Industrial PC Solutions

ASEM

Contents

ASEM designs and manufactures a wide range of Industrial PCs, HMI and PAC (Programmable Automation Controller) solutions based on x86 and ARM Cortex hardware platforms for the industrial automation market.

37 years of innovation **Made in Italy**

Since 1979, ASEM is a pioneer in the digital technologies integrations between Information & Communication Technology and Industrial Automation.

The performance, configurability, robustness and design of ASEM products and systems, are the result of 37 years of experience in designing and producing solutions for the most demanding industrial applications.
Exploring from the very beginning the potential of Open & Standard technologies into Factory Automation, and leveraging the first-class know-how in developing hardware, firmware and software, ASEM has strengthen its leading position in Italy in the Industrial PCs, HMIs and remote assistance and control systems market.

UBIQUITY

PREMIUM HMI 5

1979 - 1982
Specializing in Electronic Engineering

- Founded in 1979 by Renzo Guerra, current President and CEO, ASEM (**A**utomazione **S**istemi **E**lettronici **M**icrocomputer) started as an engineering company designing and producing microprocessor-based industrial automation systems.

1983 - 1992
Player of the IT world

- ASEM enters the PC market by designing and manufacturing interfaces and accessories for Personal Computers.
- As the only Italian company besides Olivetti®, ASEM manufactures MS-DOS compatible PCs, gaining in the latest 80's the 6% of the Italian PC market, more than global companies like Apple®and Compaq®.

1993 - 2005
Leading the Industrial PC market

- In the mid-90's, ASEM is the first company in Italy focused on the design and production of Industrial PCs, addressing the industrial market.

2006 - 2010
Producing automation systems on an international scale

- In 2006, ASEM begins a specialization path to approach the market not only as a manufacturer of Industrial PCs, but as a company providing automation systems with software.
- Thanks to agreements with partners ASEM offers Premium HMI and CODESYS (softPLC) software platforms.
- ASEM opens an office in Giussano (MB) dedicated to software and system support.
- ASEM opens a sales office in Germany to follow directly German OEM customers.

2011 - ...
The software and remote assistance era

- ASEM releases Premium HMI 3, the first supervision software with new features developed in-house.
- The company introduces the remote assistance platform Ubiquity to remotely access automation devices via VPN.
- ASEM opens a second manufacturing facility dedicated to assembly and test of electronic boards and systems.
- ASEM opens a local R&D software office in Verona.
- ASEM starts designing and producing ARM-based HMIs, remote assistance and PAC systems.
- ASEM releases the new Premium HMI 5 visualization software version, inlcuding multitouch programming, support for multi-core processors and OPC UA protocol leading the way to the distributed connectivity of the "Industry 4.0" and Industrial "IoT".

ASEM and the "**Open Automation**"

Over 25 years of experience in design and production of IPCs and 10 years of specialization in PC–based systems for machine and process automation.

Leading the "Open Automation" in Italy, ASEM is a reliable and professional partner able to guide customers through the evolution of HMI, control and remote assistance technology for the Industrial Automation market, developing and producing "Open & Standard" hardware platforms integrated with innovative, flexible and easy-to-use software.
ASEM has its own complete hardware, firmware, software, mechanics and system design capability and manages internally all production phases, including board assembly and welding.

ASEM: entrepreneurship, investments, innovation
Thanks to a constant focus on innovation and quality, combined with investments in human resources, technology and manufacturing assets, ASEM is now one of the European emerging companies in the industrial automation market, providing systems and solutions that are entirely designed, engineered and produced in-house.
The company has been committed to anticipate customers' needs, convinced that machine builders should leave proprietary technologies, to embrace "Open & Standard" platforms, focusing on software application development.

The deep knowledge of "x86" (PC) and "ARM" technology and the investments in software design are in tune with the evolution of the industrial automation market needs.
Market globalization and the economic crisis have forced machine builders to reduce costs and recover efficiency.
At the same time end users (factories) modified their demand requiring price and delivery time reduction while increasing customization requests.
Machine builders are then pushed to reduce development time and take an innovative approach using "Open & Standard" hardware platforms integrated with flexible and easy-to-use software development tools.

The integration of Information & Communication Technologies is now a need to produce automatic machines interconnected into a wider and more complex network where to exchange data and information.
ASEM technological excellence is guaranteed by significant investments in R&D and continuous training of the entire workforce.
The ability to understand and anticipate the fast market evolution, set and follow the right strategies, has enabled the company to maintain a steady growth momentum in the last 10 years.

ASEM in numbers:

- → 2016 Revenues: 34 million Euros
- → 175 employees
- → 5.200 sqm Headquarters in Artegna (UD)
- → 3.250 sqm manufacturing facility in Artegna (UD)
- → R&D offices in Verona
- → R&D offices in Giussano (MB)
- → Sales offices in Germany

R&D

The seamless integration of hardware and software technologies is key to success

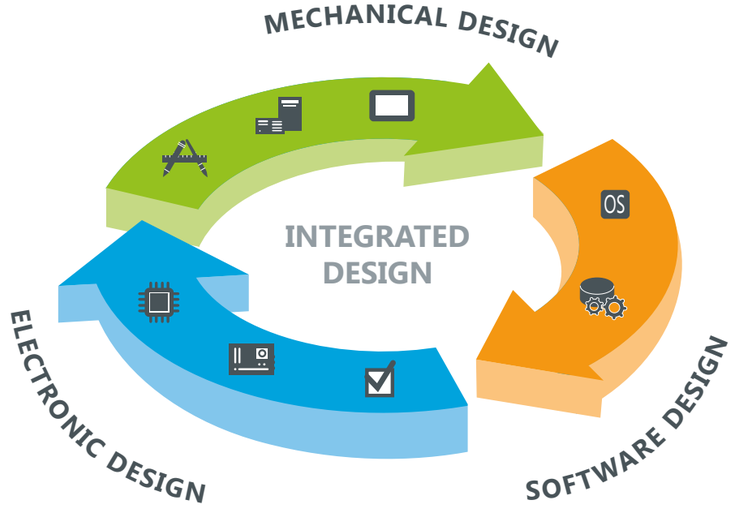
30% of ASEM human resources are dedicated to R&D. The team includes highly specialized engineers with complementary skills that cover all the electronic and mechanical design needs, as well as firmware and software development.

The close collaboration with leading technology trendsetters and the continuous dialogue with customers drive the specifications of hardware, firmware, software and systems engineering for each single product.

Thanks to the technological mastery of all system components and their perfect integration, ASEM designs performant, configurable, easy-to-use and reliable products for the most demanding industrial environments.

The different R&D teams work in synergy during the design process to ensure that hardware requirements and software features of each solution can be implemented in an integrated way.

The long experience and the high skills of the R&D engineers make ASEM a reliable technological partner to support machine builders and system integrators in the fast-changing industrial automation market.



High tech & high quality production

ASEM manufacturing plants comprise two modern industrial facilities covering a total area of 8.500 sqm.

ASEM designs, engineers and manufactures electronic boards, products and systems internally.
The decision to assemble electronic boards in its own Italian facility is in contrast with the industry trend to relocate electronics production activities in Eastern Europe and Far East, but the results in terms of quality and in terms of flexibility confirm the accuracy of the company's strategic decision, much appreciated by customers.

For the automatic assembly of boards, ASEM uses technologically advanced machinery, tools and equipment, such as precise and fast SMT Pick & Place positioners, selective soldering machines for "through all" components, ovens reflow and X-ray inspection ensuring high quality and flexibility.
The in-house assembly of electronic boards and a constant dialogue between operations' managers and the R&D engineers increase the sensitivity of electronics and mechanical designers towards production and test phases, with a consequent advantage of an increased reliability of the overall system.

The electronic components are supplied by the major global manufacturers and are specifically selected to ensure a long life cycle of products. Mechanical parts are purchased from European suppliers selected with rigorous qualification procedures.
100% of the electronic boards are subject to burn-in and functional tests for a minimum of 12 hours in special designed climatic chambers.
100% of the assembled systems are subjected to functional tests for 12 consecutive hours.

Continuity

The full control of design and production processes and the close cooperation with technology trend setters allow ASEM to ensure a 7/10 years life cycle of its systems and reparability of the same for at least 5 further years, with availability of spare parts.
ASEM guarantees End of Life procedures lasting from 6 to 12 months for the Last Buy Order and deliveries.

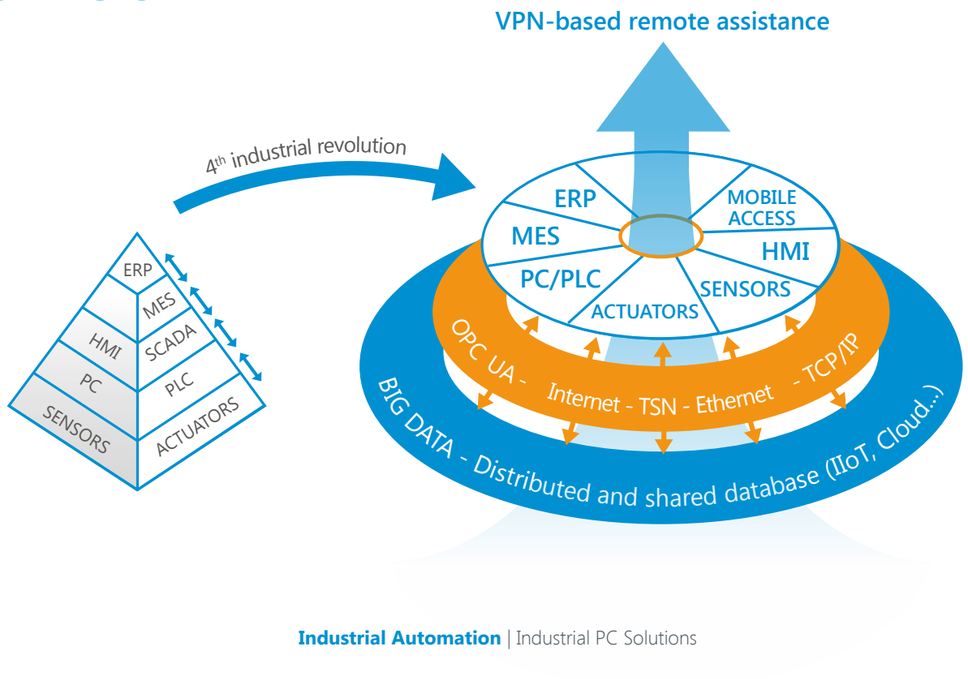
«Open Automation»
driving force of the Industry 4.0

SMART FACTORY

«Open & Standard» technologies integrated with flexible and user-friendly software solutions are leading the evolution to a digitalized industrial ecosystem, commonly known as "Industry 4.0".
The industrial IoT (Internet of Things) and the growing number of distributed smart devices connected to the Internet, transform factories in connected ecosystems in which sensors, automation devices, M2M («Machine to Machine») modules and software communicate and cooperate with each other and with humans in real time. These cyber-physical systems monitor physical processes, creating a virtual copy of the physical world enabling decentralized decision making.

This 4th Industrial Revolution is leading to a redesign of operations, services and Automation technologies providing the opportunity to significantly increase productivity, quality and flexibility of manufacturing systems.

