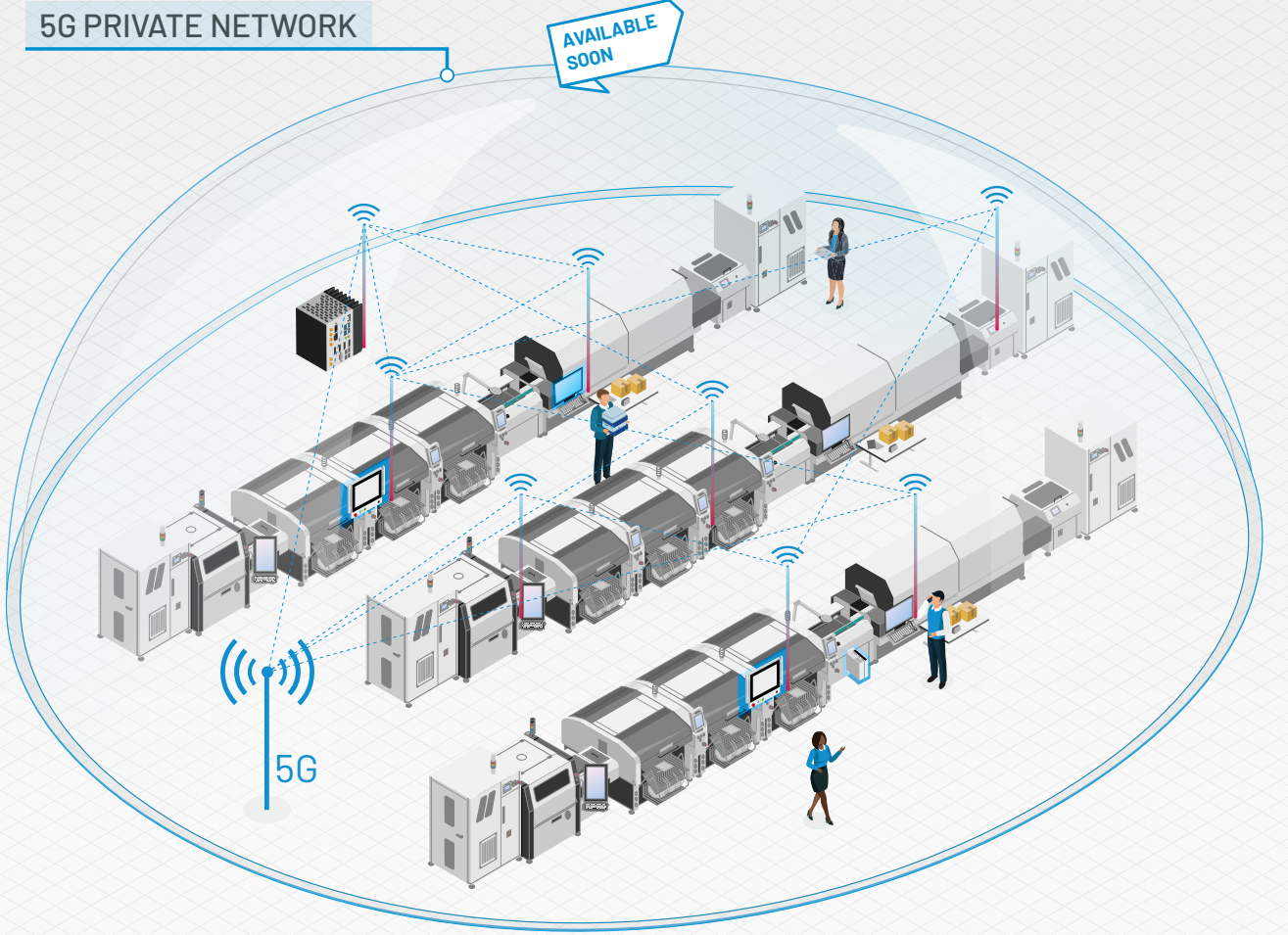


ASEM 6300B-JB1xxD

Wi-Fi6/Bluetooth & 5G* global

*5G option available soon

Extend connectivity with WiFi 6/Bluetooth and 5G*, designed to meet the latest industrial networking infrastructures.



ASEM 6300B-JB1

TECHNICAL DATA

		6300B-JB1		
MODEL		6300B-JB1xxA	6300B-JB1xxB	6300B-JB1xxD
PROTECTION GRADE	IP rating	IP20		
CASE	Installation	Book / DIN rail mounting		
	Material	Anodized aluminum alloy		
DIMENSIONS (w/o mounting)		150x86x101mm	150x110x101mm	
PROCESSOR (soldered on-board)	CPU Embedded	Intel® Celeron® 6305E 1.8GHz • 2 cores / 2 threads • 4MB Smart cache • 10nm Intel® Core™ i3-1115G4E 2.20GHz (3.90GHz Burst) • 2 cores / 4 threads • 6MB Smart cache • 10nm Intel® Core™ i5-1145G7E 1.50GHz (4.10GHz Burst) • 4 cores / 8 threads • 8MB Smart cache • 10nm Intel® Core™ i7-1185G7E 1.80GHz (4.40GHz Burst) • 4 cores / 8 threads • 12MB Smart cache • 10nm		
	CPU Industrial	Intel® Core™ i3-1115GRE 2.20GHz (3.90GHz Burst) • 2 cores / 4 threads • 6MB Smart cache • 10nm Intel® Core™ i5-1145GRE 1.50GHz (4.10GHz Burst) • 4 cores / 8 threads • 8MB Smart cache • 10nm Intel® Core™ i7-1185GRE 1.80GHz (4.40GHz Burst) • 4 cores / 8 threads • 12MB Smart cache • 10nm		
	Chipset	Intel® Tiger Lake PCH (Platform Controller Hub) • Included into processor chip (SoC)		
	Video Controller	Intel® UHD Graphics integrated in Intel® Celeron® and Intel® Core™ i3 Intel® Iris® Xe Graphics integrated in Intel® Core™ i5 and i7		
TPM		Intel® PTT (TPM integrated) Discrete TPM (optional)		
SYSTEM MEMORY RAM (soldered on-board)	Intel® Celeron®	4GB (LPDDR4x) 8GB (LPDDR4x)		
	Intel® Core i3-1115G4E Intel® Core i5-1145G7E	8GB (LPDDR4x) 16GB (LPDDR4x)		
	Intel® Core i7-1185G7E	16GB (LPDDR4x) 32GB (LPDDR4x)		
	Intel® Core i3-1115GRE	8GB (LPDDR4x)		
	Intel® Core i5-1145GRE	16GB (LPDDR4x)		
	Intel® Core i7-1185GRE	32GB (LPDDR4x)		
MASS STORAGE	SSD M.2	1x onboard connector for direct insertion of M.2 NVMe PCIe x2 SSD (up to 2TB)		
INTERFACES	LAN	4x 2.5 Gigabit Ethernet (RJ45)		
	USB	4x USB 3.2 Gen2 (Type-A) 10Gbps		
	SERIAL	-	1x RS232/422/485 isolated (DB9M)	
	VIDEO	2x DisplayPort++ v1.4a	4x DisplayPort++ v1.4a	
	AUDIO	1x Line-Out Audio Stereo 1x Mic-In		
WiFi MODULE	Model	-	Intel® Wi-Fi 6E AX210 (*1)	
	Standard	-	IEEE 802.11a/b/g/n/ac/ax Bluetooth® 5.3	
	Security	-	WPA2; WPA3	
	Antenna	-	2x RP-SMA Female connector	
NOVRAM (optional)		512kB MRAM module for retentive variables		
POWER SUPPLY INPUT		24VDC (18÷32VDC) isolated		
POWER SUPPLY ADD-ON FUNCTIONS (selectable from BIOS)		Remote Power Button 1x output signal Power Status + 1x input signal System Off		
BATTERY		1x CR2032 Internal access		
O.S. CERTIFIED		Microsoft Windows 10 IoT Enterprise LTSC 2021 64 bit Microsoft Windows 11 IoT Enterprise LTSC 2024 64bit		
OPERATING TEMPERATURE		0°C ÷ 50°C		
STORAGE TEMPERATURE		-20°C ÷ 65°C		
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (at 25°C, non-condensing)		
APPROVALS		CE UKCA cULus Listed Cmim - Morocco KCC - Korea RCM - Australia and New Zealand REACH RoHS		

Note *1: Wi-Fi 6E band (6GHz) is not available.

ARM/VESA MOUNTING IPCS

HIGH PERFORMANCE
EXTENSIVE CONFIGURABILITY
AND EXPANDABILITY
ELEGANT DESIGN
EASE OF INSTALLATION

VK3500 SERIES



- VESA 75/100 or top/bottom arm mounting
- Available in landscape and portrait versions
- Die-cast aluminum chassis, powder-coated with scratch-resistant treatment
- TFT LCDs in 15.6", 18.5", 21.5", and 24" (wide format) for the landscape version (VK3500 and VK3500-BA)
- TFT LCDs in 21.5" and 24" (wide format) for the portrait version (VK3500P-BA)
- Front panels with minimized frame in aluminum (ALU) with resistive touchscreen (landscape version only)
- Front panels with minimized frame in aluminum and glass True Flat (TFM) with projected capacitive multitouch touchscreen
- Full IP65 protection rating
- Available with configurable control area for installation of Ø22 elements with hard-wired cabling (VK3500-BA and VK3500P-BA)
- Celeron® and Core™ processors based on the Kaby Lake generation
- Available with RVL technology for remote transmission of DVI-D and USB 2.0 signals up to 100 m (optional)

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UBIQUITY INSIDE

FT Optix[®] OPTIONAL

RVL  OPTIONAL

 **BUTTON AREA**
PAG. 122

 **ACCESSORI**
PAG. 126



TECHNICAL DATA

		VK3500-BA-ALU	VK3500-BA-TFM	VK3500-ALU	VK3500-TFM	VK3500P-BA-TFM
LED BACKLIGHT TFT LCD		15.6" W - 1366x768 15.6" W - 1920x1080 18.5" W - 1366x768 18.5" W - 1920x1080 21.5" W - 1920x1080 24"W - 1920x1080				21.5" W - 1920x1080 24"W - 1920x1080
ORIENTATION		Landscape				Portrait
TOUCHSCREEN		Resistive 5 wires	P-CAP Multitouch	Resistive 5 wires	P-CAP Multitouch	P-CAP Multitouch
FRONT PANEL	Material	Aluminum	True Flat Aluminum	Aluminum	True Flat Aluminum	True Flat Aluminum
PROTECTION GRADE	IP rating	Full IP65				
	NEMA rating	UL Type 1, 4x (indoor only)		UL Type 1, 4x (indoor only) and 12		UL Type 1, 4x (indoor only)
CASE	Installation	VESA 75/100 or pole/suspension arm mounting system compatible with RITTAL CP40/ROLEC TARAPLUS/HASEKE ULT KUPPLUNG 48				
	Material	Aluminum alloy AN AB46400				
	Color	Anti-scratchable painted - RAL 9006				
	Accessories	Side handles, perimetral handle, keyboard holder kit				
BUTTON AREA (optional)		See dedicated section		-		See dedicated section
PROCESSOR (soldered on-board)		Intel® Celeron™ 3965U 2.20GHz • 64bit • 2 cores / 2 threads • 2MB Smart cache • 14nm Intel® Core™ i3-7100U 2.40GHz • 64bit • 2 cores / 4 threads • 3MB Smart cache • 14nm Intel® Core™ i5-7300U 2.60GHz (3.50GHz Turbo) • 64bit • 2 cores / 4 threads • 3MB Smart cache • 14nm Intel® Core™ i7-7600U 2.80GHz (3.90GHz Turbo) • 64bit • 2 cores / 4 threads • 4MB Smart cache • 14nm				
CHIPSET		Intel® Kaby Lake PCH-LP (Platform Controller Hub - Low Power) • Included into processor chip (SoC)				
VIDEO CONTROLLER		Intel® HD Graphics 610 integrated in Celeron™ 3965U • 300MHz/900MHz Intel® HD Graphics 620 integrated in Core™ i3 processors • 300MHz/1.00GHz Intel® HD Graphics 620 integrated in Core™ i5 processors • 300MHz/1.10GHz Intel® HD Graphics 620 integrated in Core™ i7 processor • 300MHz/1.15GHz DirectX 12 and OpenGL 4.5 support				
WATCHDOG		Programmable time period				
TPM		Intel® PTT (TPM integrated)				
SYSTEM MEMORY RAM		4GB or 8GB or 16GB (1 x SODIMM DDR4 module)				
MASS STORAGE	CFast	1x bootable CFast SATA III slot onboard with external access (up to 240GB)				
	M.2 SSD	1x onboard connector for direct insertion of M.2 2280 NVMe PCIe x2 SSD or M.2 2280 NVMe PCIe x4 SSD (up to 1TB) ¹				
INTERFACES	LAN	3x Gigabit Ethernet (RJ45)				
	USB	3x USB 3.0 (Type-A) • 1x USB 3.0 (Type-A) rear with protection cap				
	VIDEO (optional)	1x DisplayPort++ V1.2 or 1x RJ45 connector for RVL				
ADD-ON INTERFACES (optional)	Position A (max 1)	1 x RS232/422/485 (DB15M) 1 x RS232/422/485 (DB15M) isolated 1 x Gigabit Ethernet (RJ45)				
CONNECTIVITY (optional)		1x Wi-Fi module (IEEE 802.11 a/b/g/n/ac, 2.4GHz/5GHz • Bluetooth 5.1)				
POWER SUPPLY INPUT		24VDC (18÷32VDC) isolated				
POWER SUPPLY (optional)		ATX	Kit for ATX mode power supply (internal cable and push button on button area)			
BATTERY		1x CR2032 Removable front access				
O.S. CERTIFIED		Microsoft Windows 10 IoT Enterprise 2019/2021 64bit				
OPERATING TEMPERATURE		0°C ÷ 50°C				
STORAGE TEMPERATURE		-10°C ÷ 60°C				
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)				
APPROVALS		CE RoHS UKCA cULus Listed				

1. The M.2 NVMe PCIe x4 SSDs show actual performance that differs from the manufacturer's claims, as they are driven via 2 lanes (socket M.2 PCIe x2). Data transfer rates are about half of the declared value (comparable to M.2 NVMe PCIe x2 SSDs).