Our vision



Designing Ubiquity, an Internet-based software solution provinding remote access to automated machines and plants, ASEM was one the first companies understanding the value of Information and Communication Technologies applied to the Automation. Nowadays ASEM is one of the few European companies mastering on its own all driver technologies of the current 4th Industrial Revolution covering hardware development (x86, ARM platforms and OSs), and software, cloud and communication solutions design.

Asem PC-based Automation

Open & Standard technologies for Industry 4.0

Flexibility and openness
- Use of Open & Standard ARM and x86 technologies integrated with flexible and user-friendly software development tools
- Flexibility in creating distributed automation architectures

Internet & Ethernet based communication
- Internet as a communication media among different plants, factories and devices
- Horizontal communication among automation devices based on Ethernet protocols
- Vertical integration among different automation and business management solutions (Enterprise Resource Planning, Manufacturing Execution Systems, etc.) by means of open, non-proprietary communication protocols (OPC UA)

Open & Standard communication protocols
- OPC UA (Unified Architecture) is a non-proprietary M2M communication protocol for interoperability among different automation and business management solutions
- TSN, Time Sensitive Networking is an extension of Ethernet IEEE 802.1 stantard, designed to obtain real-time performances

Cyber Security
- Safety against threats and risks - physical integrity (hardware) and logical-functional (software) protection of the automation systems and content data

Asem Software Solutions

An added value for every machine and plant

HMI technology & Mobile devices
- Design of ergonomical user interfaces, able to provide users with all necessary information for a correct management of the production plant
- Use of mobile devices giving access to the plant and production data over the web

Remote access technology: Ubiquity VPN
- Remote access to the plant by means of a VPN
- IEC 62443-3 & German BSI certification for security of internet based industrial communication

IoT & Cloud technologies
- Ability of the automation sistems to transfer information from sensors and field level to the cloud
- Information easily centralized and distributed
- The Cloud acts as a Gateway for an open and global interoperability of the smart factories
- Potentially unlimited data analysis power for the development of preventive and predictive maintenance models

Control & Motion Control Technology
- Reduced design times thanks to modular, flexible and object oriented development tools, supported by real-time simulations
- Scalable control logic performances based on the choice of the CPU

Data integration among different automation software solutions

Smart Factory: manufacturing becomes intelligent

Ability of the smart factories to adapt to changing operating conditions and to sudden planning changes

→ Fast access to production data
→ Continuous production data diagnosis and analysis to obtain indications and results
→ More information available for machine/plant operators, support staff, production planners and management for a better business management
→ Condition monitoring: continuous monitoring of the machine / plant conditions
→ Power monitoring: consumption analysis and research for a higher efficiency

Industrial PC Solutions

ASEM IPCs

The only IPCs with remote assistance solution integrated

Industrial **PC & Monitor features**

More than 25 years of Industrial PCs

The “x86" (PC) and ARM Cortex platform technologies represent the evolution towards open and standard platforms, replacing systems based on proprietary technology.
These “Open & Standard" technologies are driving the process of technological convergence and digital integration between ICT (Information and Communications Technology) and Industrial Automation. Since the 80’s ASEM has been designing x86 technology and since more than 20 years has been leading the “Open Automation" in Italy designing, engineering and manufacturing “Open & Standard" systems for the Industrial Automation market.

A complete product range

To satisfy different market needs, ASEM offers a wide range of industrial PCs including Panel IPCs with LCDs from 6.5" to 24" in 4:3 and Wide 16:9 aspect ratios, Arm Mounting IPCs with 15.6", 18.5”, 21.5” and 24” Wide LCDs, Box IPCs with wall or DIN rail mounting and a complete range of Industrial Panel Monitors with LCDs from 8.4" to 24" in 4:3 and 16:9 aspect ratios and Arm Mounting Monitors with LCDs from 15.6” to 24” in 16:9 aspect ratio.

Quality, reliability and performances

The mastery of hardware, firmware and system technologies and the long experience in mechanical design and engineering have enabled ASEM to manufacture high quality and extremely reliable Industrial PCs and Monitors with strong attention to details and excellent value for money.

Chassis and Front Panels

Over the years, ASEM has gained considerable experience on materials and surface treatments to ensure electrical conductivity, shielding optimization and protection from external agents to its industrial PCs and monitors’ chassis.

Chassis are made of galvanized steel or casted aluminium and are the result of an industrialization based on thermodynamic and fluid dynamic analysis aimed at a seamless integration of electronic boards and mechanical components.
To meet the specific needs of food, chemical and pharmaceutical industries, some systems are designed and manufactured with stainless steel frames and chassis.
One of the most important details of Panel IPCs and Monitors are the front panels, designed to meet aesthetic, ergonomic and robustness requirements and at the same time ensure IP65 / IP66 protection degree, even with USB interfaces.
The ASEM standards include four front panel variants for Panel IPCs and monitors: Aluminium with resistive touchscreen, Aluminium True Flat with resistive touchscreen, Stainless Steel True Flat with resistive touchscreen and Aluminuim True Flat with glass projected capacitive (P-CAP) Multi-touchscreen.
The four front panels are available for all Panel IPCs families of the HT series, for MH and MHR panel monitor families and for all future Panel IPCs and monitor families.

Interchangeability and continuity

With a product life cycle of at least 7/10 years, ASEM designs Panel IPCs and monitors with the same cut-out (hole size needed for the installation) for each different LCD size to ensure interchangeability, without mechanical changes, among different families and compatibility with future families allowing to up-grade the Panel IPC or monitor even on machines on the field since many years.

UPS and Power Supply Systems

To prevent noise and overvoltage, IPCs and monitors’ power supplies have galvanic isolation. Industrial PCs based on x86 processors have the option to integrate on the power supply unit the UPS (Uninterruptible Power Supply) function with an external battery pack or the MicroUPS with the supercapacitors.

Motherboards

The IPC’s motherboards have microprocessors included in Intel® or AMD® embedded roadmap, with a long life cycle guaranteed by the manufacturer.
ASEM motherboards use different platform technologies with scalable performances, from entry-level processors in terms of price up to high performance dual and quad core processors, providing different expandability in terms of communication interfaces and expansion slots.
Currently, ASEM portfolio includes the latest generation Intel® BayTrail platform, with dual and quad core Atom E38xx processors, and quad core Celeron J1900, the 6th generation Intel® Core™ microprocessors Skylake H/ULT series and ARM-based systems equipped with dual and quad core NXP iMX6 processors.
Motherboards are designed to provide “all-in-one" integration of every possible function (for instance the touchscreen controller) and minimize cables and connectors in order to make systems more resistant to possible vibrations and shocks in industrial environments.
100% of the motherboards are subject to burn-in and functional tests, for 12 consecutive hours, in dedicated climate chambers.
All motherboards feature the ASEM System Identity, a non-volatile storage for system identification data, as well as other useful customers’ data for system traceability.
One of the R&D teams is dedicated to BIOS and low level driver development for x86 platforms and to BSP (Board Support Package), boot loader and low-level drivers development for ARM CORTEX platforms.

Operating Systems

Depending on microprocessor platform, ASEM ensures full compatibility of x86 systems with Win 32/64 Standard/ Embedded and Windows Embedded Compact 7 PRO operating systems and full compatibility with the most popular Linux distributions.
ARM Cortex A8 and A9 platforms support Windows Embedded Compact 7 PRO and Linux distributions assembled by ASEM.
ASEM specialists can also give support to implement a customer made image or develop customized embedded Win 32/64 and Linux images on specific customers request.

Fieldbuses

All x86 systems’ released by ASEM have the possibility to install fieldbuses (NetcoreX) boards, Master and Slave versions, that support the most spread industrial fieldbuses such as EtherCAT, CANopen, Profibus, Profinet and EtherNet / IP.

Compatibility, testing and systems certification
All ASEM industrial PCs and ARM-based systems are optimized for the use of Premium HMI and Ubiquity remote assistance software platforms.
Most of the systems are also certified for the use of CODESYS SoftPLC and SoftMotion platform, also for real-time applications.
100% of sold systems are subject to functional tests at room temperature for 12 consecutive hours, and sample systems are subjected to functional tests at temperature ranging from 0 to 50° C for 12 consecutive hours.
All ASEM products comply with EMC directives for emissions and immunity, the low voltage safety directive and the RoHS directive.
Most of the products and systems comply with UL norms and specific products comply with the ATEX norms.

Custom Solutions

The complete control of hardware, firmware and software technologies allows ASEM to realize custom systems for specific customer needs.

Light custom Solutions
Custom-light services provide different levels of customization of ASEM standard products:

Aesthetic light custom, such as:
→ removal or substitution of the ASEM trademark with a label showing the brand and/or logo of the customer;
→ customization of front film with silkscreen printing of client brands and/or logotype;

Mechanical light custom, such as:
→ personalization of the shape and / or thickness of the front panel;
→ Customization of the layout of the keyboard on the front panel;

Electronic light custom, such as the addition of communication interfaces and / or modification of the standard configuration.

The customizations described do not involve any structural changes to standard products and meet the typical needs of OEMs and System Integrators who want to offer their own solutions to the market with a homogeneous representation of the brand. Custom-light solutions can be made in a relatively short time and low volume production.

Full custom solutions
Custom-full services include the creation of new platforms and solutions based on customer specifications. ASEM does not normally sell the intellectual property of custom projects, as their realization is solely dedicated to ASEM serial production. Custom full services include the following development activities:

Mechanical custom-full, such as:
→ creation of a new mechanical solution, also with plastic parts, that uses existing electronic cards and/or motherboards;

Electronic custom full, such as:
→ development of new motherboards and/or electronic cards;

Complete custom-full, such as:
→ development of a new system or solution that includes the design of mechanical components as well as electronic boards.

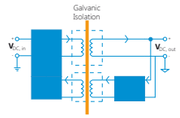
The **ASEM Standards**

ASEM STANDARDS

ASEM has set the electronic and mechanical design standards for Panel IPC, Box IPC and Monitor families to guarantee maximum flexibility, higher safety and continuity to customers.

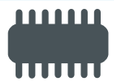
A unique cut-out for each different size of LCD to ensure:
→ Interchangeability among different families of Panel IPCsand Monitors
→ Mechanical compatibility with future families

Front panel available in four different variants
→ Aluminium with USB port
→ Aluminium True Flat with USB port
→ Stainless Steel True Flat
→ Aluminium True Flat with glass projected capacitive multitouch-screen



Power supply with galvanic isolation
To prevent:
→ Common mode noise at low/medium frequencies on the power supply line
→ Ground loop noise
→ Extra-voltage caused by lightning
And guarantee:
→ Power supply with grounded positive terminal (e.g. Japan)

Power supply version with integrated UPS (uninterruptible power supply)
→ With external battery pack - rear of the system or standalone wall mounting



ASEM system identity
→ Non-volatile memory for system identification data storage

Four variants of the front panel


Aluminium with USB


Aluminium True Flat with USB port


Stainless Steel True Flat


Aluminium P-CAP Multitouch

Software solutions for the industrial automation

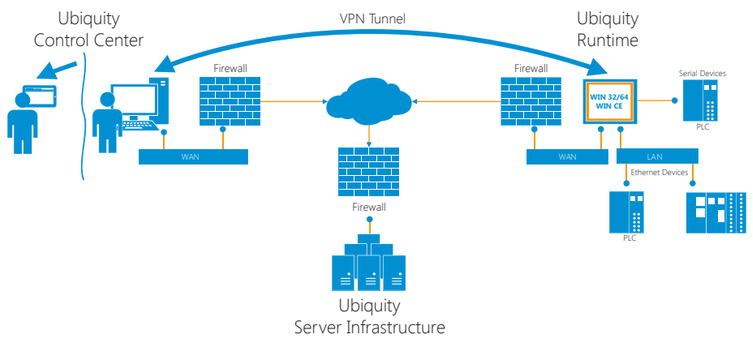
ASEM offers its own software solutions for **remote assistance, visualization, and control**, providing a complete automation portfolio.