RACK MOUNTING IPCS

HIGH PERFORMANCE
HIGH CONFIGURABILITY
OUTSTANDING RELIABILITY
VERSATILITY OF USE

PR4XXX SERIES



● Active

★★★★★

★★★★★

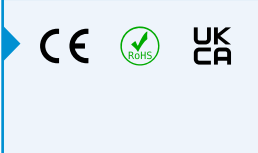
★★★★★



DOWNLOAD
THE DATASHEET

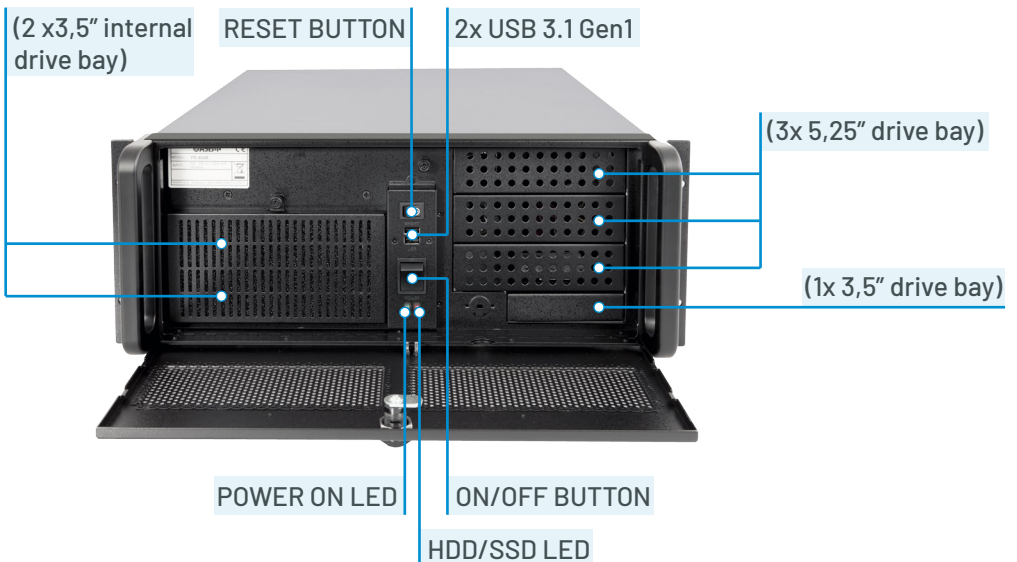

(only for PR4x53)

- Available in long (PR405X) and short (PR415X) versions
- 24/7 operation
- High processing capabilities
- Outstanding reliability
- Versatility of use
- Intel® Core™ i3-8100 quad-core 3.60GHz, Intel® Core™ i5-8400 hexa-core 2.80GHz(4.00GHz Turbo) 64-bit, Intel® Core™ i7-8700 hexa-core 3.20GHz and Intel® Xeon™ E-2176G 3.70GHz processors from the Coffee Lake generation (PR4X50)
- Intel® Core™ i3-9100 quad-core 3.60GHz, Intel® Core™ i5-9400 hexa-core 2.90GHz and Intel® Core™ i7-9700 octa-core 3.00GHz processors from the Coffee Lake generation (PR4X51)
- Intel® Core™ i3-12100E quad-core 3.20GHz, Intel® Core™ i5-12500E hexa-core 2.90GHz, Intel® Core™ i7-12700E dodeca-core 2.10GHz, Intel® Core™ i9-12900E hexadeca-core 2.30GHz processors from the Alder Lake generation (PR4X53)

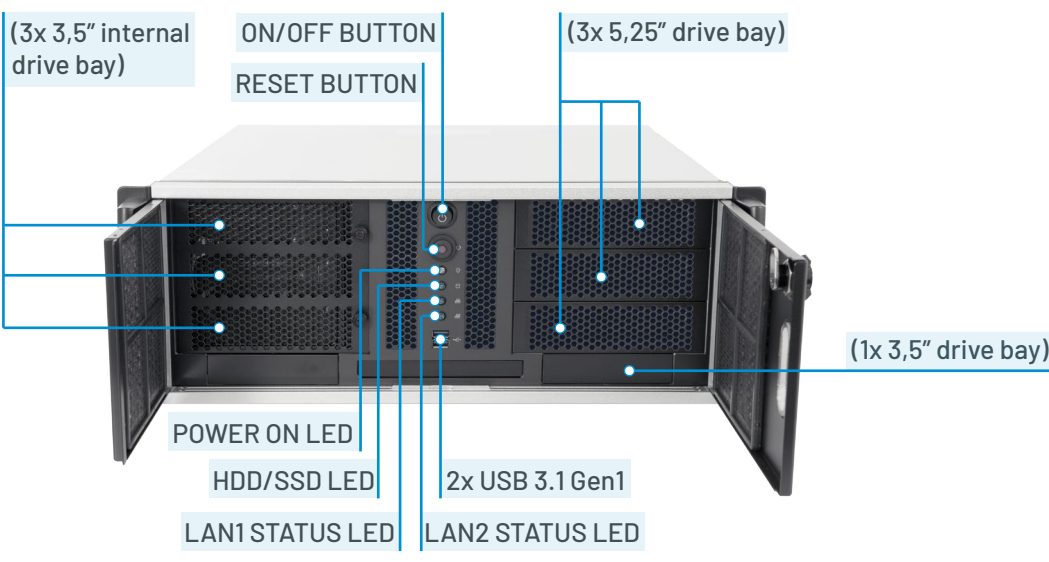


DETAIL – FRONT ACCESS

PR405X - Long version



PR415X - Short version



Front access - PR4X50/51	Front access - PR4X53	Internal access - PR40XX	Internal access - PR41XX
5.25" • DVD • HDD + KH • HDD + BH	5.25" • DVD • HDD + KH • HDD + BH	3.5" • HDD	3.5" • HDD • 2xSSD + KS
5.25" • DVD • HDD + KH • HDD + BH	5.25" • DVD • HDD + KH • HDD + BH	3.5" • HDD	3.5" • HDD • 2xSSD + KS
5.25" • DVD • HDD + KH • HDD + BH	5.25" • DVD • HDD + KH		3.5" • HDD • 2xSSD + KS
3.5" • HDD • 2xSSD + KS • 2xSSD + BS	3.5" • DVD • 2xSSD + KS • 2xSSD + BS		

• DVD: DVD-RW SATA optical drive
• HDD: 3,5" SATA HDD
• KH: 1x3,5" HDD on 5,25" drive bay installation kit
• BH: Extractable drawer for 1x3,5" HDD on 5,25" drive bay

• SSD: 2,5" SATA SSD
• KS: 2x2,5" SSD on 3,5" drive bay installation kit
• BS: Extractable drawers for 2x2,5" SSD on 3,5" drive bay

PR4XXX SERIES

TECHNICAL DATA

	PR4050	PR4150	PR4051	PR4151	PR4053	PR4153	
CASE		Cabinet rackmount 19" 4U					
	ASEM Logo	Adhesive label					
	Material	Electro galva-nized Steel	Hot dip galva-nized Steel	Electro galvani-zed Steel	Hot dip galva-nized Steel	Electro galvanized Steel	Hot dip galvani-zed Steel
CABINET FORMAT		Long	Short	Long	Short	Long	Short
MOTHERBOARD		ATX format, D3646-S (Fujitsu)				ATX Kontron K3851-R iR680E	
PROCESSOR (soldered on-board)		Intel® Core™ i3-8100 3.60GHz 64bit • 4 cores / 4 threads • 6MB Smart cache • 14nm • Socket LGA1151 Intel® Core™ i5-8400 2.80GHz (4.00GHz Turbo) 64bit • 6 cores / 6 threads • 9MB Smart cache • 14nm • Socket LGA1151 Intel® Core™ i7-8700 3.20GHz (4.60GHz Turbo) 64bit • 6 cores / 12 threads • 12MB Smart cache • 14nm • Socket LGA1151 Intel® Xeon™ E-2176G 3.70GHz (4.70GHz Turbo) 64bit • 6 cores / 12 threads • 12MB Smart cache • 14nm • Socket LGA1151		Intel® Core™ i3-9100E 3.10GHz (3.70GHz Turbo) 64bit • 4 cores / 4 threads • 6MB Smart cache • 14nm • Socket LGA1151 Intel® Core™ i5-9400E 3.00GHz (4.20GHz Turbo) 64bit • 6 cores / 6 threads • 9MB Smart cache • 14nm • Socket LGA1151 Intel® Core™ i7-9700E 2.60GHz (4.40GHz Turbo) 64bit • 8 cores / 8 threads • 12MB Smart cache • 14nm • Socket LGA1151		Intel® Core™ i3-12100E 3.20GHz (4.20GHz Turbo) 64bit • 4 cores / 8 threads • 12MB Smart cache • 10nm • Socket FCLGA1700 Intel® Core™ i5-12500E 2.90GHz (4.50GHz Turbo) 64bit • 6 cores / 12 threads • 18MB Smart cache • 10nm • Socket FCLGA1700 Intel® Core™ i7-12700E 2.10GHz (4.80GHz Turbo) 64bit • 12 cores / 20 threads • 25MB Smart cache • 10nm • Socket FCLGA1700 Intel® Core™ i9-12900E 2.30GHz (5.00GHz Turbo) 64bit • 16 cores / 24 threads • 30MB Smart cache • 10nm • Socket FCLGA1700	
CHIPSET		Intel® C246 Express Chipset with integrated RAID controller				Intel® R680E Chipset with integrated RAID controller	
VIDEO CONTROLLER		Intel® UHD Graphics 630 integrated Intel® Core™ i3 processor • 350MHz/1.10GHz Intel® UHD Graphics 630 integrated Intel® Core™ i5 processor • 350MHz/1.05GHz Intel® UHD Graphics 630 integrated Intel® Core™ i7 processor • 350MHz/1.20GHz Intel® UHD Graphics P630 integrated Intel® Xeon™ processor • 350MHz/1.20GHz Multi Display supported (up to 3)		Intel® UHD Graphics 630 integrated Intel® Core™ i3 processor • 350MHz/1.10GHz Intel® UHD Graphics 630 integrated Intel® Core™ i5 processor • 350MHz/1.05GHz Intel® UHD Graphics 630 integrated Intel® Core™ i3 processor • 350MHz/1.20GHz Multi Display supported (up to 3)		Intel® UHD Graphics 730 integrated Intel® Core™ i3 processor • 300MHz/1.40GHz Intel® UHD Graphics 770 integrated Intel® Core™ i5 processor • 300MHz/1.45GHz Intel® UHD Graphics 770 integrated Intel® Core™ i7 processor • 300MHz/1.50GHz Intel® UHD Graphics 770 integrated Intel® Core™ i9 processor • 300MHz/1.55GHz Multi Display supported (up to 4)	
GRAPHICS LIBRARY		DirextX 12 • OpenGL 4.5 supported				DirextX 12 • OpenGL 4.5 • OpenCL 2.1 supported	
AUDIO		Realtek® ALC671 5.1-channel High Definition Audio CODEC				Tempo Semiconductor 92HD91B • 5.1-channel High Definition Audio CODEC	
ETHERNET CONTROLLER		Intel® I210AT and Intel® I219LM with support of Intel® AMT 11, WoL and Magic Packet™				Intel® I225LM and Intel® I219LM with support of Intel® iAMT, WoL and Magic Packet™	
TPM		Discrete TPM 2.0 module (optional)					
SYSTEM MEMORY RAM		4GB (1x 4GB SODIMM DDR4 module) 8GB (2x 4GB SODIMM DDR4 module) 16GB (2x 8GB SODIMM DDR4 module) 32GB (2x 16GB SODIMM DDR4 module) 64GB (4x 16GB SODIMM DDR4 module)				8GB (2x 4GB SODIMM DDR5 module) 16GB (2x 8GB SODIMM DDR5 module) 32GB (2x 16GB SODIMM DDR5 module) 64GB (4x 16GB SODIMM DDR5 module) 128GB (4x 32GB SODIMM DDR5 module)	
MASS STORAGE	M.2 SSD	1x onboard connector for direct insertion of M.2 2280 NVMe PCIe SSD (up to 1TB)				2x onboard connector for direct insertion of M.2 2280 NVMe PCIe SSD (up to 2TB)	
	SSD/HDD	6x SATA 6Gb/s ports for SSD 2,5"/HDD 3,5" SATA III				4x SATA 6Gb/s ports for SSD 2,5"/HDD 3,5" SATA III	
RAID		RAID 0, 1, 5, 10 ¹					
DRIVE BAY	External	3x 5,25" (h=1,65") 1x 3,5" (H=1,00")					
	Internal	2x 3,5" (H=1,00")	3x 3,5" (H=1,00")	2x 3,5" (H=1,00")	3x 3,5" (H=1,00")	2x 3,5" (H=1,00")	3x 3,5" (H=1,00")

TECHNICAL DATA

	PR4050	PR4150	PR4051	PR4151	PR4053	PR4153
INTERFACES	LAN	2x Gigabit Ethernet (RJ45)			1x Gigabit Ethernet (RJ45) 2x 2.5 Gigabit Ethernet (RJ45)	
	USB	2x USB 3.1 Gen2 (Type-A) • 2x USB 3.1 Gen1 (Type-A) • 4x USB 2.0 (Type-A) 2x USB 3.1 Gen1 (Type-A) front access 1x USB 3.1 Gen2 Stick (Type-A) internal			2x USB 3.2 Gen2 (Type-A) • 4x USB 3.2 Gen1 (Type-A) • 1x USB 3.2 Gen2 (Type-C) 2x USB 3.2 Gen1 (Type-A) front access 1x USB 2.0 Stick (Type-A) internal 1x USB 3.2 Gen2 Stick (Type-A) internal	
	SERIAL	1x RS232 (DB9M) 3x RS232 internal connector				
	PERIPHERAL DEVICES	1x PS/2 Keyboard port (purple) • 1x PS/2 mouse port (green)			-	-
	VIDEO	1x DVI-D • 2x DisplayPort V1.2			4x DisplayPort V1.4a	
	AUDIO	1x Line In • 1x Line Out • 1x Microphone				
INTERFACES w/ SLOT BRACKET		-			-	
EXPANSION SLOTS		2x PCI full size (32 bit, 33MHz, Rev 2.3) 1x PCIe x16 (16 Lanes, Gen3) • 1x PCIe x16 (4 Lanes, Gen3) 2x PCIe x8 (1 Lane, Gen3) 1x PCIe x1 (Gen3)			1x PCIe x16 (16 lanes, Gen5) • 1x PCIe x16 (4 lanes, Gen4) 1x PCIe x8 (4 lanes, Gen4 “open slot”) • 1x PCIe x8 (4 lanes, Gen3 “closed slot”) 2x PCIe x1 (Gen3 “open slots”) 1x PCI full size (32 bit, 33MHz, Rev 2.3)	
POWER SUPPLY		Inpute voltage 110/230VAC • 400W or 650W, auto-ranging Inpute voltage 110/230VAC • 2x 500W, autoranging, redundant	Inpute voltage 110/230VAC • 400W or 650W, auto-ranging	Inpute voltage 110/230VAC • 400W or 650W, auto-ranging	nput voltage 110/230VAC • 400W or 650W, autoran-ging Input voltage 110/230VAC • 2x 500W, autoranging, redundant	Input voltage 110/230VAC • 400W or 650W, autoranging
O.S. CERTIFIED		Microsoft Windows 10 IoT Enterprise 2019/2021 64 bit Windows Server Embedded Standard 2019 R2 64 bit			Microsoft Windows 11 IoT Enterprise LTSC 2024 64bit	
SPECIAL FEATURES		24/7 operation				
OPERATING TEMPERATURE		0°- 40°C with 24x7 HDD 5°- 40°C with standard HDD				
STORAGE TEMPERATURE		-10°C ÷ 60°				
OPERATING/STORAGE RELATIVE HUMIDITY		20 ÷ 90% RH (non-condensing)				
APPROVALS		CE RoHS UKCA				

1. For RAID 0, 1 configurations at least 2x HDDs 3,5" or 2x SSDs 2,5" are required.
For RAID 5 configuration a minimum of 3x HDDs 3,5" (no SSDs) are required.
For RAID 10 configuration, 4x HDDs 3,5" (no SSDs) are required.

INDUSTRIAL MONITORS

ROBUSTNESS
OUTSTANDING RELIABILITY
INTEGRATED RVL TECHNOLOGY



COMPARISON TABLE

				
		MK200	MX200	MQ200 & MH200
FRONT PANELS	Wide sizes	15,6", 18,5", 21,5" and 24"	18,5"	12,1", 15,6", 18,5", 21,5" and 24"
	Narrow sizes	-	-	12,1", 15", 17", 19"
	Types	ALU	TFK	ALU, TF, TFM, TFK
	Touchscreen technology	Multitouch	Resistive	Resistive Multitouch
PROTECTION GRADE		Up to Full IP65	Up to Full IP69K	Up to Full IP69K
CASE MATERIAL		Aluminum alloy AN AB46400	Stainless Steel AISI 304L	Zinc-coated skin pass steel
INSTALLATION		VESA 75/100 or pole/suspension arm mounting	Top/bottom arm mounting with customized flange	Panel mounting
ACCESSORIES (optional)		Side handles Perimetral handle Keyboard holder kit	-	-
BUTTON AREA (optional)		✓	✓	✗
POWER SUPPLY INPUT		24VDC	24VDC	24VDC 110V/230VAC
CERTIFICATIONS		   	   	    

* only for QT-TFM

MQ200 & MH200



- TFT LCDs in 12.1" and 15" (4:3 format), 17" and 19" (5:4 format), and 12.1", 15.6", 18.5", 21.5", and 24" (wide format)
- Front panels in aluminum (ALU) and True Flat aluminum (TF) with resistive touchscreen
- Front panels in aluminum and glass True Flat with projected capacitive multitouch touchscreen (TFM)
- Front panels in stainless steel (TFK) with resistive touchscreen
Front protection rating IP65
- Video input: 1x DVI-D and 1x DisplayPort
- ATEX certification for QT-TFM versions (optional)
- Available in the RVL version (MQR200 & MHR200) for remote transmission of DVI-D and USB 2.0 signals up to 100 m
- Available in the 110/230VAC power supply version

DOWNLOAD THE DATASHEET

REMOTE VIDEO LINK

COMPATIBLE with Smart UPS



*only TFM frontal

TECHNICAL DATA

		MQ200-ALU	MQ200-TFK	MQ200-TFM	MH200-ALU	MH200-TF
LED backlight TFT LCD		12.1" W - 1280x800 15.6" W - 1366x768 15.6" W - 1920x1080 18.5" W - 1366x768 18.5" W - 1920x1080 21.5" W - 1920x1080 24" W - 1920x1080			12.1" - 800x600 12.1" - 1024x768 15" - 1024x768 17" - 1280x1024 19" - 1280x1024	
CUT-OUT		QT			HT	
TOUCHSCREEN		Resistive 5 wires		P-CAP Multitouch	Resistive 5 wires	
FRONT PANEL		Aluminum	True Flat Stainless Steel	True Flat Aluminum	Aluminum	True Flat Aluminum
FRONT USB		-			1x USB 2.0 (Type-A), protected	
PROTECTION GRADE	IP rating	IP65 - frontal	IP69K - frontal	IP65 - frontal		
	NEMA rating	UL Type 1, 4x (indoor only)	UL Type 1, 4x (indoor only) and 12	UL Type 1, 4x (indoor only)	UL Type 1, 4x (indoor only) and 12	
CASE	Installation	Panel mounting				
	Material	Zinc-coated skin pass steel				
VIDEO INPUT	MQ/MH	1x DisplayPort 1x DVI-D				
	MQR/MHR	1x RJ45 connector for remotation of DVI-D1				
USB INPUT	MQ/MH	1x USB 2.0 HUB input (Type-B)				
	MQR/MHR	1x RJ45 connector for remotation of USB 2.01				
USB OUTPUT		3x USB 2.0 (Type-A)				
	Optional	1x USB 2.0 (Type-A)				
POWER SUPPLY INPUT		24VDC (18÷32VDC) isolated				
		110V/230VAC (90÷264VAC) isolated, autoranging				
OPERATING TEMPERATURE		0° ÷ +50°C				
STORAGE TEMPERATURE		-5° ÷ +60°C				
OPERATION/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)				
APPROVALS		CE RoHS UKCA cULus Listed		CE RoHS UKCA cULus Listed ATEX zone 2/22	CE RoHS UKCA cULus Listed	

1. The same RJ45 connector is used for remotation of DVI-D and USB 2.0 signals

MK200 SERIES



- VESA 75/100 o top/bottom arm mounting
- Disponibile in versione landscape e portrait
- Chassis in alluminio pressofuso verniciato a polvere con trattamento antigraffio
- LCD TFT da 15.6", 18.5", 21.5" e 24" in formato Wide per la versione landscape (MK200 e MK200-BA)
- LCD TFT da 21,5" e 24" in formato Wide per la versione portrait (MK200P-BA)
- Pannelli frontali dal frame minimizzato in alluminio (ALU) con touchscreen resistivo (solo in versione landscape)
- Pannelli frontali dal frame minimizzato in alluminio e vetro True Flat (TFM) con touchscreen capacitivo retroproiettato multitouch
- Grado di protezione full IP65
- Input video: 1x DVI-D e 1x DisplayPort
- Disponibili con area comandi configurabile per l'installazione di elementi Ø22 con cablaggio hard-wired (MK200-BA e MK200P-BA)
- Disponibile nella versione RVL (versioni MKR) per la remotazione dei segnali DVI-D e USB 2.0 fino a 100m

DOWNLOAD THE DATASHEET

RVL **OPTIONAL**

BUTTON AREA
PAG. 122

ACCESSORI
PAG. 126

COMPATIBLE
with Smart UPS

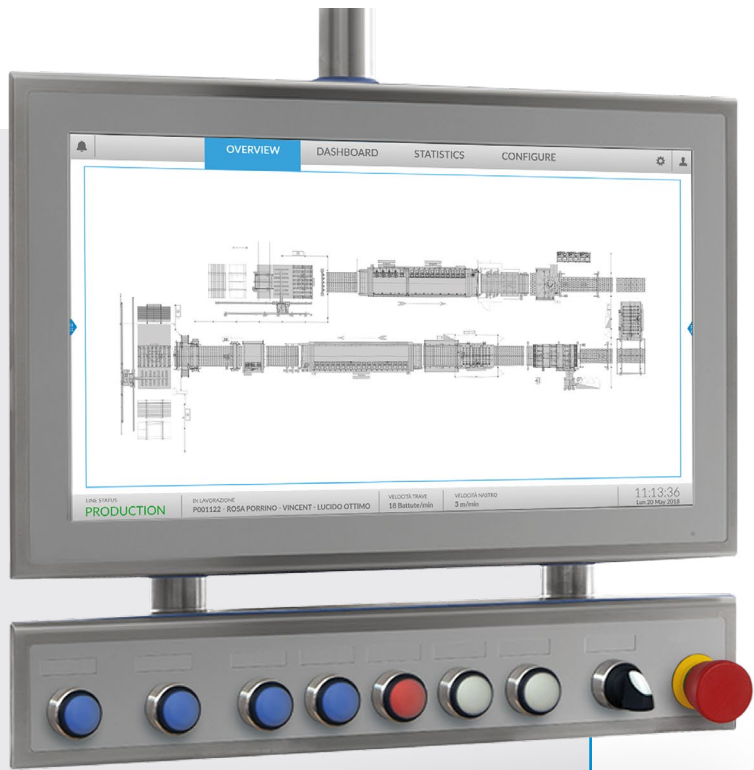
LISTED

TECHNICAL DATA

	MK200-BA-ALU	MK200-BA-TFM	MK200-ALU	MK200-TFM	MK200P-BA-TFM
LED BACKLIGHT TFT LCD	15.6" W - 1366x768 15.6" W - 1920x1080 18.5" W - 1366x768 18.5" W - 1920x1080 21.5" W - 1920x1080 24" W - 1920x1080				21.5" W - 1920x1080 24" W - 1920x1080
ORIENTATION	Landscape				
TOUCHSCREEN	Resistive 5 wires	P-CAP multitouch	Resistive 5 wires	P-CAP multitouch	P-CAP multitouch
FRONT PANEL	Aluminum	True Flat Aluminum	Aluminum	True Flat Aluminum	True Flat Aluminum
PROTECTION GRADE	IP rating	Full IP65			
	NEMA rating	UL Type 1, 4x (indoor only)		UL Type 1, 4x (indoor only) and 12 UL Type 1, 4x (indoor only)	
CASE	Installation	VESA 75/100 or pole/suspension arm mounting system compatible with RITTAL CP40/ROLEC TARAPLUS/HASEKE ULT KUPPLUNG 48			
	Material	Aluminum alloy AN AB46400			
	Colour	Anti-scratchable painted - RAL 9006			
	Accessories	Side handles, perimetral handle, keyboard holder kit			
BUTTON AREA (optional)	See dedicated section		-		See dedicated section
VIDEO INPUT	1x DisplayPort 1x DVI-D				
	Remote version MKR	1x RJ45 connector for remotation of DVI-D1			
USB INPUT	1x USB 2.0 HUB input (Type-B)				
	Remote version MKR	1x RJ45 connector for remotation of USB 2.01			
USB OUTPUT	3x USB 2.0 (Type-A)				
	Rear access	1x USB 2.0 (Type-A) with protection cap			
POWER SUPPLY INPUT	24VDC (18÷32VDC) isolated				
OPERATING TEMPERATURE	0° ÷ +50°C				
STORAGE TEMPERATURE	-5° ÷ +60°C				
OPERATION/STORAGE RELATIVE HUMIDITY	20% ÷ 90% RH (non-condensing)				
APPROVALS	CE RoHS UKCA cULus Listed				

1. The same RJ45 connector is used for remotation of DVI-D and USB 2.0 signals

MX200



DOWNLOAD THE DATASHEET

● Active

- Monitorsspecificallydesignedforapplicationsinthefoodandpharmaceutical/chemical industries
- Stainless steel chassis (AISI 304L) with inclined surfaces to prevent dust accumulation
- Hygienic stainless steel screws (AISI 304L) with under-head sealing gaskets
- Fully washable blue silicone gaskets
- 18.5" widescreen TFT LCD
- Resolution up to Full HD
- Front panels in True Flat stainless steel(AISI 304L)with resistive or capacitive touchscreen
- Top/bottom arm mounting
- Protection rating up to full IP69K
- Video input: 1x DVI-D and 1x DisplayPort
- Available in the RVL version (MXR200) for remote transmission of DVI-D and USB 2.0 signals up to 100 m
- Available with configurable control area for the installation of hard-wired elements: Ø22 washable silicone, or Ø30 low-profile stainless steel

REMOTE VIDEO LINK



STAINLESS STEEL



IP69K
food and beverage industry compliant



BUTTON AREA
PAG. 124



COMPATIBLE with Smart UPS



IMAGE GALLERY



TECHNICAL DATA

	MX200-TFK	MX200-TFMK	MX200-BA-TFK	MX200-BA-TFMK
LED BACKLIGHT TFT LCD	18.5" W - 1366x768 18.5" W - 1920x1080			
TOUCHSCREEN	Resistive 5 Wires	P-CAP Multitouch	Resistive 5 Wires	P-CAP Multitouch
FRONT PANEL	True Flat Stainless Steel			
PROTECTION GRADE	Full IP69K		Full IP65	
BUTTON AREA	-		See dedicated section	
CASE	Installation	6x M5 screws + gasket + technical drawing to build your own fixing flange (included) or Top/bottom arm mounting with customized flange for Ø48mm tubes (optional)		
	Material	Stainless Steel AISI 304L		
VIDEO INPUT		1x DisplayPort 1x DVI-D		
	Remote version MXR	1x RJ45 connector for remotation of DVI-D ¹		
USB INPUT		1x USB 2.0 HUB input (Type-B)		
	Remote version MXR	1x RJ45 connector for remotation of USB 2.0 ¹		
USB OUTPUT		3x USB 2.0 (Type-A)		
	Optional	2x USB 2.0 (Type-A) rear access with protection cap		
POWER SUPPLY INPUT	24VDC (18÷32VDC) isolated			
OPERATING TEMPERATURE	0° ÷ +50°C			
STORAGE TEMPERATURE	-5° ÷ +60°C			
OPERATION/STORAGE RELATIVE HUMIDITY	20% ÷ 90% RH (non-condensing)			
APPROVALS	CE RoHS UKCA cULus Listed			