Remote Assistance: **Ubiquity**

In 2011 ASEM presented Ubiquity, the innovative software platform for remote assistance.
Designed for machine builders, the remote assistance solution UBIQUITY enables access to remote systems and their sub-networks as if they were connected with a cable.
The software solution UBIQUITY enables the access to remote supervision and control systems and to the automation devices (PLC, drive, etc), connected to the Ethernet and Serial sub-networks, through a VPN (Virtual Private Network) based on proprietary technology comparable to a cable connection.
UBIQUITY does not require additional hardware and allows to operate in remote plants as if they were directlyconnected to your enterprise network.
It enables technical support teams to solve any issue, eliminating the need for on-site assistance, dramatically reducing post-sale service costs.
This solution is particularlyuseful during machine setupand commissioning, tomonitor remote applications,to modify and updatesoftware applications andremotely debug PLCs andother automation devices.

UBIQUITY INSIDE

Starting from March 2016, Ubiquity is installed on all ASEM IPCs, enhancing the value of every IPC with an integrated remote assistance solution.



Visualization: **Premium HMI and PHMI Mobile**

With Premium HMI software platform, ASEM has been providing valuable visualization systems appreciated for the **quantity and quality of the functionalities** available and the **transversality** of the platform, which makes it possible to use the sameproject both on HMI solutions based on ARM or x86 hardware platforms (also with multicore architecture support), with WinCE or Win 32/64 Runtimes without any need to modify or change settings in the '**Premium HMI Studio**' development tool.

Multitouch and OPC UA
Premium HMI 5 supports Multitouch programming for Win 32/64 and WEC 7 systems with Multicore processors and supports OPC UA protocol, leading the way to the distributed connectivity of the "Industry 4.0" and Industrial "IoT".

Premium HMI Mobile is the App to view and interact with Premium HMI projects, via mobile devices (iOS and Android) connected to the enterprise Wi-Fi network.
The new app provides mobile and multitouch support to the HMI project running on Machine Operator Panels/ Panel IPCs.

Control: **CODESYS**

ASEM Programmable Automation Controllers base their PLC functionalities on the consolidated and widespread CODESYS SoftPLC of the German 3S, with a highly efficient implementation of version 3.5 which guarantees the deterministic execution of PLC control logic with WinCE and Win 32/64 operating systems.

Product Portfolio

1. ARM based Panels

The ARM based Panels, with Cortex A8 and A9 processors, are available with Microsoft Windows Embedded Compact 7 Pro or Linux operating systems. They include a wide range of 16 milion colors TFT LED Backlight LCD screens, from 4.3" up to 15.6" with resistive touchscreens and Aluminium/Aluminium True Flat front Panels and Aluminium True Flat with glass projected capacitive Multitouch-screen.

RT25	RT30/31	RT40
		
p. 21	p. 22	p. 24

2. PANEL IPCs

ASEM Panel IPCsare low consumption and high computing performances systems, with or without fans, based on Atom, Celeron and Core™ i3, i5, i7 dual and quad core processors.
Available with TFT LCDs from 6.5" to 24" and Aluminium, Aluminium True Flat, Stainless Steel True Flat with resistive touchscreens and Aluminium/ Aluminium True Flat front Panels and Aluminium True Flat with glass projected capacitive Multitouch-screen.

HT2000	HT2150	HT2200
		
p. 28	p. 30	p. 32

HT3000	HT3200	HT5000
		
p. 34	p. 36	p. 38

3. BOOK MOUNTING IPCs

ASEM recently completed its Box IPC portfolio with a complete range of book mounting systems, combining performances, design, ergonomics and configurability.
Based on Intel® Bay Trail™ and Skylake™ platforms, they are supplied with a sturdy Aluminium chassis, highly refined in every aesthetic and ergonomic detail.

BM2150	BM2200	BM3400
		
p. 42	p. 44	p. 46

3. BOX IPCs

ASEM provides a full range of Box IPCs in terms of configurability, dimensions and performances.
They are based on Atom, Celeron, Core™ i3, i5, i7 dual and quad core processors and they are suitable for wall or DIN rail mounting.

PB2000	PB2150	PB2200
		
p. 50	p. 52	p. 54

PB3000	PB3200	PB5000
		
p. 56	p. 58	p. 60

4. Arm MOUNTING IPCs

The Arm Mounting IPCs are compact, fanless, ergonomic and easy to install systems with a stylish design. Based on Intel® Broadwell platform they are available with 15.6", 18.5", 21.5" and 24" TFT Led Backlight LCDs in a full IP65 Aluminium chassis.

VK3200	VPC2200
	
p. 64	p. 66

5. RACK IPCs

19" 4U rack solutions with a wide range of configurations, motherboards, expansion slots and Intel® Core™ i3, i5, i7, dual and quad core processors.

PR4046 / PR4146	PR4047 / PR4147	PR4048 / PR4148
		
p. 70	p. 71	p. 72

6. INDUSTRIAL MONITORS

Panel Industrial Monitors are available with 8.4" to 24" LCDs and four front panel variants.
Arm Mounting Monitors are compact, fanless, ergonomic and easy to install solutions, and are available with 15.6", 18.5", 21.5" and 24" TFT LCDs in a full IP65 Aluminium chassis.
Industrial Monitor families are available with up to 100 m remotation for digital video and USB 2.0 signal.

MH100 / MHR100	MK100 / MKR100
	
p. 76	p. 78

ARM based Panels

The ARM based Panels, with Cortex A8 and A9 processors, are available with Microsoft Windows Embedded Compact 7 Pro or Linux operating systems.
They include a wide range of 16 milion colors TFT LED Backlight LCD screens, from 4.3" up to 15.6" with resistive touchscreens and Aluminium/Aluminium True Flat front Panels and Aluminium True Flat with glass projected capacitive Multitouch-screen.

RT25

4.3" and 7" ARM based Panels

The entry-level panels RT25 are based on 1 GHz ARM Cortex A8 processor and Microsoft Windows Embedded Compact 7 PRO or Linux operating system.

The Linux image is designed for customers developing their own applications and/or using web-based applications.

RT25 panels are available with 16 million colors 4.3" and 7" Wide TFT LED Backlight LCDs, 4 wires resistive touchscreens and Aluminium or Aluminium True Flat front panels.

Highlights

- → 1 GHz ARM Cortex A8 processor
- → 4.3" and 7" Wide TFT LCDs
- → Microsoft Windows Embedded Compact 7 PRO / Linux operating system
- → IP66 front panel protection degree
- → CE, cULus LISTED (508) certifications

RT30 / RT31

From 5.7" to 15.6" ARM based Panels

The entry-level panels RT30/31 are based on 1 GHz and 800 MHz ARM Cortex A8 processors and Microsoft Windows Embedded Compact 7 PRO or Linux operating system.

The Linux image is designed for customers developing their own applications and/or using web-based applications. The RT30/31 panels are available with 16 million color TFT LED Backlight LCDs, from

5.7" up to 15.6", 4 with 5 wires resistive touchscreens and Aluminium/Aluminium True Flat front panels and Aluminium True Flat with glass projected capacitive multitouch-screen.

Highlights

- → Microsoft Windows Embedded Compact 7 PRO / Linux operating system
- → From 5.7" to 15.6" Wide LCDs
- → 1 GHz / 800 MHz ARM Cortex A8 processors
- → Rear access on-board SD/SDHC slot
- → 1 isolated CAN channel (RT31)
- → MicroUPS (optional)
- → IP66 front panel protection degree
- → CE, cULus LISTED (508) certifications
- → ATEX approval Zone 2/22 fot RT30, RT30-TF and RT30-TFC

Technical Data

	RT25	RT25-TF	RT30	RT30-TF	RT30-TFC	RT31	RT31-TF	RT31-TFC
OS AVAILABLE	Microsoft Windows Embedded Compact 7 Pro							
	Embedded Linux distribution based on Yocto Project							
	No OS							
LED backlight TFT LCD	4.3" W - 480x272 7" W - 800x480		5.7" - 640x480 7" W - 800x480 8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1" - 800x600 12.1" - 1024x768 12.1" W - 1280x800 15.0" - 1024x768 15.6" W - 1366x768		7" W - 800x480 10.1" W - 1280x800 12.1" W - 1280x800 15.6" W - 1366x768	7" W - 800x480 8.4" - 800x600 10.4" - 800x600 10.1" W - 1280x800 12.1" - 800x600 12.1" - 1024x768 12.1" W - 1280x800 15.0" - 1024x768 15.6" W - 1366x768		7" W - 800x480 10.1" W - 1280x800 12.1" W - 1280x800 15.6" W - 1366x768
TOUCHSCREEN	Resistive 4 wires		Resistive 4 wires for 5.7" and 7" Resistive 5 wires for other sizes		P-CAP Multitouch	Resistive 4 wires for 5.7" and 7" Resistive 5 wires for other sizes		P-CAP Multitouch
FRONT PANEL	Aluminium	Aluminium True Flat	Aluminium	Aluminium True Flat		Aluminium	Aluminium True Flat	
PROTECTION GRADE	IP66, Enclosure type 4x - frontal							
PROCESSOR	ARM Cortex A8 processor NXP i.MX535 1 GHz					ARM Cortex A8 processor NXP i.MX537 800 MHz		
SYSTEM MEMORY - RAM	1 GB with DDR3 soldered							
MASS STORAGE	256 MB Read-Only NAND-Flash for operating system and runtime							
	4 GB eMMC psuedo-SLC, file system organization for projects and applications							
	-		1 x Slot SD/SDHC v2.0					
LAN	LAN1 EtherNET 100 Mbps (RJ45)		LAN1 Ethernet 100 Mbps (RJ45)					
			LAN2 Ethernet 10/100 Mbps (RJ45)					
USB	1 x USB 2.0 (Type-A, rear)		2 x USB 2.0 (Type-A, rear)					
SERIAL	1 x RS-232/422/485 (DB15M)							
FIELDBUS	-					1 x CAN isolated channel (DB9M) with FlexCAN integrated controller		
POWER SUPPLY UNIT	24VDC					24VDC isolated		
	-		Backup for microinterruption, max 500ms, with supercapacitors (optional)					
OPERATING TEMPERATURE	0°- 50°C							
APPROVALS	CE, cULus LISTED (508)		CE, cULus LISTED (508), ATEX zone 22, II 3 D		CE, cULus LISTED (508), ATEX zone 2/22, II 3 G D	CE, cULus LISTED (508)		