1. The same RJ45 connector is used for remotation of DVI-D and USB 2.0 signals

OPERATOR PANELS

VISUALIZATION
HMI
FLEXIBILITY



OptixPanel™ Standard



- Integrated solutions based on FactoryTalk® Optix™, the new collaborative, cloud-based software platform that delivers an unprecedented level of flexibility, scalability, expandability, and openness for visualization and Edge Computing applications
- Complete industrial interoperability for M2M scenarios and integration with MES and ERP systems, thanks to native support for the OPC UA protocol, and simple bidirectional communication with Cloud infrastructures via the MQTT protocol
- Front design in aluminum and True Flat aluminum with resistive touchscreen
- Front design in glass with projected capacitive multitouch touchscreen
- Front design in stainless steel with resistive touchscreen
- Available with TFT LCDs in 10.4", 12.1", and 15" (4:3 format) and in 7", 10.1", 12.1", 15.6", 18.5", and 21.5" (wide format)
- Natively equipped with two Gigabit Ethernet ports, two USB 3.0 ports, and one multi-standard serial port
- Integrated FactoryTalk® Remote Access™ software for remote assistance (compatible with UBIQUITY license)

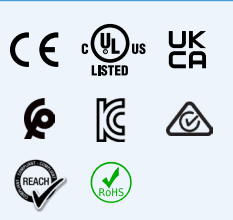
DOWNLOAD THE DATASHEET

Optix™ INSIDE

Remote Access™ INSIDE

IP69K (only SR frontal)

OPC UA
MQTT



TECHNICAL DATA

OptixPanel™ Standard				
HMI SOFTWARE	FactoryTalk® Optix™ runtime - M license (Upgradeable to L)			
REMOTE ASSISTANCE SW	FactoryTalk® Remote Access™ PRO (UBIQUITY compatible)			
O.S. INSTALLED	Linux Yocto			
LED BACKLIGHT TFT LCD	7" W - 800x480 10,1" W - 1280x800 12,1" W - 1280x800 15,6" W- 1920x1080 18,5" W - 1920x1080 21,5" W - 1920x1080	10,4" 4:3 - 800x600 12,1" 4:3 - 1024x768 15" 4:3 - 1024x768	7" W - 800x480 10,1" W - 1280x800 12,1" W - 1280x800 15,6" W- 1920x1080 18,5" W - 1920x1080 21,5" W - 1920x1080	10,1" W - 1280x800 12,1" W - 1280x800 15,6" W- 1920x1080 18,5" W - 1920x1080 21,5" W - 1920x1080
CUT-OUT	QT	A/B	QT	QT
TOUCHSCREEN	Resistive 5 wires		P-CAP Multitouch	Resistive 5 wires
BEZEL DESIGN	Aluminum frame (AF)	Aluminum TrueFlat (AT)	Glass (GL)	Stainless Steel (SR)
	Logo	AB or brandless		
PROTECTION GRADE IP	IP rating	IP65 - frontal		IP69K - frontal
	NEMA rating	UL type 1, 4x (indoor only)		UL Type 1, 4x (indoor only), 12
CASE	Installation	Panel mounting		
	Material	Zinc-coated skin pass steel		
PROCESSOR (soldered on-board)	NXP® i.MX 8M Plus Quad ARM® Cortex® A53 1.6GHz • 64bit • integrated GPU			
SYSTEM MEMORY RAM	4GB			
MASS STORAGE	~12GB available for customer's application (eMMC in pSLC mode)			
STORAGE EXPANSION	1x MicroSD slot on board with external access (push-push)			
INTERFACES	LAN	2x Gigabit Ethernet (RJ45)		
	USB	2x USB 3.0 (Type-A / host)		
	SERIAL	1x RS232/422/485 (DB9M) isolated		
POWER SUPPLY INPUT	24VDC (18 ÷ 32VDC) isolated			
BATTERY	1x CR2032 Internal access			
OPERATING TEMPERATURE	0° ÷ 50°C			
STORAGE TEMPERATURE	-20° ÷ 60°C			
OPERATING/STORAGE RELATIVE HUMIDITY	20% ÷ 90% RH (non-condensing)			
APPROVALS	REACH, RoHS, WEEE, CE, cULus Listed, UKCA, ATEX, KC, RCM, MOROCCO, ODVA			

OptixPanel™ Compact



DOWNLOAD THE DATASHEET

● Active

- Integrated solutions based on FactoryTalk® Optix™, the new collaborative, cloud-based software platform that delivers an unprecedented level of flexibility, scalability, expandability, and openness for visualization and Edge Computing applications
- Complete industrial interoperability for M2M scenarios and integration with MES and ERP systems, thanks to native support for the OPC UA protocol, and simple bidirectional communication with Cloud infrastructures via the MQTT protocol
- Front design in aluminum with resistive touchscreen
- Front design in glass with projected capacitive multitouch touchscreen
- Available with TFT LCDs in 4.3" and 7" (wide format)
- Natively equipped with one Gigabit Ethernet port, one USB 2.0 port, and one multi-standard serial port
- Integrated FactoryTalk® Remote Access™ software for remote assistance (compatible with UBIQUITY license)
- Introduction of Series B, featuring an updated hardware platform, backward compatible and intended to replace the current Series A

FT Optix™ INSIDE

FT Remote Access™ INSIDE

OPC UA

MQTT



TECHNICAL DATA – SERIES A

OptixPanel™ Compact - Ser.A		
HMI SOFTWARE	FactoryTalk® Optix™ runtime - S license (Upgradeable to M)	
REMOTE ASSISTANCE SW	FactoryTalk® Remote Access™ Basic (UBIQUITY compatible) (Upgradeable to Pro)	
O.S. INSTALLED	Linux Yocto	
LED BACKLIGHT TFT LCD	4.3" W - 480x272 7" W - 800x480	
CUT-OUT	QT	
TOUCHSCREEN	Resistive 4 wires	P-CAP Multitouch
BEZEL DESIGN	Aluminum frame (AF)	Glass (GL)
PROTECTION GRADE IP	Logo	AB or brandless
	IP rating	IP65 - frontal
	NEMA rating	UL type 1, 4x (indoor only)
CASE	Installation	Panel mounting
	Material	Zinc-coated skin pass steel
PROCESSOR (soldered on-board)	NXP® i.MX 8M Mini Quad ARM® Cortex® A53 1.6GHz • 64bit • integrated GPU	
SYSTEM MEMORY RAM	1GB	
MASS STORAGE	~2,5GB available for customer's application (eMMC in pSLC mode)	
INTERFACES	LAN	1x Gigabit Ethernet (RJ45)
	USB	1x USB 2.0 (Type-A / host)
	SERIAL	1x RS232/422/485 (DB9M) not isolated
POWER SUPPLY INPUT	24VDC (18 ÷ 32VDC) isolated	
BATTERY	1x BR1225A Internal access	
OPERATING TEMPERATURE	0° ÷ 50°C	
STORAGE TEMPERATURE	-20° ÷ 60°C	
OPERATING/STORAGE RELATIVE HUMIDITY	20% ÷ 90% RH (non-condensing)	
APPROVALS	REACH, RoHS, WEEE, CE, cULus Listed, UKCA, KC, RCM, MOROCCO, ODVA	

AVAILABLE SOON

The introduction of a new OptixPanel Compact Series B is planned, which will replace the current Series A. The table below summarizes the main changes and new features introduced with Series B, highlighting only the differences compared to Series A.

TECHNICAL DATA – SERIES B

OptixPanel™ Compact - Ser.B		
LED backlight TFT LCD	4.3" W - 800x480 7" W - 800x480	
PROTECTION GRADE IP	IP rating	IP66 - frontal
	NEMA rating	UL type 1, 4x (indoor only)
STORAGE EXPANSION	1x microSD (µSD) slot on board with external access (push-push)	
BATTERY	1x CR2032 external access	
APPROVALS	CE, cULus Listed, UL HazLoc C1D2, UKCA, KC, RCM, MOROCCO, ODVA	

Series B will progressively replace Series A and will become the standard production version.

LP80



- HMI + PLC integrated solutions in a single device, ideal for compact and simplified architectures
- Integrated CODESYS SoftPLC software for SoftPLC applications and μ UPS + 512 kB MRAM for the secure management of retentive variables
- Optional FactoryTalk® Optix™ software ensures complete industrial interoperability for M2M scenarios and integration with MES and ERP systems, thanks to native support for the OPC UA protocol and simple bidirectional communication with Cloud infrastructures via the MQTT protocol
- Front design in aluminum with resistive touchscreen
- Front design in glass with projected capacitive multitouch touchscreen
- Available with TFT LCDs in 7", 10.1", 12.1", and 15.6" (wide format)
- Natively equipped with two Gigabit Ethernet ports, two USB 3.0 ports, and one multi-standard serial port
- Integrated FactoryTalk® Remote Access™ software for remote assistance (compatible with UBIQUITY license)
- Flexible visualization with a choice between FactoryTalk® Optix™ and CODESYS TargetVisu/WebVisu
- Optional CODESYS Motion software for motion control applications directly on the panel

DOWNLOAD THE DATASHEET

FT Optix™ INSIDE

FT Remote Access™ INSIDE

CODESYS

OPC UA

MQTT



TECHNICAL DATA

LP80		
HMI SOFTWARE	FactoryTalk® Optix™ runtime - S license (Upgradeable to M)	
	Runtime	SoftPLC Codesys Control
	Supported protocols	EtherCAT Master, Modbus TCP Master/Slave, Modbus Serial Master/Slave, Profinet Controller, Ethernet/IP Scanner
CONTROL SOFTWARE	Motion: Codesys SoftMotion Visualization: Codesys TargetVisu and Codesys WebVisu	
	Additional components	
REMOTE ASSISTANCE SOFTWARE		FactoryTalk® Remote Access™ Pro (UBIQUITY compatible)
O.S. INSTALLED		Linux Yocto
LED backlight TFT LCD		7" W - 800x480 10,1" W - 1280x800 12,1" W - 1280x800 15,6" W - 1920x1080
CUT-OUT		QT
TOUCHSCREEN	Resistive 5 wires	
	P-CAP Multitouch	
BEZEL DESIGN	Material	Aluminum frame (AF)
	Logo	Brandless
	Colour	Black anodized
PROTECTION GRADE IP	IP rating	IP65 - frontal
	NEMA rating	UL TYPE 1, 4x (indoor only)
CASE	Installation	Panel mounting
	Material	Zinc-coated skin pass steel
	IP rating	IP20
PROCESSOR (soldered on-board)		NXP® i.MX 8M Plus Quad ARM® Cortex® A53 1.6GHz • 64bit • integrated GPU
SYSTEM MEMORY RAM		4GB
RETENTIVE MEMORY		512kB Magnetoresistive RAM
MASS STORAGE		~12GB available for customer's application (eMMC in pSLC mode)
STORAGE EXPANSION		1x MicroSD slot on board with external access (push-push)
INTERFACES	LAN	2x Gigabit Ethernet (RJ45)
	USB	2x USB 3.0 (Type-A / host)
	SERIAL	1x RS232/422/485 (DB9M) isolated
POWER SUPPLY INPUT	24VDC 1.5A SELV (18 ÷ 32VDC) isolated	
	MicroUPS based on supercapacitors for automatic storage of retentive variables	
BATTERY		1x CR2032 with external access
OPERATING TEMPERATURE		0° ÷ 50°C
STORAGE TEMPERATURE		-20° ÷ 60°C
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)
APPROVALS		CE, cULus Listed, UKCA, ODVA

ROUTER & GATEWAYS

DATA COLLECTION
CONNECTIVITY
OPTIMIZATION
COMMUNICATION

OptixEdge

● Active



DOWNLOAD THE DATASHEET

FT Optix[®] INSIDE

FT Remote Access[®] INSIDE

Optix Wizard

DOCKER CONTAINER

DESIGN FOR SECURITY







- Industrial IoT gateway equipped with an NXP® i.MX 8M Plus processor
- Collects, analyzes, and sends data to the cloud via FactoryTalk® Optix™
- Provides remote support via FactoryTalk® Remote Access™, with integrated digital I/Os for added security
- The OptixEdge Application Wizard enables quick IIoT application setup, including configuration of data sources and destinations, rapid dashboard creation using available widgets, and more
- Extends the capabilities of FactoryTalk® Optix™ and FactoryTalk® Remote Access™ by hosting Docker containers

TECHNICAL DATA

OptixEdge STANDARD		
HMI SW	FactoryTalk® Optix™ XS size (5 tokens)	FactoryTalk® Optix™ S size (8 tokens)
REMOTE ASSISTANCE SW	FactoryTalk® Remote Access™ Pro (UBIQUITY compatible)	
OTHER SW	3rd party Networking	Docker containers support NAT, NAT1:1, Routing, Internet Sharing *
O.S. INSTALLED	Linux Yocto	
PROTECTION GRADE IP	IP rating	IP20
	NEMA rating	UL TYPE 1 (indoor only)
CASE	Installation	DIN rail / Book mounting
	Material	Aluminum
PROCESSOR	i.MX 8M Plus	
SYSTEM MEMORY RAM	4GB	
MASS STORAGE	~12GB available for customer's application (eMMC in pSLC mode)	
STORAGE EXPANSION	1x MicroSD slot on board with external access (push-push)	
INTERFACES	Lan	2x Gigabit Ethernet (RJ45)
	USB	1x USB 3.0 (Type-A / host)
	Serial	1x RS232/422/485 (DB9M) isolated
DIGITAL INPUTS	In 0	enable FTRA Network connection
	In 1	restart Device
	Type	18÷32V - optoisolated (500V)
DIGITAL OUTPUTS	Out 0	feedback on FTRA Network connection
	Out 1	feedback on active FTRA remote connection
	Type	Solid state relay - optoisolated (500V) max 200mA - 24VDC - N.O.
POWER SUPPLY INPUT	24VDC (18 ÷ 32VDC) SELV isolated	
CURRENT CONSUMPTION	0.5A max at 24VDC	
RTC BACKUP	Supercapacitor	
OPERATING TEMPERATURE	0° ÷ 50°C	
STORAGE TEMPERATURE	-20° ÷ 60°C	
OPERATING/STORAGE RELATIVE HUMIDITY	20% ÷ 90% RH (non-condensing)	
VIBRATION	Frequency range	10,00 Hz to 500,00 Hz
	Sweep rate	1 octave / min
	Number of sweep cycles	5 / axis (56'27")
	Displacement	0,3048 mm p-p (10,00 Hz to 57 Hz)
	Acceleration	0-p: 2,0 g (57 Hz to 500,00 Hz)
SHOCK	Operating	15 g (acceleration) at 11 ms (duration)
	Non operating	30 g (acceleration) at 11 ms (duration)
APPROVALS	REACH, RoHS, WEEE CE (EMC), cULus Listed, KC, UKCA, RCM, MOROCCO, ODVA	

* Available via future firmware update

Industrial PCs and scalable solutions for HMI, IIoT and Industry 5.0 applications / 05.2026

RK2X SERIES



- Ensures remote support and remote access on any automation device where the software application (UBIQUITY runtime) cannot be installed or on machines and plants without an internet connection
- Reliability, speed, and low latency ensured by end-to-end connection
- Systems are based on ARM processors and feature two Gigabit Ethernet ports (one LAN and one WAN), one USB 2.0 interface, and one multi-standard serial port
- RK21 and RK22 systems available with Wi-Fi module and 4G LTE modem for maximum wireless connectivity
- RK22 available with integrated four-port Gigabit Ethernet switch
- Available with two 24VDC digital inputs for enabling remote access and device reset, and two low-voltage relay outputs for useful operational signaling
- Robust and elegant chassis for book-style or DIN rail mounting
- Available with extended operating temperature range for installation in harsh environments

UBIQUITY INSIDE

RED CYBER CERTIFICATION

CEULUS LISTEDUKCA

RoHS

TECHNICAL DATA

		RK						
		20	21(Wi-Fi version)	21(Wi-Fi + 4G version)	21(4G ver- sion)	22 (Wi-Fi version)	22 (Wi-Fi + 4G version)	22 (4G version)
REMOTE ASSISTANCE SW	Only RK/RM	UBIQUITY Router Runtime						
O.S. INSTALLED		Linux Yocto						
	Utility	Asem System Manager						
PROTECTION GRADE IP	IP rating	IP20						
	NEMA rating	UL type 1(indoor only)						
CASE	Installation	DIN mounting/ Book mounting						
	Material	Aluminum						
PROCESSOR (soldered on-board)		NXP® i.MX7 DualLite ARM Cortex A7/M4 1GHz • integrated GPU						
SYSTEM MEMORY RAM		1GB (DDR3L module)						
MASS STORAGE		8GB eMMC MLC						
INTERFACES	LAN	1x Gigabit Ethernet (RJ45)				1x Switch Ethernet (4x Gigabit Ethernet)		
	WAN	1x Gigabit Ethernet (RJ45)						
	USB	1x USB 2.0 (Type-A)						
	SERIAL	1x RS232/422/485 isolated (DB9M)						
WI-FI	Model	-	Intel AC9260 (M.2 interface)		-	Intel AC9260 (M.2 interface)		-
	Standard	-	IEEE 802.11a/b/g/n/ac, 2.4GHz/5GHz • Bluetooth 5.1 • Data rate up to 1.73Gbps		-	IEEE 802.11a/b/g/n/ac, 2.4GHz/5GHz • Bluetooth 5.1 • Data rate up to 1.73Gbps		-
	Security	-	WEP 64/128bit, WPA, WPA2, WPS, 802.1x		-	WEP 64/128bit, WPA, WPA2, WPS, 802.1x		-
	Antenna	-	2x RP-SMA Female connector		-	2x RP-SMA Female connector		-
CELLULAR NETWORK	Standard	-		2G/3G/4G LTE CAT 4 Multi-Band All regions • Data rate up to 50Mbps upload / 150Mbps download		-		2G/3G/4G LTE CAT 4 Multi-Band All regions • Data rate up to 50Mbps upload / 150Mbps download
	Antenna	-		1x SMA Female connector		-		1x SMA-F connector
	SIM	-		1x SIM card socket push-push type		-		1x SIM card socket push-push type
DIGITAL INPUT	IN0	Security key for WAN connection activation. Function managed by UBIQUITY (RK/RM) Freely configurable using UNIQO (DM)						
	IN1	UBIQUITY Router software reset (RK/RM) Freely configurable using UNIQO (DM)						
	Type	0÷24V isolation 500V						
DIGITAL OUTPUT	OUT0	UBIQUITY Router WAN enabled connection signal (RK/RM) Freely configurable using UNIQO (DM)						
	OUT1	UBIQUITY remote assistance service running signal (RK/RM) Freely configurable using UNIQO (DM)						
	Type	Output with relay (max 200mA - 24VDC - N.O.)						
POWER SUPPLY INPUT		12/24VDC (9 ÷ 34VDC) isolated						
OPERATING TEMPERATURE		-20°C ÷ 60°C w/ radio module -20°C ÷ 65°C w/o radio module						
STORAGE TEMPERATURE		-20° ÷ 60°C						
OPERATING/STORAGE RELATIVE HUMIDITY		20% ÷ 90% RH (non-condensing)						
APPROVALS		CE RoHS UKCA cULus Listed						

REAL-TIME SOLUTIONS

SCALABILITY
INTEROPERABILITY
SOFTPLC
SECURE MANAGEMENT OF
RETENTIVE VARIABLES

/Administration
/Managing Resources
/Legal
/Accounting
/Finance
/Marketing
/Publicity
/Promotion
/Research
/Business
/Development
/Engineering
/Manufacturing
/Planning

REAL-TIME SOLUTIONS

PANEL AND BOX IPCS X86 BASED

iPCs are available with the most up-to-date CODESYS® version tested by ASEM. In any case, it is possible to upgrade or downgrade to all CODESYS® versions within a defined range.

The µUPS, MRAM, switch, and LED components included in ASEM systems expose APIs, making them suitable for use not only with CODESYS® but also with other applications and proprietary software.

SYSTEM	REAL TIME TESTED CONFIGURATIONS		CAT Driver	µUPS/UPS + MRAM	Inbound ECC	Features
	CPU	OS				
ASEM 6300B-SW2	i3-1320PE	Linux Ubuntu Server/Desktop 24.04	NO	Smart UPS + 512kB MRAM	NO	Retentive variables storage
ASEM 6300P-SW2	i5-13600HE	Win11 IoT LTSC 2024				
ASEM 6300B-JB1	Celeron 6305E i5-1145G7E	Linux Ubuntu Server/Desktop 24.04	NO	Smart UPS + 512kB MRAM	YES	Retentive variables storage, check and correction of r/w data errors on RAM
		Win10 IoT LTSC 2021				
BM3800	i9-10900TF	Linux Ubuntu Server/Desktop 24.04	YES	Smart UPS	NO	Isolation of Cores dedicated to control
		Win10 IoT LTSC 2021				
QT-HT2250	x7-E3950	Linux Ubuntu Server/Desktop 24.04	YES	UPS	NO	Isolation of Cores dedicated to control
PB-BM2250		Win10 IoT LTSC 2021				
BM1XY	x7-E3950	Linux Ubuntu Server/Desktop 24.04	YES	UPS	NO	Isolation of Cores dedicated to control
		Win10 IoT LTSC 2021				
QT-HT2250	J1900	Win10 IoT LTSC 2019	NO	NO	NO	-
PB-BM2150						
QT-HT2200	J1900	Win10 IoT LTSC 2019	NO	µUPS + 512kB MRAM	NO	Retentive variables storage
PB-BM2200						

ARM-BASED EMBEDDED SYSTEMS

LP systems are ARM-based operator panels that integrate CODESYS®, visualization software, and remote assistance software, making them fully Ready to Automation systems.

As embedded systems, they are not suitable for hosting custom applications or proprietary software.

Embedded systems are available with the most up-to-date CODESYS® version tested by ASEM. In any case, it is possible to upgrade or downgrade to all CODESYS® versions provided by ASEM.

SYSTEMS	CPU	OS	µUPS+ MRAM	Features
LP80 (coming soon)	ARM A53 (64bit) i.MX 8M Plus	Linux Yocto RT	YES + 512kB	Retentive variables storage



REAL-TIME SOLUTIONS

RUNTIME LICENSES

It is possible to purchase ASEM iPCs and embedded systems with CODESYS® software pre-installed, choosing from different options for control and visualization.

In this case, the installation of the SoftPLC and any additional components must be carried out independently.

For iPCs, the system can be ordered with pre-installed and licensed packages, or the SoftPLC licenses can be purchased directly from the CODESYS® Store, selecting from various options for communication drivers, libraries, and visualization features.

PRODUCT	CODESYS SoftPLC RTE	UBIQUITY	SoftMotion	SoftMotion + CNC	PremiumHMI	FT Optix	TargetVisu	WebVisu
Win x86	YES *	YES	Optional	Optional	Optional	Optional	Optional	Optional
LP80 (coming soon)	YES *	YES	Optional	NO	NO	Optional	Optional	Optional

LEGENDA:

* CODESYS® SoftPLC licenses for Win x86 systems and for LP80 support 2 cores. If needed, the same ASEM systems can be ordered with licenses that support up to 4 cores or 5 or more cores.

FIELDBUS

In case of purchasing iPCs or embedded systems with a pre-installed CODESYS® SoftPLC license, the following communication protocols are available:

Fieldbus	CANopen		EtherCAT		Modbus TCP		Modbus Serial		OPC UA	Profibus		Profinet		Ethernet/IP	
	Master	Slave	Master	Slave	Master	Slave	Master	Slave	Server	Master	Slave	Controller	Device	Scanner (Master)	Adapter (Slave)
LP80 (coming soon)	-	-	✓	-	✓	✓	✓	✓	-	-	-	✓	-	-	-
Win x86	+	+	✓+	+	✓	✓	✓	✓	✓	+	+	+	+	✓+	✓+

LEGENDA:

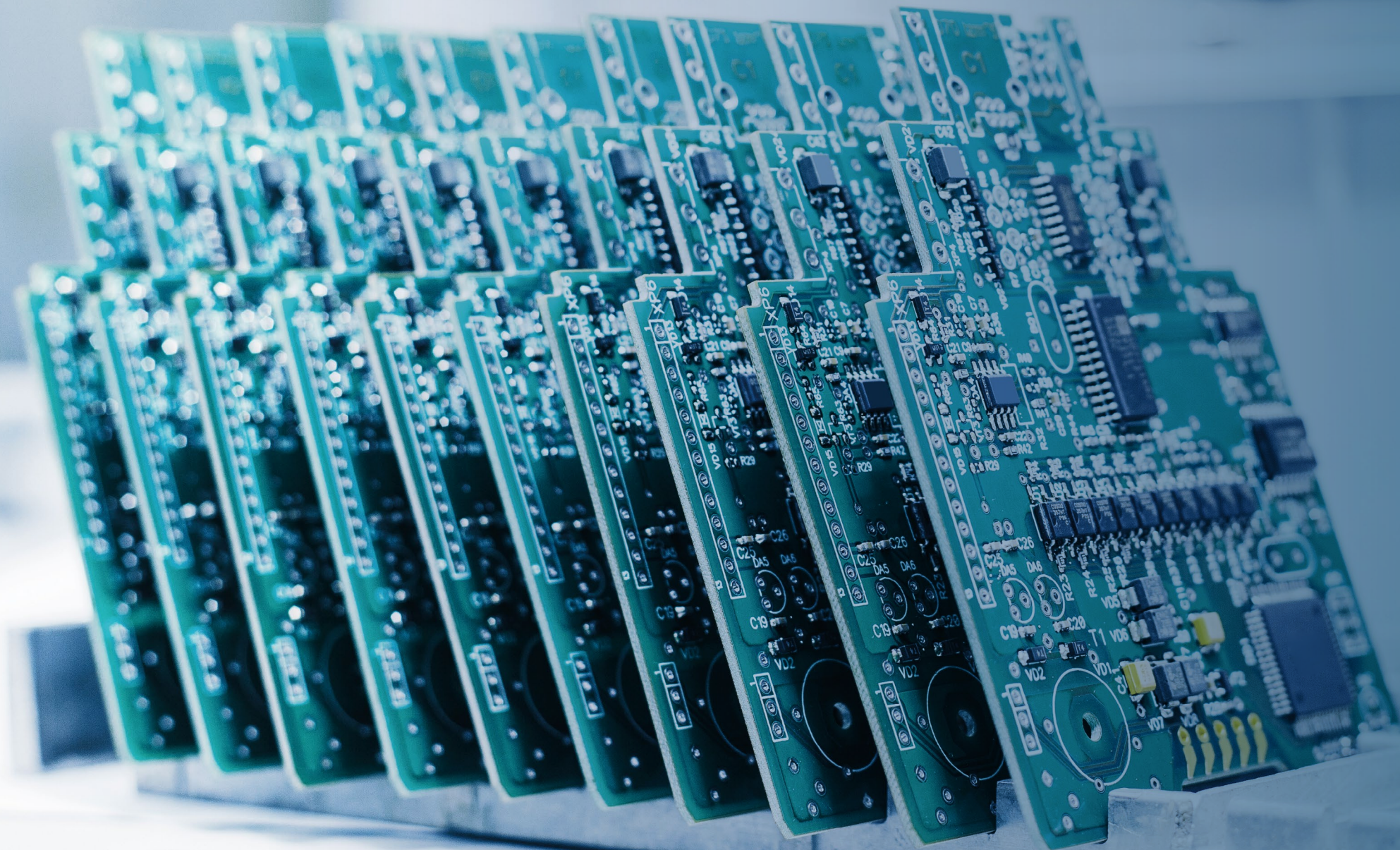
✓ Available with integrated hardware

⊕ Requires additional communication card

✓⊕ Available with integrated hardware or, optionally, with an additional communication card

- Not Available

TECHNOLOGIES AND ACCESSORIES



SMART UPS



DOWNLOAD
THE DATASHEET

Smart UPS is designed to ensure the safe shutdown of the PC in the event of voltage drops or main power interruptions, by initiating the system shutdown procedure and supplying power to one or two devices, with a total maximum power of 240W, for a sufficient time to complete the operation.