RT40 [new]

ARM multicore Cortex A9 based Panels

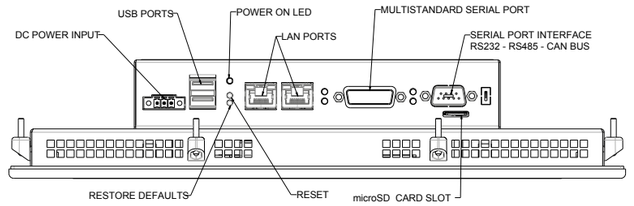
RT40 panels are based on Windows Embedded Compact 7 Pro or Linux operating system and are available with a wide range of 16 million colors LED backlight TFT LCD sizes with Aluminium (resistive touchscreen), Aluminium True Flat (resistive touchscreen) or Aluminium True Flat Multitouch front panels (glass projected capacitive touchscreen).
RT40 systems are based on the ARM Cortex A9 1.0 GHz multicore processors (NXP i.MX6 DualLite and QuadPlus) with 1 or 2 GB system RAM (DDR3-1600/800), 4 GB Pseudo-SLC eMMC memory and a slot for a removable MicroSD memory card and, as an option, 512 kb MRAM (Magnetoresistive RAM) for rententive data storage at power down to be used in combination with the MicroUPS.
The motherboard includes the isolated 24 VDC power supply, two 10/100/1000 Mbps Ethernet interfaces, an RS-232/422/485 configurable serial port with MPI protocol support, two USB 2.0 interfaces and an optional MicroUPS (removable). RT40, optionally, can be supplied with an additional isolated CAN interface or an isolated RS-485 serial port.

Highlights

- Windows Embedded Compact 7 PRO or Linux operating system
- 8.4", 10.4", 12.1", 15" displays in 4:3 aspect ratio; 10.1" and 12.1" displays in 16:10 aspect ratio, 7", 15.6" and 18.5" displays in 16:9 aspect ratio
- ARM Cortex A9 multicore processors (i.MX6 DualLite or QuadPlus)
- Optional MicroUPS (removable and easily exchangeable)
- Optional isolated CAN interface or additional isolated RS485 port
- Front panel in Aluminium or Aluminium True Flat with resistive touchscreen
- Front panel in Aluminium True Flat Multitouch with glass projected capacitive touchscreen (for 16:10 and 16:9 aspect ratio front panels)
- IP66 front degree of protection - Enclosure type 4X (Indoor use only)
- Isolated power supply with galvanic isolation
- Operating temperature 0°C÷+50°C
- ATEX approval Zone 2/22

Gallery

I/O shield



Technical data

	RT40	RT40-TF	RT40-TFM
O.S. INSTALLED	Windows Embedded Compact 7 Pro or Linux		
PROCESSOR	ARM Cortex A9 1GHz i.MX6 DualLite or QuadPlus		
DRAM / SYSTEM MEMORY	1 GB DDR3 soldered		
MASS STORAGE	4 GB eMMC Pseudo-SLC		
	1x microSD slot on board with external access		
LED backlight TFT LCD	7" W - 800x480 8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1" - 800x600 12.1" - 1024x768 12.1" W- 1280x800 15.0" - 1024x768 15.6" W - 1366x768		7" W - 800x480 10.1" W - 1280x800 12.1" W- 1280x800 15.6" W - 1366x768
TOUCHSCREEN	Resistive 4 / 5 wires		P-CAP Multitouch
FRONT PANEL	Aluminium	Aluminium True Flat	Aluminium True Flat Multitouch
PROTECTION DEGREE	IP66, Enclosure type 4x - front		
INTERFACES	2 x LAN 10/100/1000 Mbps		
	2 x USB 2.0 (Type-A, rear)		
	1 x RS232/422/485 (DB15M) with MPI support (187Kb/s)		
	1 x RS485 isolated (DB9M) with terminations (optional)		
	1 x CAN isolated channel (DB9M) and terminations (optional)		
POWER SUPPLY UNIT	24VDC isolated		
	MicroUPS removable (optional)		
OPERATING TEMPERATURE	0°- 50°C		
APPROVALS	CE, cULus LISTED (508), ATEX zone 22, II 3 D	CE, cULus LISTED (508), ATEX zone 2/22, II 3 G D	

Panel IPCs

ASEM Panel IPCs are low consumption and high computing performances systems, with or without fans, based on Atom, Celeron and Core™ i3, i5, i7 dual and quad core processors. Available with TFT LCDs from 6.5" to 24" and Aluminium, Aluminium True Flat, Stainless Steel True Flat with resistive touchscreens and Aluminium/Aluminium True Flat front Panels and Aluminium True Flat with glass projected capacitive Multitouch-screen.

HT2000

Fanless Panel IPC based on Intel® Cedar Trail platform

The fanless HT2000 Panel IPC family is based on Intel® Cedar Trail platform with 1,86 GHz dual core D2550 3rd generation Atom processor. The all-in-one motherboard features four rear access USB 2.0 ports, two 10/100/1000 Mbps Ethernet ports with “Jumbo Frame" and “Wake on Lan" support, one serial RS232 interface, one rear external access CFast SATA II slot and up to 4 GB DDR3 RAM.
HT2000 family is available with 10.4", 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio, 10.1”, 12.1” in 16:10 Wide aspect ratio, 15.6”, 18.5” and 21.5" in 16:9 Wide aspect ratio 16 million colors TFT LED Backlight LCDs and aluminium (HT) or aluminium True Flat (HT-TF) with 5 wires resistive touchscreen front panels with one USB port.

The versions with 10.1”, 12.1” 15.6”, 18.5" and 21.5" Wide LCDs are also available with Aluminium True Flat front panels with glass projected capacitive Multitouch-screen (HT-TFM).
Panels with 12.1", 15", 17" and 19" LCDs are also available with Stainless Steel True Flat front panels (HT-TFX).

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ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Fanless Panel IPC with 0-50° C operating temperature
- → Intel® Cedar Trail platform and 1,86 GHz D2550 dual core processor
- → 10.4", 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio, 10.1”, 12.1” in 16:10 Wide aspect ratio, 15.6”, 18.5” and 21.5” in 16:9 Wide aspect ratio TFT LCDs
- → Built-in UPS with external battery pack (optional)
- → 1 PCI or 1 PCIe x1 expansion slot (S1 version)
- → IP66 front protection degree
- → CE, cULus LISTED (508) certification

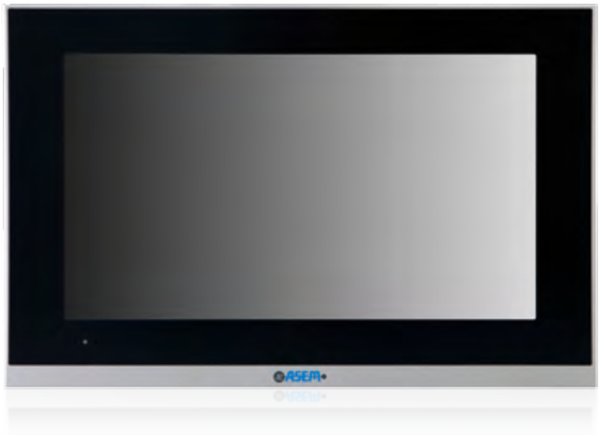
Gallery

Technical data

	HT2000	HT2000-TF	HT2000-TFX	HT2000-TFM
LED backlight TFT LCD	10.1" W - 1280x800 10.4" - 800x600 12.1" - 800x600 12.1" - 1024x768 12.1" W - 1280x800 15.0" - 1024x768 15.6" - 1366x768 17" - 1280x1024 18.5" - 1366x768 19" - 1280x1024 21.5"- 1920x1080		12.1" - 800x600 12.1" - 1024x768 15.0" - 1024x768 17" - 1280x1024 19" - 1280x1024	10.1" W - 1280x800 12.1" W - 1280x800 15.6" - 1366x768 18.5" - 1366x768 21.5"- 1920x1080
TOUCHSCREEN	Resistive 5 wires GFG (optional)	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch
FRONT PANEL	Aluminium	True Flat Aluminium	Stainless Steel True Flat	True Flat Aluminium
PROTECTION GRADE	IP66 - frontal			
PROCESSOR	Intel® Atom™ D2550 1,86 GHz, 2 cores / 4 threads, 1MB L2 cache, soldered			
CHIPSET	Intel® NM10			
VIDEO CONTROLLER	GMA3650 Integrated in Intel® Atom™ microprocessor, 640MHz, LVDS 8bit/color digital interface			
SYSTEM MEMORY - RAM	1GB or 2GB or 4GB (1 x SODIMM DDR3 module)			
MASS STORAGE	1 bootable CFast slot on board with external access			
	1 x SSD 2,5" or 1 x HDD 2,5" SATA II			
LAN	2 x LAN 10/100/1000Mbps (2 x Intel® 82574L)			
USB	4 x USB 2.0 (Type-A, rear)		4 x USB 2.0 (Type-A, rear)	
	1 x USB 2.0 (Type-A, front)			
SERIAL	1 x RS232 (DB9M)			
VIDEO OUTPUT	1 x VGA or 1 x DVI-I (DVI-D + VGA)			
ADD-ON INTERFACES (optional, max 1)	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A)			
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)			
	2 x RS232 (DB9M)			
	2 x USB 2.0 (Type-A)			
EXPANSION SLOTS S0	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards			
S1	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards			
	1 x PCI or 1 x PCIe x1 (2.5 Gb/s)			
POWER SUPPLY UNIT	24VDC isolated with or without UPS (optional) with external battery pack			
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32 bit, Windows XP Pro 32 bit, Microsoft Windows Embedded Standard 7E/7P 32 bit, Windows Embedded Standard 2009 (XPe SP3) 32 bit, Microsoft Windows Embedded Compact 7 Pro			
OPERATING TEMPERATURE	0°- 50°C			
	0°- 45°C with 24x7 HDD			
	5°- 45°C with standard HDD			
APPROVALS	CE, cULus LISTED (508)			

HT2150 [new]

Entry level fanless Panel IPC based on Intel® Bay Trail platform



The fanless Panel IPC family HT2150 is an entry-level solution (available with small LCD sizes) that offers an excellent performance/price ratio.
It is based on the Celeron J1900 2GHz quad core 64 bit processor of the Intel® Bay Trail™ System On Chip (SoC) platform.
The "all in one" motherboard provides two Ethernet 10/100/1000Mbps ports, that support "Jumbo Frame" and "Wake on Lan" functionalities, a USB 3.0 port, a USB 2.0 port, a SATA II CFast slot with rear access, an mSATA connector for SATA II SSD, up to 8 GB RAM with one DDR3 SODIMM module and an internal connector for additional serial or USB interfaces.
HT2150 IPCs are available with 16 milion color LED Backlight TFT LCDs form 6.5" to 15.6", in 4:3 and Wide aspect ratio, with Aluminium or Aluminium True flat front panels, 5 wires resistive touchscreen and an additional USB 2.0 port on front.
All version with Wide LCDs are also available with TrueFlat Multitouch front panels, with glass projected capacitive touchscreen.
HT2150 systems have an isolated 24 VDC power supply input and are available in two versions, the SL with a reduced depth and the S0 with the possibility to install additional interfaces.

ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Ubiquity remote assistance software providing remote access to the system
- → Support to 32 or 64 bit operating systems
- → "All in one" motherboard
- → High performance Intel® Bay Trail™ SoC platform
- → Fanless panel IPC with 0-50° C operating temperature
- → 6.5", 8.4", 10.4", 12.1" and 15" LCD in 4:3 aspect ratio, 7", 10.1", 12.1" and 15,6" LCDs in Wide aspect ratio
- → Isolated 24 VDC power supply input
- → SL version with reduced depth
- → S0 version with the possibility to install additional interfaces
- → CE, cULus LISTED (61010) certifications

Gallery

Technical data

	HT2150	HT2150-TF	HT2150-TFM
LED backlight TFT LCD	7" W - 800x480 8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1" - 800x600 12.1" - 1024x768 12.1" W - 1280x800 15.0" - 1024x768 15.6" W - 1366x768		7" W - 800x480 10.1" W - 1280x800 12.1" W - 1280x800 15.6" W - 1366x768
TOUCHSCREEN	Resistive 5 wires GFG (optional)	Resistive 5 wires	P-CAP Multitouch
FRONT PANEL	Aluminium	True Flat Aluminium	True Flat Aluminium
PROTECTION GRADE	IP66 - frontal		
PROCESSOR	Intel® Celeron J1900 2.0Ghz, 4 cores / 4 threads, 2MB L2 cache, soldered		
VIDEO CONTROLLER	Intel® HD Graphics integrated in microprocessor, 688MHz Clock 854MHz Turbo, LVDS 8bit/color digital interface		
SYSTEM MEMORY - RAM	1GB or 2GB or 4GB or 8GB (1 x SODIMM DDR3 module)		
MASS STORAGE	1 bootable CFast slot on board with external access 1 x SSD mSATA SATA II		
LAN	2 x LAN 10/100/1000Mbps (2 x Intel® I210)		
USB	1 x USB 3.0 (Type-A, rear) 1 x USB 2.0 (Type-A, rear) 1 x USB 2.0 (Type-A, front)		1 x USB 3.0 (Type-A, rear) 1 x USB 2.0 (Type-A, rear)
ADD-ON INTERFACES (optional for S0, max 1)	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A) 1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A) 2 x RS232 (DB9M) 1 x USB 2.0 (Type-A)		
POWER SUPPLY UNIT	24VDC isolated		
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit		
OPERATING TEMPERATURE	0°- 50°C		
APPROVALS	CE, cULus LISTED (61010) pending		

HT2200

Fanless Panel IPC based on Intel® Bay Trail platform

The fanless HT2200 Panel IPC family is based on the Intel® Bay Trail SoC Celeron J1900 quad core high performance processor.
The all-in-one motherboard features one rear access USB 3.0 port, two USB 2.0 ports, two 10/100/1000 Mbps Ethernet ports, one serial RS232 interface, one rear external access CFast SATA II slot, one DVI-I (DVI-D + VGA) video output and RAM configuration up to 8 GB DDR3 SODIMM.
HT2200 family is available with 10.4", 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio, 10.1" and 12.1" in 16:10 aspect ratio, 15.6", 18.5", 21.5", 24" in 16:9 Wide aspect ratio 16 million color TFT LED Backlight LCDs and aluminium (HT) or aluminium True Flat (HT-TF) with 5 wires resistive touchscreen front panels with one USB port.
The versions with 10.1", 12.1", 15.6", 18.5", 21.5" and 24" Wide LCDs are also available with Aluminium True Flat front panels with glass projected capacitive Multitouch-screen (HT-TFM).
Panels with 12.1", 15", 17" and 19" LCDs are also available with Stainless Steel True Flat front panels (HT-TFX).

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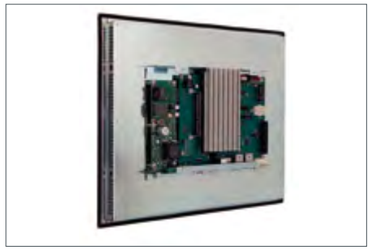
ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- Fanless Panel IPC with 0-50° C operating temperature
- High performance Intel® Bay Trail SoC Celeron J1900 quad core processor
- 10.1", 12.1" in 16:10 aspect ratio, 10.4", 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio, 15.6", 18.5", 21.5", 24" in 16:9 Wide aspect ratio TFT LCDs
- Built-in UPS with external battery pack (optional)
- 1 PCI or 1 PCIe x1 expansion slot (S1 version)
- SL version with reduced depth
- IP66 front panel protection degree
- CE, cULus LISTED (508) certification

Gallery



Technical data

	HT2200	HT2200-TF	HT2200-TFX	HT2200-TFM
LED backlight TFT LCD	10.1" W - 1280x800 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 19" - 1280x1024 21.5" W- 1920x1080 24" W- 1920x1080		12.1" - 800x600 12.1" - 1024x768 15.0" - 1024x768 17" - 1280x1024 19" - 1280x1024	10.1" W - 1280x800 12.1" W - 1280x800 15.6" W - 1366x768 15.6" W - 1920x1080 18.5" W - 1366x768 21.5" W- 1920x1080 24" W- 1920x1080
TOUCHSCREEN	Resistive 5 wires GFG (optional)	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch
FRONT PANEL	Aluminium	True Flat Aluminium	Stainless Steel True Flat	True Flat Aluminium
PROTECTION GRADE	IP66 - frontal			
PROCESSOR	Intel® Celeron J1900 2.0Ghz, 4 cores / 4 threads, 2MB L2 cache, soldered			
VIDEO CONTROLLER	Intel® HD Graphics integrated in microprocessor, 688MHz Clock 854MHz Turbo, LVDS 8bit/color digital interface			
SYSTEM MEMORY - RAM	1GB or 2GB or 4GB or 8GB (1 x SODIMM DDR3 module)			
MASS STORAGE SL	1 bootable CFast slot on board with external access			
	1 x SSD mSATA SATA II			
S0/S1	1 bootable CFast slot on board with external access			
	1 x SSD mSATA SATA II or 1 x SSD 2,5" or 1 x HDD 2,5" SATA II			
LAN	2 x LAN 10/100/1000Mbps (2 x Intel® I210)			
USB	1 x USB 3.0 (Type-A, rear)		1 x USB 3.0 (Type-A, rear)	
	2 x USB 2.0 (Type-A, rear)		2 x USB 2.0 (Type-A, rear)	
	1 x USB 2.0 (Type-A, front)			
SERIAL	1 x RS232 (DB9M)			
VIDEO OUTPUT	1 x DVI-I (DVI-D + VGA with adapter)			
ADD-ON INTERFACES (optional for S0/S1, max 1)	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A)			
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)			
	2 x RS232 (DB9M)			
	2 x USB 2.0 (Type-A)			
	1 x LAN 10/100/1000Mbps (Intel® I210)			
EXPANSION SLOTS S1	1 x PCI or PCIe x1 (2.5 Gb/s)			
POWER SUPPLY UNIT	24VDC isolated with or without UPS (optional) with external battery pack			
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit			
OPERATING TEMPERATURE	0°- 50°C			
	0°- 45°C with 24x7 HDD			
	5°- 45°C with standard HDD			
APPROVALS	CE, cULus LISTED (508)			

HT3000

Fanless Panel IPC based on Intel® Ivy Bridge platform

The fanless HT3000 Panel IPC family is based on the Intel® Ivy Bridge platform and 17 or 35 Watt 3rd generation Core™ i7, Core™ i5, Core™ i3 and Celeron dual core processors soldered on board.
The all-in-one motherboard features two USB 3.0 and two rear access USB 2.0, three 10/100/1000 Mbps Ethernet ports with "Jumbo Frame" and "Wake on Lan" support.
It also features one connector for mSATA SSD, one rear external access CFast SATA II slot, DVI-I (DVI-D + VGA) video output and one connector for 2,5" SATA III HDD or SSD.
The RAM can be configured up to 16 GB with DDR3 SODIMM modules.
HT3000 family is available with 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio, 12.1" in 16:10 aspect ratio and 15.6", 18.5", 21.5", 24" in Wide 16:9 aspect ratio 16 million color TFT LED Backlight LCDs and aluminium (HT) or aluminium True Flat (HT-TF) with 5 wires resistive touchscreen front panels with one USB port.
The versions with 12.1", 15.6", 18.5", 21.5" and 24" Wide LCDs are also available with Aluminium True Flat front panels with glass projected capacitive Multitouch-screen (HT-TFM).
Panels with 12.1", 15", 17" and 19" LCDs are also available with Stainless Steel True Flat front panels (HT-TFX).

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ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- Fanless Panel IPC with 0-50° C operating temperature
- Intel® Ivy Bridge platform with 3rd generation Core™ i3, Core™ i5, Core™ i7 dual and quad core and Celeron dual core up to 35 W
- 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio, 12.1" in 16:10 aspect ratio, 15.6", 18.5", 21,5" and 24" in Wide 16:9 aspect ratio TFT LCDs
- 1 PCI or 1 PCIe x4 expansion slots (S1 version)
- IP66 front panel protection degree
- CE, cULus LISTED (508) certifications

Gallery

Technical data

	HT3000	HT3000-TF	HT3000-TFX	HT3000-TFM
LED backlight TFT LCD	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 19" - 1280x1024 21.5" W - 1920x1080 24" W - 1920x1080	12.1" - 800x600 12.1" - 1024x768 15.0" - 1024x768 17" - 1280x1024 19" - 1280x1024	12.1" W - 1280x800 15.6" W - 1366x768 15.6" W - 1920x1080 18.5" W - 1366x768 21.5" W- 1920x1080 24" W - 1920x1080
TOUCHSCREEN	Resistive 5 wires	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch
	GFG (optional)			
FRONT PANEL	Aluminium	True Flat Aluminium	Stainless Steel True Flat	True Flat Aluminium
PROCESSOR (soldered)	Intel® Celeron™ 1047E, 1.40GHz, 2 cores / 2 threads, 2MB Smart cache, 17W			
	Intel® Celeron™ 1020E, 2.20GHz, 2 cores / 2 threads, 2MB Smart cache, 35W			
	Intel® Core™ i3-3120ME, 2.40GHz, 2 cores / 4 threads, 3MB Smart cache, 35W			
	Intel® Core™ i5-3610ME, 2.70GHz (3.3GHz Turbo), 2 cores / 4 threads, 3MB Smart cache, 35W			
	Intel® Core™ i7-3612QE, 2.1GHz (3.1GHz Turbo), 4 cores / 8 threads, 6MB Smart cache, 35W			
CHIPSET	Intel® HM76 Express Chipset			
VIDEO CONTROLLER	Intel® HD Graphics, 650MHz integrated in Celeron™ microprocessor			
	Intel® HD Graphics 4000, 650MHz integrated in Core™ microprocessor			
SYSTEM MEMORY - RAM	2GB or 4GB or 8GB or 16GB (2 x SODIMM DDR3 modules)			
MASS STORAGE	1 bootable CFast slot on board with external access			
	1 x SSD 2,5" or 1 x HDD 2,5" SATA III			
	1 x mSATA SSD SATA III			
LAN	3 x LAN 10/100/1000Mbps (2 x Intel® 82574L, 1 x Intel®82579LM)			
USB	2 x USB 3.0 (Type-A, rear)		2 x USB 3.0 (Type-A, rear)	
	2 x USB 2.0 (Type-A, rear)		2 x USB 2.0 (Type-A, rear)	
	1 x USB 2.0 (Type-A, front)			
SERIAL	1 x RS232 (DB9M)			
PS/2	1 x PS/2 for keyboard or mouse			
VIDEO OUTPUT	1 x VGA or 1 x DVI-I (DVI-D + VGA)			
ADD-ON INTERFACES (optional, max 1)	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A)			
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)			
	2 x RS232 (DB9M)			
	2 x USB 2.0 (Type-A)			
	1 x Ethernet10/100/1000Mpbs, Intel® 82574L			
	Unmanaged Ethernet switch 4 x 10/100/1000Mbps			
EXPANSION SLOTS S0	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards			
S1	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards			
	1 x PCI or 1 x PCIe x4 (5 Gb/s)			
POWER SUPPLY UNIT	24VDC isolated with or without UPS (optional) with external battery pack			
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Windows XP Pro 32 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Windows Embedded Standard 2009 (XPe SP3) 32 bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit			
OPERATING TEMPERATURE	0°- 50°C			
	0°- 45°C with 24x7 HDD			
	5°- 45°C with standard HDD			
APPROVALS	CE, cULus LISTED			