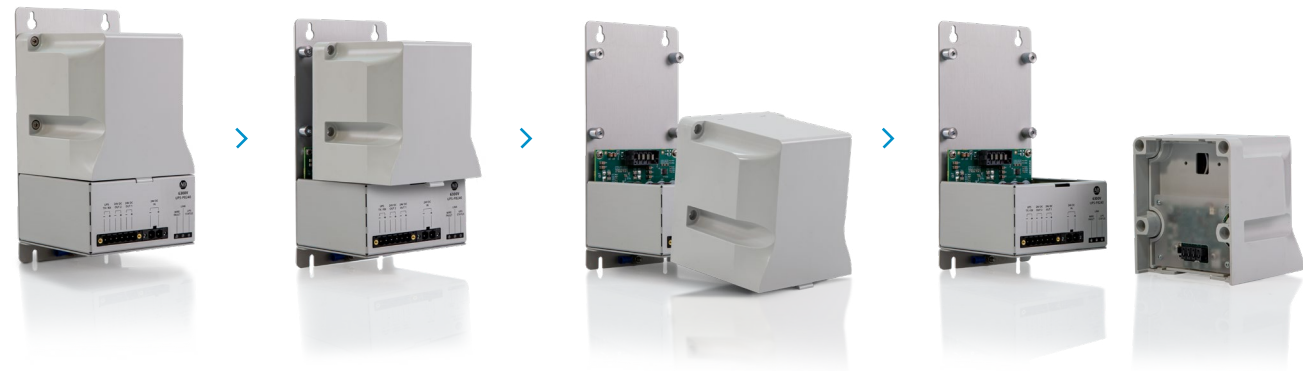
The proprietary serial communication protocol, based on RS485, enables the exchange of diagnostic and monitoring data, allowing precise control of the entire system through the dedicated Smart UPS Console software running on the PC.

Installation up to 15 meters from the load devices ensures flexibility, while the stable 24V DC output guarantees consistent performance and protects the powered devices.

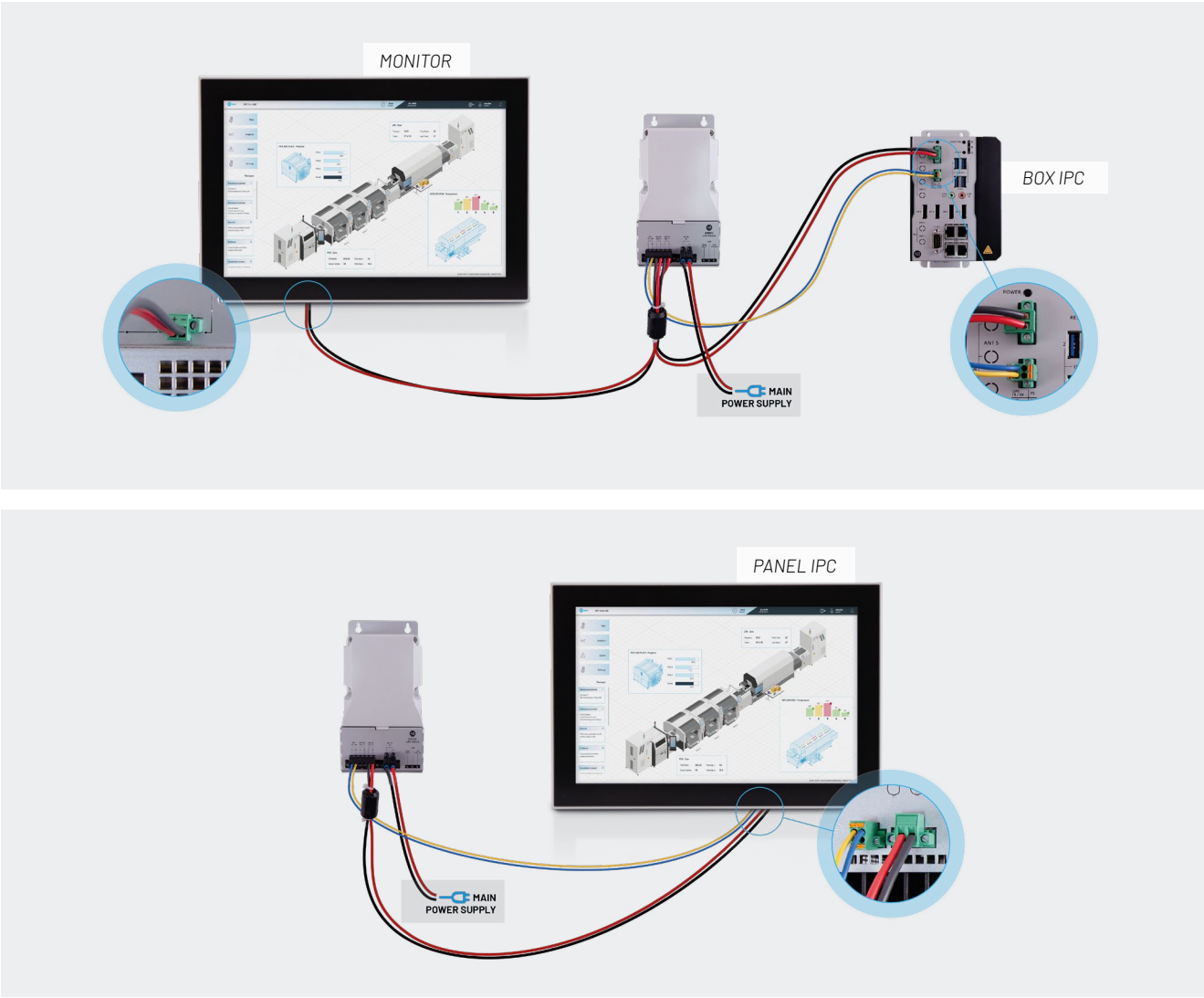
The replaceable battery pack allows quick and easy maintenance, reducing downtime and operating costs.



Replaceable battery pack



COMPATIBILITY



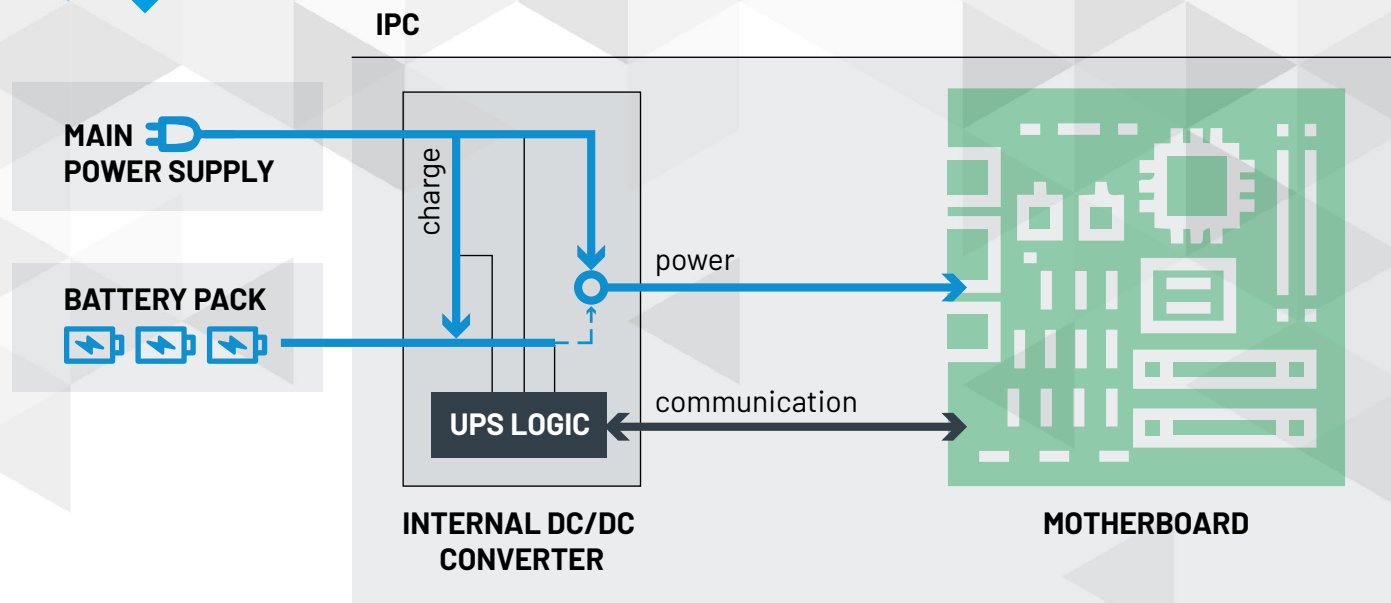
SmartUPS + Monitor + Box IPC

SmartUPS + Panel IPC

Smart UPS requires connection to an ASEM 6300 series industrial PC, supplying power to both the PC and an ASEM or third-party monitor. The table below lists the compatible models.

COMPACT IPCs	PANEL & BOX IPCs			ASEM INDUSTRIAL MONITORS		3rd PARTY MONITORS
ASEM 6300B-JB1	ASEM 6300x-EW1	ASEM 6300x-SW2	BM3800	MQ/MH200	MK/MKR200	

UPS FOR BM1XY



ASEM has developed for its IPCs an integrated UPS (Uninterruptible Power Supply) system to prevent sudden shutdowns, avoiding data loss or damage caused by unexpected primary power failures. To ensure maximum reliability and immunity to disturbances, the control electronics are integrated into the power module, keeping the communication interfaces between the IPC and the UPS within the system.

The multi-level control architecture, entirely designed and developed by ASEM's R&D team, includes:

- a hardware section capable of switching the power source from the primary supply to the battery (and vice versa) within microseconds
- a configurable hardware section to monitor battery status and manage charge and discharge phases
- a microcontroller-based control section that manages system states and interfaces with the IPC
- a high-level software section, running in a Windows environment, configurable by the user, which performs system and battery diagnostics and manages shutdown

The architecture is common across all systems and is customized by configuring specific parameters according to the application type and consumption, in order to optimize battery life.

SOFTWARE

The operation of UPS-equipped systems is managed by high-level software developed for the Windows environment, divided into two parts:

- a service responsible for monitoring power supply voltage and battery status, and managing any shutdown procedure
- a graphical application used to configure system behavior in the event of power loss and to monitor diagnostics

In addition, to prevent abnormal battery degradation and avoid unexpected shutdowns, if a voltage below the minimum threshold is detected, a controlled system shutdown is triggered regardless of the configured parameters.



**CONFIGURABLE SHUTDOWN DELAY
FROM 10 SECONDS TO 10 MINUTES**

**REMAINING BACKUP TIME INDICATION
BASED ON THE SYSTEM'S ACTUAL
POWER CONSUMPTION**

**REAL-TIME BATTERY STATUS
DIAGNOSTICS**

LOGGING FUNCTIONS WITH DATA

**HISTORY TRACKING
INTEGRATION WITH THE USER
APPLICATION**



UPS TECHNOLOGIES

BATTERY PACK TYPES

1) LEAD-ACID BATTERIES

Battery packs with lead-acid cells, compared to more modern technologies, have larger size and dimensions but can deliver high peak currents and operate over a wide temperature range (well beyond the 0-50°C guaranteed for systems). They consist of 6 cells for a nominal voltage of 12V and can supply up to 100W for approximately 2 minutes. They also include a temperature sensor and a protection circuit that disconnects the battery in case of excessive current or low voltage.

2) NICKEL-METAL HYDRIDE BATTERIES (NIMH)

NiMH battery packs are more compact than lead-acid ones and feature lower self-discharge during storage. They consist of 10 cells for a nominal voltage of 12V and can supply up to 60W for approximately 10 minutes. They also include a temperature sensor, a protection circuit that disconnects the battery in case of excessive current or low voltage, and a switch to disconnect the battery during transport.

MASS STORAGE

ASEM provides a wide range of mass storage solutions to expand IPCs according to customer requirements. All storage devices are validated and tested to ensure reliable operation in each working environment.



SSD COMPARISON TABLE

	SSD 2,5" SATA III	SSD mSATA SATA III	SSD M.2 2242 SATA III	SSD M.2 2280 NVMe PCIe x4
BM1XY FAMILY	X	X	✓	X
ASEM 6300B-JB1	X	X	✓	✓
xx2150	X	✓	X	X
xx2200	✓	✓	X	X
xx2250	X	X	✓	X
ASEM 6300X-EW1	✓	X	✓	✓
BM3800	✓	X	✓	✓
ASEM 6300X-SW2	✓	X	✓	✓
VK3500 SERIES	X	X	✓	✓
PR4x50	✓	X	X	✓
PR4x51	✓	X	X	✓
PR4x53	✓	X	X	✓

LIST OF MASS STORAGE:

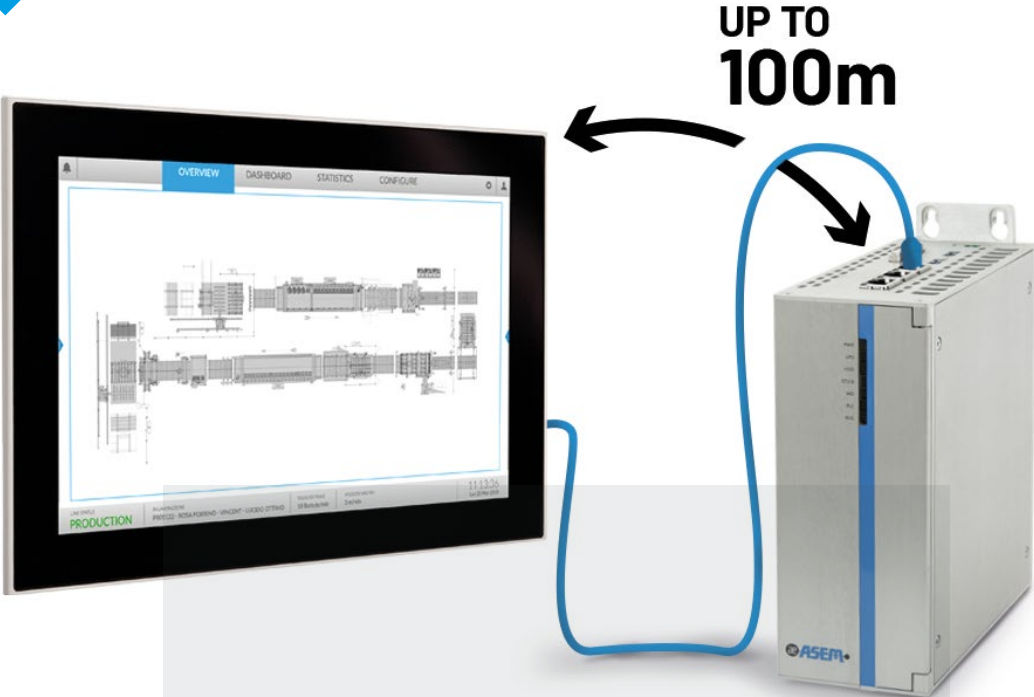
- CFAST: available in ET (extended temperature) version
- SSD: available in SATA and NVMe PCIe versions, also in ET (extended temperature) version
- HDD: available in 2.5" and 3.5" SATA III versions, also in 24/7 version



HDD COMPARISON TABLE

	HDD 2,5" SATA III	HDD 3,5" SATA III
BM1XY FAMILY	X	X
ASEM 6300B-JB1	X	X
xx2150	X	X
xx2200	✓	X
xx2250	X	X
ASEM 6300X-EW1	X	X
BM3800	✓	X
VK3500 SERIES	X	X
PR4x50	X	✓
PR4x51	X	✓
PR4x53	X	✓

RVL (REMOTE VIDEO LINK)



VIDEO REMOTING SOLUTIONS

Remote Video Link is ASEM’s innovative technology that enables the connection of an industrial monitor up to 100 meters away from the IPC using a single cable, through which DVI-D and USB 2.0 signals are transmitted using the HDBaseT standard.

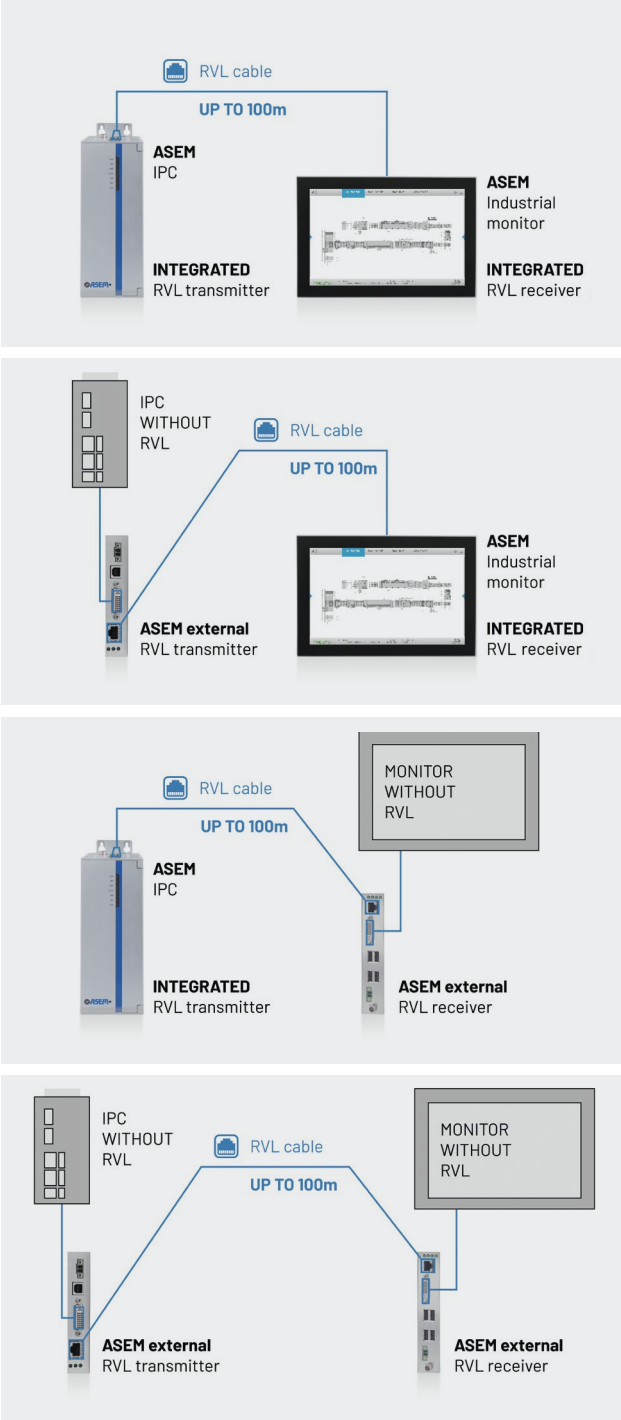
Signal transmission reaches up to 50 meters using Cat 5e SF/FTP cable and up to 100 meters using Cat 6A S/FTP cable.

The use of a standard industrial Ethernet cable and RJ45 connector allows easy wiring in confined spaces and in mobile systems (e.g., arm-mounted systems).

ASEM can also provide external RVL transmitter and/or receiver units to enable video signal remoting with third-party IPCs or monitors. Both are powered at 24VDC.

Thanks to RVL technology, ASEM can create long-distance connections between any industrial devices across a wide range of applications.

The following are the different use cases:



1) ASEM IPCS AND INDUSTRIAL MONITORS

ASEM integrates RVL technology into its IPCs and industrial monitors, enabling direct connection between proprietary systems without the need for additional external devices.

2) ASEM INDUSTRIAL MONITORS

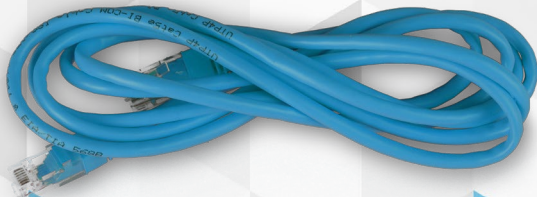
ASEM provides external RVL transmitters to easily connect a third-party IPC (or an ASEM IPC not equipped with an integrated RVL transmitter) to the RVL technology integrated into proprietary monitors.

3) ASEM IPCS

ASEM provides external RVL receivers to easily connect a third-party industrial monitor to the RVL technology integrated into proprietary IPCs.

4) IPCS AND INDUSTRIAL MONITORS WITHOUT INTEGRATED RVL

ASEM provides external RVL receivers and transmitters to easily connect an industrial monitor to IPCs that are not equipped with an integrated RVL transmitter.



TPM

TRUSTED PLATFORM MODULE

What is TPM? The Trusted Platform Module (TPM) is a technology designed to provide both hardware and software security features.

The Trusted Computing Group (TCG) is the organization that publishes and maintains TPM specifications in compliance with the ISO/IEC 11889 international standard. TPM is used to generate, store, and restrict the use of cryptographic keys, passwords, and certificates.

The dTPM (Discrete Trusted Platform Module) is a dedicated microcontroller designed to protect hardware. It embeds cryptographic keys within devices and is used for secure cryptographic operations and for the secure storage of critical data.

In recent years, TPM functionality has also been integrated into x86-based systems. In this case, TPM is embedded within a chipset component of the platform. For example, TPM functionality in x86 systems is part of the security and management engine and is logically isolated from other modules of the engine.

- TPM is a technology for endpoint security(*)
- IEC 62443-4-2 identifies TPM as the gold standard for meeting SL3 and SL4 requirements
- Verifies that the operating system and device firmware have not been tampered with
- Stores digital credentials in a secure hardware-based repository
- Sets passwords and manages cryptographic keys
- Enhances smart cards, fingerprint readers, and remote controls for multi-factor authentication
- Encrypts files and folders to control access
- Establishes system state information to ensure endpoint integrity
- Enables more secure wireless, remote, and VPN access
- For Windows® 11, TPM 2.0 is a requirement (the PC must have TPM enabled)

(*) Industrial Internet Security Framework (<https://www.iiconsortium.org/IISF.htm>)

(**) BM2200 only

ASEM PRODUCTS TPM

	iTPM	dTPM
BM1XY FAMILY	✓	✗
xx2150	✗	✗
xx2200	✗	✓ **
xx2250	✓	✓
BM3800	✓	✗
VK3500 SERIES	✓	✗
ASEM 6300x-EW1	✓	✓
ASEM 6300B-JB1	✓	✓
ASEM 6300x-SW2	✓	✓
PR4xxx	✓	✓

CONNECTIVITY

ASEM offers products with technologies designed to support the latest data communication interfaces and internet connectivity. Wi-Fi and Bluetooth modules, as well as cellular modules, are available and can also be installed in combination to provide multiple usage options based on the specific requirements of each automation environment, in compliance with Industry 4.0 demands.

The adopted technologies inherently deliver reliability, robust connectivity, and high speed, which—thanks to the latest 5G band available on current and future products—are combined with low latency, high data processing capacity, and support for multiple simultaneous connections.

To further optimize connection stability and performance, MIMO and Diversity functions can be leveraged, enabled through dual antennas mounted directly on the product or remotely.

WIRELESS E BLUETOOTH CONNECTION TABLE

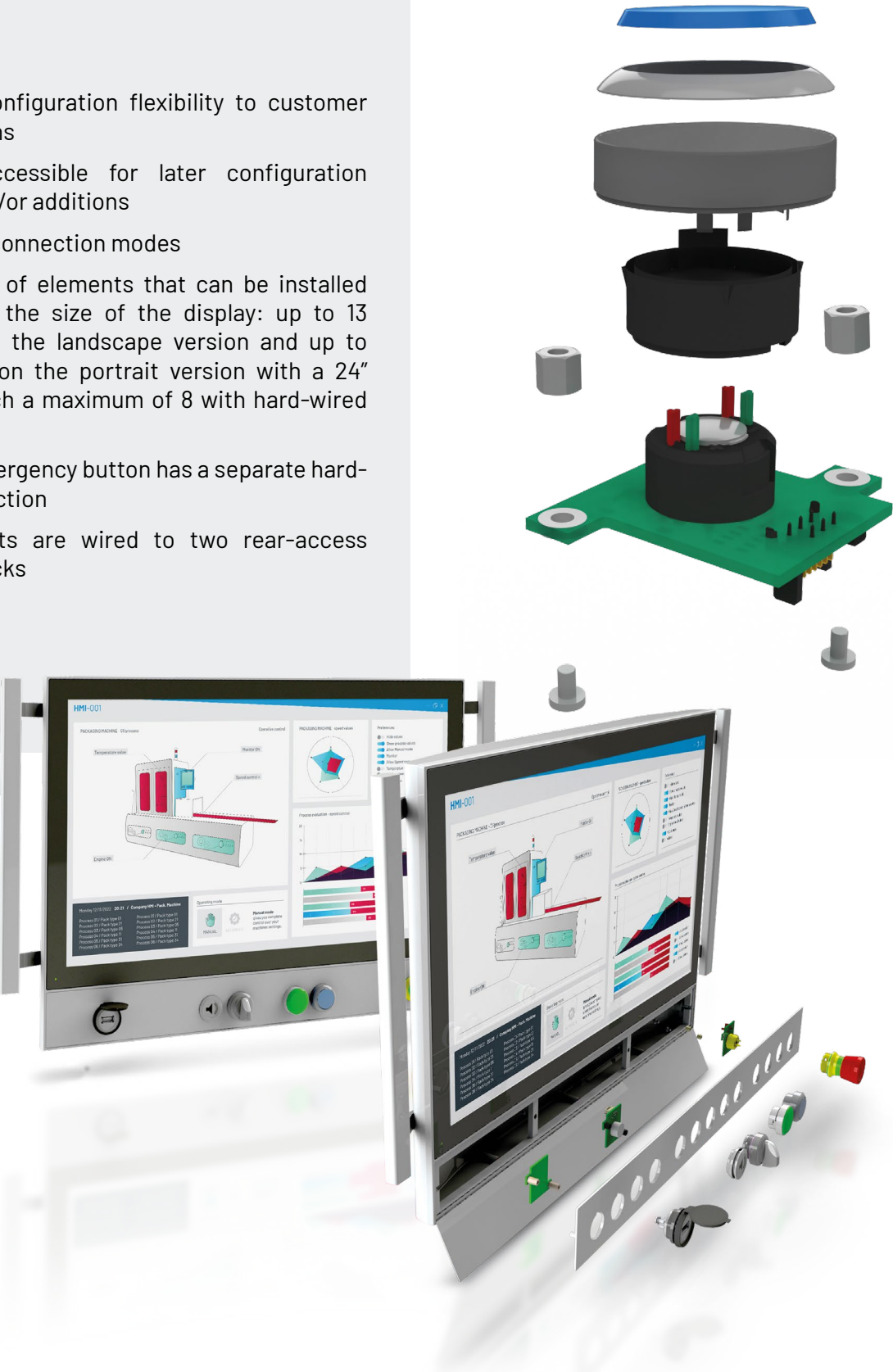
	Wi-Fi connection	Cellular connection
VK3500 SERIES	✓	✗
ASEM 6300B-JB1	✓	✗
RK21	✓	✓
RK22	✓	✓