HT3200

Fanless Panel IPC based on Intel® Broadwell™ platform

The HT3200 Panel IPCs are based on the x86 Intel® Broadwell platform with Ultra Low Voltage 5th generation Intel® Core™/Celeron processors.
The "all in one" motherboard provides two USB 3.0 and one USB 2.0 ports, three 10/100/1000 Mbps Ethernet ports, one serial RS232, one optional serial RS232/422/485 isolated interface (not available on SL version), one optional 10/100/1000 Mbps Ethernet interface, a DVI-I (DVI-D + VGA) video output, one SATA III CFast slot, one SATA III mSATA SSD slot or one connector for 2,5" SATA III HDD or SSD (not available on SL version) and up to 8 GB RAM with a single DDR3 SODIMM module.
HT3200 family is available with 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4, 12.1" in 16:10 and 15.6", 18.5", 21.5", 24" in Wide 16:9 aspect ratio 16 million colour TFT LED Backlight LCDs and aluminium (HT), aluminium True Flat (HT-TF) front panels, with 5 wires resistive touchscreen and one USB port. The versions with 12.1", 15.6", 18.5", 21.5" and 24" Wide LCDs are also available with Aluminium True Flat front panels with glass projected capacitive Multitouch-screen (HT-TFM). Panels with 12.1"(4:3), 15", 17" and 19" LCDs are also available with Stainless Steel True Flat front panels (HT-TFX).

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ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- Fanless Panel IPC with 0-50° C operating temperature
- Intel® 5th generation Core and Celeron processors
- 12.1" and 15" in 4:3; 17" and 19" in 5:412.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio, 12.1" in 16:10 aspect ratio, 15.6", 18.5", 21.5" and 24" in Wide 16:9 aspect ratio TFT LCDs
- Built-in UPS with external battery pack (optional)
- 1 PCI or 1 PCIe x4 expansion slot (S1 version)
- SL version with reduced depth
- IP66 front panel protection degree
- Optional TPM module
- Optional 4th Ethernet 10/100/1000 Mbps interface
- CE, cULus LISTED (508) certifications

Gallery

Technical data

	HT3200	HT3200-TF	HT3200-TFX	HT3200-TFM
LED backlight TFT LCD	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 19" - 1280x1024 21.5" W - 1920x1080 24" W - 1920x1080	15.0" - 1024x768 17" - 1280x1024 19" - 1280x1024	12.1" W - 1280x800 15.6" W - 1366x768 15.6" W - 1920x1080 18.5" W - 1366x768 21.5" W - 1920x1080 24" W - 1920x1080
TOUCHSCREEN	Resistive 5 wires GFG (optional)	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch
FRONT PANEL	Aluminium	Aluminium True Flat	Stainless Steel True Flat	Aluminium True Flat and Glass
PROTECTION GRADE	IP66 - front			
PROCESSOR (soldered)	Intel® Celeron 3765U 1,9Ghz, 2 cores - 2 threads - 2MB smart cache - 15W Intel® Core™ i3-5010U 2,1Ghz, 2 cores - 4 threads - 3MB smart cache - 15W Intel® Core™ i5-5350U 1,8Ghz (2,9GHz Turbo), 2 cores - 4 threads - 3MB smart cache - 15W Intel® Core™ i7-5650U 2,2Ghz (3,1GHz Turbo), 2 cores - 4 threads - 4MB smart cache - 15W			
CHIPSET	Intel® Broadwell PCH-LP (Platform Controller Hub - Low Power) • Included into processor chip			
VIDEO CONTROLLER	Intel® HD Graphics integrated in microprocessor Celeron 3765U, 850MHz Clock Intel® HD Graphics 5500 integrated in microprocessor i3, 900MHz Clock Intel® HD Graphics 6000 integrated in microprocessor i5, i7, 1GHz Clock with LVDS 8bit/color digital interface			
SYSTEM MEMORY - RAM	2GB or 4GB or 8GB (1 x SODIMM DDR3 module)			
MASS STORAGE SL	1 bootable CFast SATA II slot on board with external access 1 x SSD mSATA SATA III			
S0/S1	1 bootable CFast SATA II slot on board with external access 1 x SSD mSATA SATA III 1 x SSD or 1 x HDD 2,5" SATA III			
LAN	3 x Ethernet 10/100/1000 Mbps (RJ45 - 2 x Intel® I210-AT, 1 x Intel® I218-LM)			
USB	2 x USB 3.0 (Type-A, rear) 2 x USB 2.0 (Type-A, rear) 1 x USB 2.0 (Type-A, front, protected)		2 x USB 3.0 (Type-A, rear) 1 x USB 2.0 (Type-A, rear)	
SERIAL	1 x RS232 (DB9M)			
VIDEO OUTPUT	1 x DVI-I (DVI-D + VGA with adapter)			
ADD-ON INTERFACES (optional for S0/S1, max 1)	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A) 1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A) 2 x RS232 (DB9M) 2 x USB 2.0 (Type-A)			
EXPANSION SLOTS S1	1 x PCI or 1 x PCIe x4 (5 Gb/s)			
POWER SUPPLY UNIT	24VDC isolated with or without UPS (optional) with external battery pack			
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit			
OPERATING TEMPERATURE	0°- 50°C 0°- 45°C with 24x7 HDD 5°- 45°C with standard HDD			
APPROVALS	CE, cULus LISTED (508) pending			

HT5000

Highly expandable Panel IPC based on Intel® Ivy Bridge platform

The HT5000 Panel IPC family is based on Intel® Ivy Bridge platform and 35 or 45 Watt 3rd generation Core™ i3, Core™ i5, Core™ i7 dual and quad core and Celeron dual core processors on socket.
The all-in-one motherboard provides two USB 3.0 and two USB 2.0 with rear access and three 10/100/1000 Mbps Ethernet with "Jumbo Frame" and "Wake on Lan" support.
It also has one connector for mSATA SSD, a serial RS232 interface, one rear external access CFast SATA II slot, a DVI-I (DVI-D + VGA) video output.
HT5000 can also be configured in RAID 0, 1 (optional) and it features connectors for two 2,5" SATA III HDD or SSD (also with extractable drawers).
The RAM can be configured up to 16 GB RAM with two DDR3 SODIMM modules.
HT5000 family is available with 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio and 15.6", 18.5", 21.5", 24" in Wide 16:9 aspect ratio 16 million color TFT LED Backlight LCDs and aluminium (HT) or aluminium True Flat (HT-TF) with 5 wires resistive touchscreen front panels with one USB port.
The versions with 15.6", 18.5", 21.5" and 24" Wide LCDs are also available with Aluminium True Flat front panels with glass projected capacitive Multitouch-screen (HT-TFM).
Panels with 15", 17" and 19" LCDs are also available with Stainless Steel True Flat front panels (HT-TFX).

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ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Panel IPC with 0-50° C operating temperature
- → Intel® Ivy Bridge platform with 3rd generation Core™ i3, Core™ i5, Core™ i7 dual and quad core and Celeron dual core up to 45 W processors on socket
- → 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio and 15.6", 18.5", 21.5", 24" in Wide 16:9 aspect ratio TFT LCDs
- → RAID 0, 1 configurations, also with extractable drawers (optional)
- → 110/230 VAC or isolated 24 VDC power supply input
- → 1 PCI or 1 PCIe x4 (S1 version) or 3 PCI or 2 PCI and 1 PCIe x4 (S3 version) expansion slots
- → IP66 front panel protection degree
- → CE, cULus LISTED (508) certifications

Gallery

Technical data

	HT5000	HT5000-TF	HT5000-TFX	HT5000-TFM
LED backlight TFT LCD	15.0" - 1024x768 15.6" W - 1366x768 15.6" W - 1920x1080 17" - 1280x1024 18.5" W - 1366x768	19" - 1280x1024 21.5" W - 1920x1080 24" W -1920x1080	15.0" - 1024x768 17" - 1280x1024 19" - 1280x1024	15.6" W - 1366x768 15.6" W - 1920x1080 18.5" W - 1366x768 21.5" W - 1920x1080 24" W -1920x1080
TOUCHSCREEN	Resistive 5 wires GFG (optional)	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch
FRONT PANEL	Aluminium	True Flat Aluminium	Stainless Steel True Flat	True Flat Aluminium
PROTECTION GRADE	IP66 - frontal			
PROCESSOR (on socket)	Intel® Celeron™ 1020E, 2.20GHz, 2 cores / 2 threads, 2MB Smart cache, 35W			
	Intel® Core™ i3-3120ME, 2.40GHz, 2 cores / 4 threads, 3MB Smart cache, 35W			
	Intel® Core™ i5-3610ME, 2.70GHz (3.3GHz Turbo), 2 cores / 4 threads, 3MB Smart cache, 35W			
	Intel® Core™ i7-3610QE, 2.30GHz (3.3GHz Turbo), 4 cores / 8 threads, 6MB Smart cache, 45W			
CHIPSET	Intel® HM76 Express Chipset			
VIDEO CONTROLLER	Intel® HD Graphics, 650MHz integrated in Celeron™ microprocessor			
	Intel® HD Graphics 4000, 650MHz integrated in Core™ microprocessor			
SYSTEM MEMORY - RAM	2GB or 4GB or 8GB or 16GB (2 x SODIMM DDR3 modules)			
RAID	RAID 0, 1 (optional) with Intel® QM77 Express Chipset			
MASS STORAGE	1 bootable CFast slot on board with external access 2 x SSD 2,5" or HDD 2,5" SATA III (also in RAID or with extractable drawers) 1 x mSATA SSD SATA III			
LAN	3 x LAN 10/100/1000Mbps (2 x Intel® 82574L, 1 x Intel® 82579LM)			
USB	2 x USB 3.0 (Type-A, rear)		2 x USB 3.0 (Type-A, rear)	
	2 x USB 2.0 (Type-A, rear)		2 x USB 2.0 (Type-A, rear)	
	1 x USB 2.0 (Type-A, front)			
SERIAL	1 x RS232 (DB9M)			
PS/2	1 x PS/2 for keyboard or mouse			
VIDEO OUTPUT	1 x VGA or 1 x DVI-I (DVI-D + VGA)			
ADD-ON INTERFACES (optional, max 1)	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A)			
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)			
	2 x RS232 (DB9M)			
	2 x USB 2.0 (Type-A)			
	1 x Ethernet 10/100/1000Mpbs, Intel® 82574L			
	Unmanaged Ethernet switch 4 x 10/100/1000Mbps			
EXPANSION SLOTS S0	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards			
S1	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards			
	1 x PCI or PCIe x4 (5 Gb/s)			
S3	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards			
	3 x PCI or 2 x PCI + 1 x PCIe x4 (5 Gb/s)			
POWER SUPPLY UNIT	24VDC isolated with or without UPS (optional only for S0 or S1 versions) with external battery pack 110V / 230VAC			
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Windows XP Pro 32 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Windows Embedded Standard 2009 (XPe SP3) 32 bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit			
OPERATING TEMPERATURE	0°- 50°C 0°- 45°C with 24x7 HDD 5°- 45°C with standard HDD			
APPROVALS	CE, cULus LISTED			

Book Mounting IPCs

ASEM recently completed its Box IPC portfolio with a complete range of book mounting systems, combining performances, design, ergonomics and configurability.
Based on Intel® Bay Trail™ and Skylake™ platforms, they are supplied with a sturdy Aluminium chassis, highly refined in every aesthetic and ergonomic details.

BM2150 [new]

Entry level Book Mounting fanless Box IPC based on Intel® Bay Trail™ platform

The Book Mounting fanless IPC BM2150 is an entry-level solution that offers an excellent performance/price ratio.
It is based on the Celeron J1900 2GHz quad core 64 bit processor of the Intel® Bay Trail™ System On Chip (SoC) platform.

The “all in one” motherboard provides, on top, two Ethernet 10/100/1000Mbps ports, that support “Jumbo Frame” and “Wake on Lan” functionalities, one USB 3.0 port, one USB 2.0 port, a DVI-D video output and on front a SATA II CFast slot.

The motherboard has also an mSATA connector for SATA II SSD, up to 8 GB RAM with one DDR3 SODIMM module and an internal connector for additional serial or USB interfaces.
BM2150 system has an isolated 24 VDC power supply input.

ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Ubiquity remote assistance software providing remote access to the system
- → Support to 32 or 64 bit operating systems
- → “All in one” motherboard
- → High performance Intel® Bay Trail™ SoC platform
- → Fanless book mounting IPC with 0-50° C operating temperature
- → Isolated 24 VDC power supply input
- → CE, cULus LISTED (61010) certifications

Gallery

Technical data

	BM2150
PROCESSOR	Intel® Celeron J1900 2.00Ghz 64 bit, 4 cores / 4 threads, 2MB L2 cache, soldered
VIDEO CONTROLLER	Intel® HD Graphics integrated in microprocessor, 688MHz Clock 854MHz Turbo, LVDS 8bit/color digital interface
SYSTEM MEMORY - RAM	1GB or 2GB or 4GB or 8GB (1 x SODIMM DDR3 module)
MASS STORAGE	1 bootable CFast slot on board with front external access
	1 x SSD mSATA SATA II
LAN	2 x LAN 10/100/1000Mbps (2 x Intel® I210, top)
USB	1 x USB 3.0 (Type-A) 1 x USB 2.0 (Type-A)
BATTERY	1 x CR2032 internal access
VIDEO OUTPUT	1 x DVI-D (top)
ADD-ON INTERFACES	1 x RS232/422/485 (DB15M) + 1 x USB 2.0 (Type-A)
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)
	2 x RS232 (DB9M)
	1 x USB 2.0 (Type-A)
POWER SUPPLY UNIT	24VDC isolated
CASE Installation	For book mounting
Material	Alluminium alloy 6082/5754/5056, Plastic front door
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 2016 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit
OPERATING TEMPERATURE	0°- 50°C
APPROVALS	CE, cULus LISTED (61010) pending

BM2200 [new]

Book Mounting fanless Box IPC based on Intel® Bay Trail™ platform

The Book Mounting fanless IPC BM2200 is based on the Celeron J1900 2GHz quad core 64 bit processor of the Intel® Bay Trail™ System On Chip (SoC) platform.
BM2200 systems are supplied with a sturdy Aluminium chassis, highly refined in every aesthetic and ergonomic detail.
The "all in one" motherboard provides, on top, two Ethernet 10/100/1000Mbps ports, that support "Jumbo Frame" and "Wake on Lan" functionalities, two USB 2.0 ports, a DVI-I (DVI-D + VGA) video output or, as an alternative, a Remote Video Link connector (RJ45); on front, a USB 3.0 port, a SATA II CFast slot, a slot for the extractable system battery and the signaling LEDs.
The motherboard has also an mSATA connector for a SATA II SSD, a SATA II connector for a 2,5" SSD/HDD, up to 8 GB RAM with one DDR3 SODIMM module and an internal connector for additional serial or LAN interfaces.
BM2200 systems have an isolated 24 VDC power supply input and an integrated UPS with external battery pack.

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ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Ubiquity remote assistance software providing remote access to the system
- → Highly refined aluminium chassis
- → Remote Video Link - remotation of DVI and USB 2.0 signals up to 100m with Cat 5e SF/UTP or a Cat 6A S/FTP cable (BM2200 RVL)
- → "All in one" motherboard
- → High performance Intel® Bay Trail™ SoC platform
- → Fanless Book Mounting IPCs with 0-50° C operating temperature
- → Isolated 24 VDC power supply input
- → Integrated UPS with external battery pack (optional)

Gallery

Technical data

	BM2200	BM2200 RVL
PROCESSOR	Intel® Celeron J1900 2.00Ghz a 64 bit, 4 cores / 4 threads, 2MB L2 cache, soldered	
VIDEO CONTROLLER	Intel® HD Graphics integrated in microprocessor, 688MHz Clock 854MHz Turbo, LVDS 8bit/color digital interface	
SYSTEM MEMORY - RAM	1GB or 2GB or 4GB or 8GB (1 x SODIMM DDR3 module)	
TPM	TPM module (optional)	
MASS STORAGE	1 bootable CFast slot on board with external access (front)	
	1 x SSD mSATA SATA II or 1 x SSD or 1 x HDD 2,5" SATA II	
LAN	2 x LAN 10/100/1000Mbps (2 x Intel® I210)	
USB	1 x USB 3.0 (Type-A, front)	
	2 x USB 2.0 (Type-A, top)	
BATTERY	1 x CR2032 Removable from the front	
VIDEO OUTPUT	1 x DVI-I (DVI-D + VGA with adapter, top)	RJ45 connector for the DVI-D and USB 2.0 signals remotation up to 100mt
ADD-ON INTERFACES	1 x RS232/422/485 (DB15M) + 2 x RS232 (DB9M)	
	1 x RS232/422/485 (DB15M) isolated + 2 x RS232 (DB9M)	
	1 x RS232/422/485 (DB15M) + 1 x LAN 10/100/1000Mbps (Intel® I210)	
	1 x RS232/422/485 (DB15M) isolated + 1 x LAN 10/100/1000Mbps (Intel® I210)	
POWER SUPPLY UNIT	24VDC isolated or 24VDC isolated with UPS with external battery pack	
CASE Installation	For book mounting	
Material	Alluminium alloy 6082/5754/5056	
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 2016 64 bit , Microsoft Windows 10 IoT Enterprise 2016 64 bit	
OPERATING TEMPERATURE	0°- 50°C	
	0°- 45°C with HDD 24x7	
	5°- 45°C with standard HDD	
APPROVALS	CE, cULus LISTED (61010) pending	

BM3400 [new]

Performance Book Mounting fanless Box IPC based on Intel® Skylake™ platform

The Book Mounting fanless IPC BM3400 is based on Celeron, Core™ i3, i5 and i7 dual and quad core 64 bit processors of the Intel® Skylake™ platform.
BM3400 systems are supplied with a sturdy Aluminium chassis, highly refined in every aesthetic and ergonomic detail.
The "all in one" motherboard provides, on top, four Ethernet 10/100/1000Mbps ports, that support "Jumbo Frame" and "Wake on Lan" functionalities, two USB 2.0 ports, two USB 3.0 ports, one DVI-D video output and, as an option, one or two Remote Video Link connectors (RJ45); on front, a USB 3.0 port, a SATA III CFast slot, a slot for the extractable system battery, the signaling LEDs and optionally two slots for extractable storage units drawers.
The motherboard has also an mSATA connector for a SATA III SSD, two SATA III connector for 2,5" SSD/HDDs, the possibility to set the mass storage devices in RAID 0, 1 configuration, up to 32 GB RAM with two DDR4 SODIMM modules and an internal connector for additional serial or USB interfaces.
BM3400 systems are provided with 24 VDC power supply input and optionally an integrated UPS with external battery pack.
The systems are available in two versions, the S0 with the possibility to install additional interfaces and the S2 with two PCI/PCIe expansion slots.

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ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Ubiquity remote assistance software providing remote access to the system
- → Highly refined aluminium chassis
- → Up to 2 Remote Video Link - remotation of DVI and USB 2.0 signals up to 100m via Cat 5e SF/UTP or Cat 6A S/FTP cable (optional)
- → "All in one" motherboard
- → High performance Intel® Skylake™ platform with 6th generation Core processors
- → Fanless book mounting IPC with 0-50° C operating temperature
- → Isolated 24 VDC power supply input
- → Integrated UPS with external battery pack (optional)
- → 2 x PCIe x4 or 1 x PCI + 1 x PCIe x4 (S2 version)
- → CE, cULus LISTED (61010) certifications