CONFIGURABLE CONTROL AREA

VK3500/MK200 SERIES



- Maximum configuration flexibility to customer specifications
- Frontally accessible for later configuration changes and/or additions
- Hard-wired connection modes
- The number of elements that can be installed depends on the size of the display: up to 13 elements on the landscape version and up to 8 elements on the portrait version with a 24" LCD (of which a maximum of 8 with hard-wired connection)
- The SIL3 emergency button has a separate hard-wired connection
- The elements are wired to two rear-access terminal blocks



Ø22 IP65 ELEMENTS



INDICATOR LIGHTS

- available in 5 colours (red, yellow, green, blue, white)



BUTTONS

- opaque version in 2 colours (grey and black)
- translucent version in 5 colours (red, yellow, green, blue, white)
- also with a customisable insert



EMERGENCY STOP BUTTON SIL3

- rotary or pull release, with or without LED indicator



SELECTORS

- with key
- light keyless
- 1(90°) or 2(±40°, ±60°) positions (toggle or stable actuation)



ADDITIONAL INTERFACES

- Gigabit Ethernet (RJ45)
- Transponder RFID reader/writer LF (125 kHz) and HF (13,56 MHz)
- USB 2.0 (Type-A)
- knob with incremental encoder
- buzzer



ELEMENTS FOR MANAGING ATX MODE

- opaque version
- translucent version
- with key



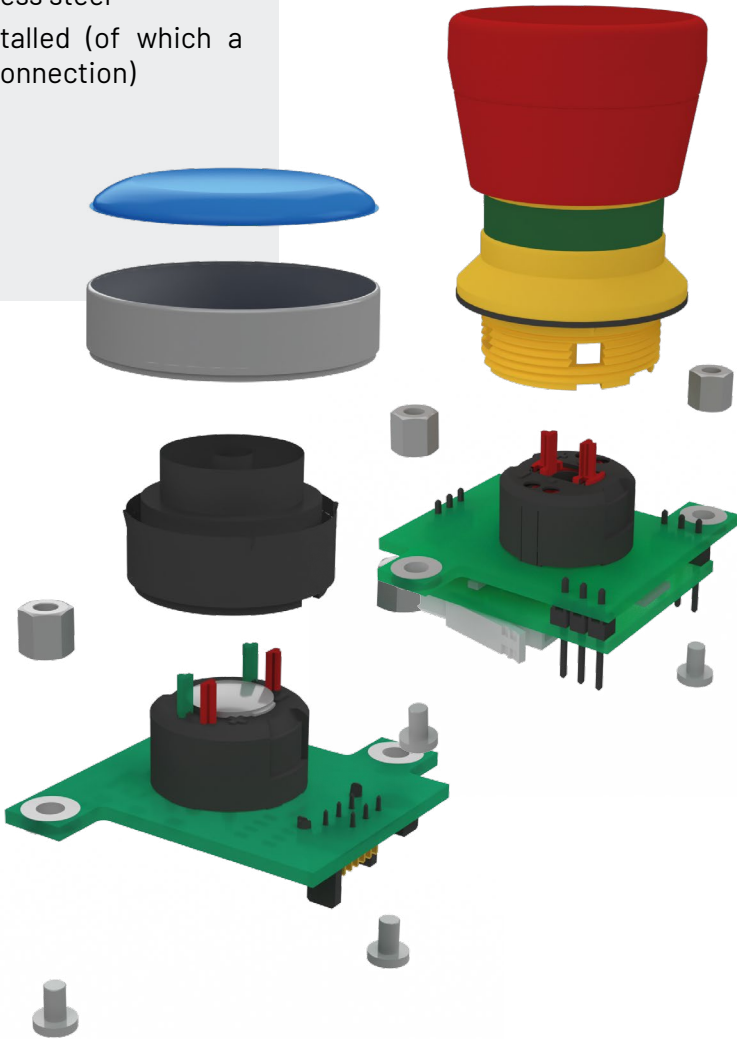
**FRONTALLY ACCESSIBLE
FOR LATER CONFIGURATION
CHANGES AND/OR ADDITIONS**

CONFIGURABLE CONTROL AREA

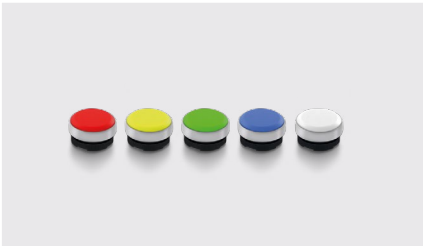
MX200



- Maximum configuration flexibility to customer specifications
- Frontally accessible for later configuration changes and/or additions
- Hard-wired connection modes
- Customer-selected elements can be Ø22 washable silicone or Ø30 low-profile stainless steel
- Up to 9 elements can be installed (of which a maximum of 8 with hard-wired connection)



Ø22 SILICONE ELEMENTS



INDICATOR LIGHTS

- available in 5 colours (red, yellow, green, blue, white)



BUTTONS

- translucent version in 5 colours (red, yellow, green, blue, white)
- grey opaque version



SELECTORS

- with key
- light keyless
- 1 (90°) or 2 (±40°, ±60°) positions (toggle or stable actuation)



EMERGENCY STOP BUTTON

- rotary or pull release, with or without LED indicator

Ø30 STAINLESS STEEL, LOW-PROFILE ELEMENTS



INDICATOR LIGHTS

- available in 5 colours (red, yellow, green, blue, white)



BUTTONS

- translucent version in 5 colours (red, yellow, green, blue, white)
- grey opaque version
- with ring lighting



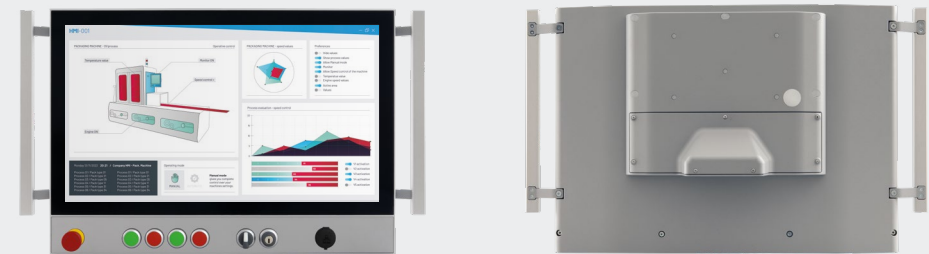
SELECTORS

- with key
- light keyless
- 1 (90°) or 2 (±40°, ±60°) positions (toggle or stable actuation)

MECHANICAL ACCESSORIES

VK3500/MK200 SERIES

SIDE HANDLES



A set of two anodised aluminium side handles is available to facilitate system positioning

PERIMETER HANDLE



An anodised aluminium perimeter handle is available for easy positioning of the system and to protect the operator from accidental impacts

KEYBOARD HOLDER KIT



An aluminium keyboard holder kit painted RAL 9006 is available for the permanent installation of a keyboard and/or mouse of the customer's choice

TYPES OF ASSEMBLY

ARM/VESA Mounting IPC & Monitor

VK3500/MK200 SERIES

VESA MOUNTING

The VK3500 and MK200 systems are available with chassis having an attachment compatible with VESA 75/100 standards



ARM ASSEMBLY

VK3500 and MK200 systems are available with arm-mounted chassis compatible with RITTAL CP40/ROLEC TARAPLUS/ HASEKE ULT KUPPLUNG 48

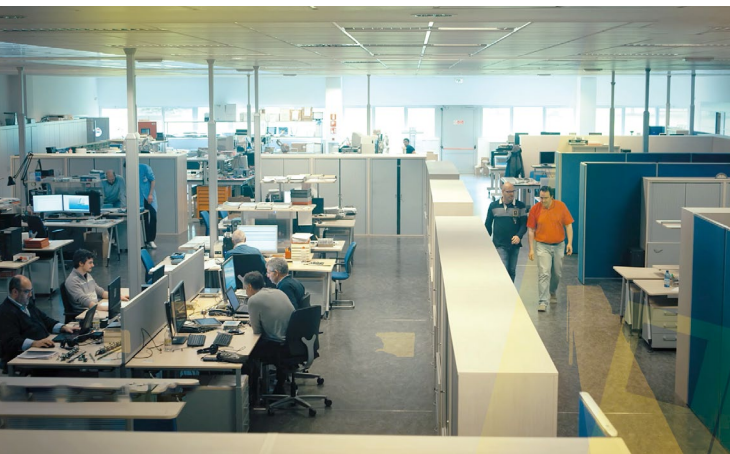


MX200 SERIES

The MX200 systems have a chassis with a specific attachment with six M5-type screws arranged with a 100mm centre distance. ASEM provides its customers with all the technical specifications for creating their own attachment flange. An arm-mounting flange for Ø48mm tubes is optionally supplied.



SERVICES AND SUPPORT



CUSTOMER-ORIENTED PHILOSOPHY

ASEM's customer-oriented philosophy is reflected in its continuous attention to and care for customer needs, supported by a comprehensive and highly qualified pre- and post-sales service. All company processes are designed and organized to ensure maximum customer satisfaction through an excellent level of product quality and operational flexibility capable of promptly responding to the evolving demands of the market. ASEM ensures product and process quality by systematically and rigorously applying its quality system in accordance with UNI EN ISO 9001:2015 standards. The quality system, introduced in 1999, is certified by Intertek and is continuously updated to improve the effectiveness and efficiency of company operations.



SUPPORT AND REPAIRS

ASEM provides its customers with excellent technical support and consulting services for both hardware and software, along with a reliable product and system repair service. To optimize support activities and minimize response times, ASEM guarantees assistance through a team of specialized technicians via the following channels:

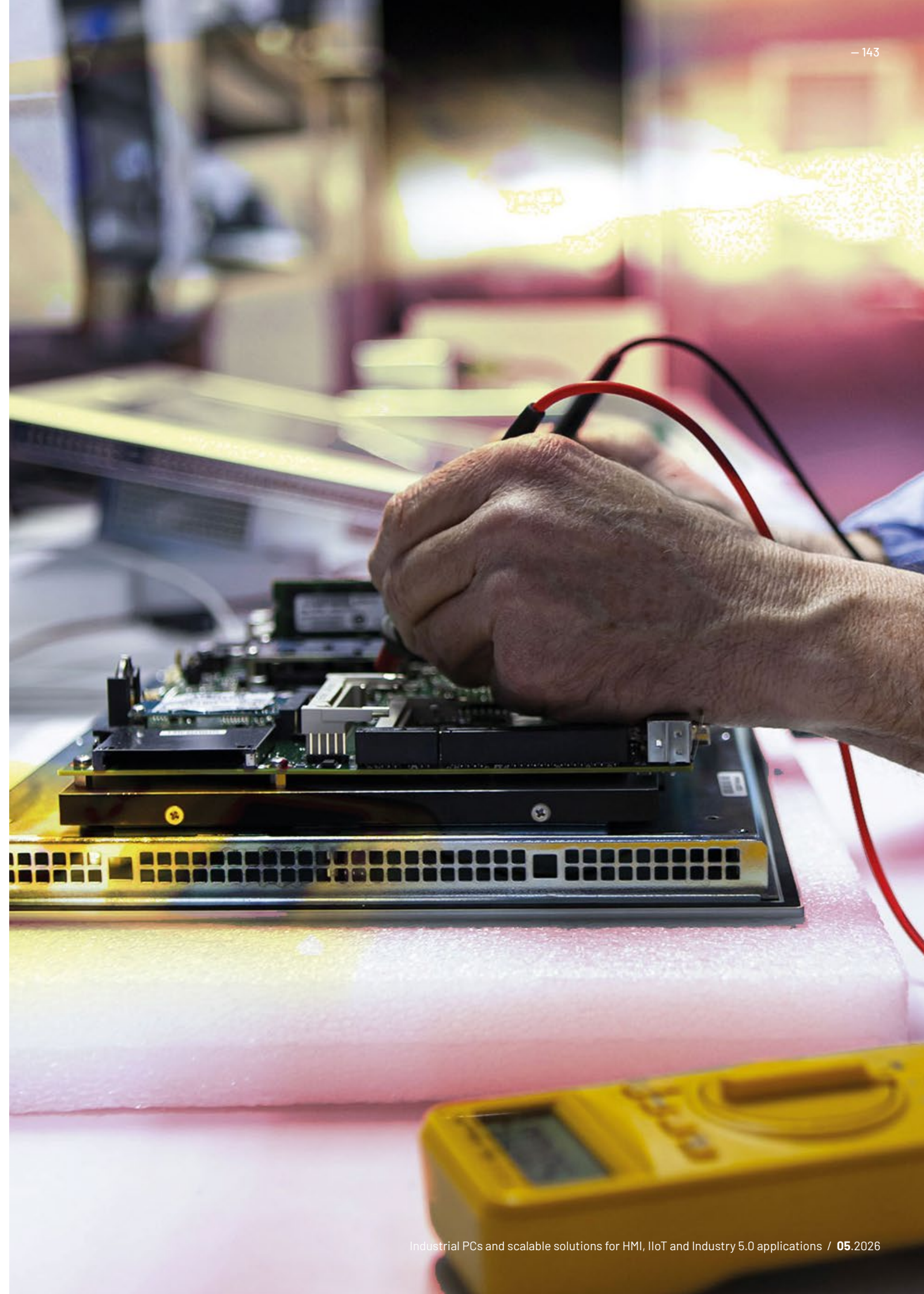
"HELP DESK PHONE" SERVICE

- For hardware and systems: +39 0432 967250, available Monday to Friday from 09:00 to 12:30 and from 14:00 to 17:30
- For software: +39 0362 859124, available Monday to Friday from 09:00 to 12:30 and from 14:00 to 17:30

E-MAIL SERVICE

Support requests for hardware and software can be sent to the following e-mail addresses:

- For hardware and systems suptec@asem.it
- For software supportsw@asem.it





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USER INFORMATION

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