Gallery

Technical data

	BM3400
PROCESSORS	Intel® Celeron G3900E 2.40GHz 64 bit, 2 cores / 2 threads, 2MB Smart cache, soldered Intel® Core i3-6100E 2.70GHz 64 bit, 2 cores / 4 threads, 3MB Smart cache, soldered Intel® Core i5-6440EQ 2.70GHz (3.40GHz Turbo) 64 bit, 4 cores / 4 threads, 6MB Smart cache, soldered Intel® Core i7-6820EQ 2.80GHz (3.50GHz Turbo) 64 bit, 4 cores / 8 threads, 8MB Smart cache, soldered
VIDEO CONTROLLER	Intel® HM170 PCH (Platform Controller Hub)
PROCESSORS	Intel® HD Graphics 510 integrated in Celeron 3900E processor ▪ 350MHz/950MHz ▪ DirectX 12 and OpenGL 4.4 support Intel® HD Graphics 530 integrated in Core i3-6100E processor ▪ 350MHz/950MHz ▪ DirectX 12 and OpenGL 4.4 support Intel® HD Graphics 530 integrated in Core i5-6440EQ, Core i7-6820EQ processors ▪ 350MHz/1,00GHz ▪ DirectX 12 and OpenGL 4.4 support Intel® HD Graphics P530 integrated in Xeon processor ▪ 350MHz/1,05GHz ▪ DirectX 12 and OpenGL 4.4 support
SYSTEM MEMORY - RAM	4GB or 8GB or 16GB or 32GB (2 x SODIMM DDR4 modules)
TPM	TPM module (optional)
MASS STORAGE S0 / S2	1 bootable CFast slot on board with front external access 1 x SSD mSATA SATA III
S0	without RVL: 1 x SSD/HDD 2,5" SATA 3 or max 2 x SSD/HDD 2,5" SATA 3 with front extractable drawer with RVL: 1 x SSD/HDD 2,5" SATA 3 or 1 x SSD/HDD 2,5" SATA 3 with front extractable drawer
S2	max 2 x SSD/HDD 2,5" SATA 3 or max 2 x SSD/HDD 2,5" SATA 3 with front extractable drawer
RAID	RAID 0, 1
LAN	4 x LAN 10/100/1000Mbps (3 x Intel® I210 + 1 x Intel® I219LM)
USB	1 x USB 3.0 (Type-A, front)
	2 x USB 2.0 (Type-A, top) + 2 x USB 3.0 (Type-A, top)
SERIAL	1 x RS232 (DB9M)
BATTERY	1 x CR2032 Removable from the front
VIDEO OUTPUT	1 x DVI-D (top) 1 or 2 x RJ45 connectors Remote Video Link (DVI-D and USB 2.0 signals remotation up to 100 m, optional)
ADD-ON INTERFACES (optional)	1 x RS232/422/485 (DB15M) + 1 x USB 2.0 (Type-A)
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)
	2 x RS232 (DB9M)
	2 x USB 2.0 (Type-A)
	1 x RS232/422/485 (DB15M) + 1 x LAN 10/100/1000Mbps
EXPANSION SLOTS S2	2 x PCIe x4 or 1 x PCI + 1 x PCIe x4 (5 Gb/s)
POWER SUPPLY UNIT	24VDC isolated
	24VDC isolated with UPS (optional) with external battery pack
CASE Installation	For book mounting
Material	Alluminium alloy 6082/5754/5056
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 2016 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with HDD 24x7 or S2 versions
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED (61010) pending

Box IPCs

ASEM provides a full range of Box IPCs in terms of configurability, dimensions and performances. They are based on Atom, Celeron, Core™ i3, i5, i7 dual and quad core processors and they are suitable for wall or DIN rail mounting.

PB2000

Fanless Box IPC with Intel® Atom D2550 processor

The fanless PB2000 Box IPC is based on Intel® Cedar Trail platform with 1,86 GHz dual core D2550 3rd generation Atom processor.
The all-in-one motherboard provides four USB 2.0 ports, two 10/100/1000 Mbps Ethernet ports with "Jumbo Frame" and "Wake on Lan" support, one serial RS232 interface, one external access CFast SATA II slot, one DVI-I (DVI-D + VGA) video output and up to 4 GB RAM DDR3 with one SODIMM module.
The motherboard has also a connector for SSD 2,5" or HDD 2,5" SATA II.
PB2000 systems have an isolated 24 VDC power supply input and optionally an integrated UPS with external battery pack.

ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Fanless Box IPC with 0-50° C operating temperature
- → Intel® Cedar Trail platform and 1,86 GHz D2550 dual core processor
- → Isolated 24 VDC power supply input
- → Integrated UPS with external battery pack (optional)
- → 1 PCI or 1 PCIe x1 expansion slot (S1 version)
- → Wall or DIN rail installation
- → CE, cULus LISTED (508) certifications

Gallery

Technical data

	PB2000
PROCESSOR	Intel® Atom™ D2550 1,86 GHz, 2 cores / 4 threads, 1MB L2 cache, soldered
CHIPSET	Intel® NM10
VIDEO CONTROLLER	Integrated in Intel® Atom™ microprocessor, 640MHz, LVDS 8bit/color digital interface
SYSTEM MEMORY - RAM	1GB or 2GB or 4GB (1 x SODIMM DDR3 module)
MASS STORAGE	1 bootable CFast slot on board with external access
	1 x SSD 2,5" or 1 HDD 2,5" SATA II
LAN	2 x LAN 10/100/1000Mbps (2 x Intel® 82574L)
USB	4 x USB 2.0 (Type- A)
SERIAL	1 x RS232 (DB9M)
VIDEO OUTPUT	1 x VGA or 1 x DVI-I (DVI-D + VGA)
ADD-ON INTERFACES (optional, max 1)	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A)
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)
	2 x RS232 (DB9M)
	2 x USB 2.0 (Type-A)
EXPANSION SLOTS S0	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards
S1	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards
	1 x PCI or 1 x PCIe x1 (2.5 Gb/s)
POWER SUPPLY UNIT	24VDC isolated with or without UPS (optional) with external battery pack
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32 bit, Windows XP Pro 32 bit, Microsoft Windows Embedded Standard 7E/7P 32 bit, Windows Embedded Standard 2009 (XPe SP3) 32 bit, Microsoft Windows Embedded Compact 7 Pro
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with 24x7 HDD
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED (508)

PB2150 [new]

Fanless Box IPC based on Intel® Bay Trail platform

The fanless Box IPC PB2150 is an entry-level solution that offers an excellent performance/price ratio.
It is based on the Celeron J1900 2GHz quad core 64 bit processor of the Intel® Bay Trail™ System On Chip (SoC) platform.
The "all in one" motherboard provides two Ethernet 10/100/1000Mbps ports, that support "Jumbo Frame" and "Wake on Lan" functionalities, a USB 3.0 port, a USB 2.0 port, one external access SATA II CFast slot, a DVI-D video output, an mSATA connector for SATA II SSD, up to 8 GB RAM with one DDR3 SODIMM module and an internal connector for additional serial or USB interfaces.

PB2150 system has an isolated 24 VDC power supply input and is available in two versions, the SL with a reduced depth and the S0 with the possibility to install additional interfaces.

c UL us LISTED

ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Ubiquity remote assistance software providing remote access to the system
- → "All in one" motherboard
- → High performance Intel® Bay Trail™ SoC platform
- → Fanless Box IPC with 0-50° C operating temperature
- → Isolated 24 VDC power supply input
- → SL version with reduced depth
- → S0 version with the possibility to install additional interfaces
- → CE, cULus LISTED (61010) certifications

Gallery

Technical data

	PB2150
PROCESSOR	Intel® Celeron® Processor J1900 2.00Ghz, 4 cores / 4 threads, 2MB L2, 22nm technology
VIDEO CONTROLLER	Intel® HD Graphics integrated in microprocessor, 688MHz Clock 854MHz Turbo, LVDS 8bit/color digital interface
SYSTEM MEMORY - RAM	1GB or 2GB or 4GB or 8GB (1 x SODIM DDR3 module)
MASS STORAGE	1 bootable CFast slot on board with external access
	1 x SSD mSATA SATA II
LAN	2 x LAN 10/100/1000Mbps (2 x Intel® I210)
USB	1 x USB 3.0 (Type-A, rear)
	1 x USB 2.0 (Type-A, rear)
VIDEO OUTPUT	1 x DVI-D
ADD-ON INTERFACES (optional for S0, max 1)	1 x RS232/422/485 (DB15M) + 1 x USB 2.0 (Type-A)
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)
	2 x RS232 (DB9M)
	1 x USB 2.0 (Type-A)
POWER SUPPLY UNIT	24VDC isolated
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 2016 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit
OPERATING TEMPERATURE	0°- 50°C
APPROVALS	CE, cULus LISTED (61010) pending

PB2200

Fanless Box IPC based on Intel® Bay Trail platform

The fanless PB2200 Box IPC offers an excellent price/performance ratio and is based on the Intel® Bay Trail SoC Celeron J1900 quad core high performance processor. The all-in-one motherboard provides one USB 3.0 port, two USB 2.0 ports, two 10/100/1000 Mbps Ethernet ports, one serial RS232 interface, one external access CFast SATA II slot, one DVI-I (DVI-D + VGA) video output, an mSATA connector for a SATA II SSD, a SATA II connector for a 2,5" SSD/HDD, up to 8 GB RAM with one DDR3 SODIMM module and an internal connector for additional serial or USB interfaces.
BM2200 systems have an isolated 24 VDC power supply input and optionally an integrated UPS with external battery pack.

c UL us LISTED

ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Ubiquity remote assistance software providing remote access to the system
- → Fanless Box IPC with 0-50° C operating temperature
- → High performance Intel® Bay Trail SoC Celeron J1900 quad core processor
- → Isolated 24 VDC power supply input
- → SL version with reduced depth
- → Integrated UPS with external battery pack (optional)
- → 1 PCI or 1 PCIe x1 expansion slot (S1 version)
- → Wall or DIN rail installation
- → CE, cULus LISTED (508) certifications

Gallery

Technical data

	PB2200
PROCESSOR	Intel® Celeron J1900 2.0Ghz, 4 cores / 4 threads, 2MB L2 cache, soldered
VIDEO CONTROLLER	Intel® HD Graphics integrated in microprocessor, 688MHz Clock 854MHz Turbo, LVDS 8bit/color digital interface
SYSTEM MEMORY - RAM	1GB or 2GB or 4GB or 8GB (1 x SODIMM DDR3 module)
MASS STORAGE SL	1 bootable CFast slot on board with external access
	1 x SSD mSATA SATA II
S0/S1	1 bootable CFast slot on board with external access
	1 x SSD 2,5" mSATA SATA II or 1 x SSD 2,5" or HDD 2,5" SATA II
LAN	2 x LAN 10/100/1000Mbps (2 x Intel® I210)
USB	1 x USB 3.0 (Type-A, rear)
	2 x USB 2.0 (Type-A, rear)
SERIAL	1 x RS232 (DB9M)
VIDEO OUTPUT	1 x DVI-I (DVI-D + VGA with adapter)
ADD-ON INTERFACES (optional for S0/S1, max 1)	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A)
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)
	2 x RS232 (DB9M)
	2 x USB 2.0 (Type-A)
EXPANSION SLOTS S1	1 x PCI or PCIe x1 (2.5 Gb/s)
POWER SUPPLY UNIT	24VDC isolated with or without UPS (optional) with external battery pack
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with 24x7 HDD
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED (508)

PB3000 / PB3010

Fanless Box IPC with Intel® Ivy Bridge platform

The fanless PB3000 Box IPC is based on the Intel® Ivy Bridge platform and 17 or 35 Watt 3rd generation Core™ i7, Core™ i5, Core™ i3 and Celeron dual core processors soldered on board.
The all-in-one motherboard provides two USB 3.0, two USB 2.0, three 10/100/1000 Mbps Ethernet ports, with "Jumbo Frame" and "Wake on Lan" support, one connector for mSATA SSD, one external access CFast SATA II slot, one DVI-I (DVI-D + VGA) video output.
It also has one connector for 2,5" SATA III HDD or SSD, one connector for mSATA SSD and up to 16 GB RAM with two DDR3 SODIMM modules.
The PB3010 version has two digital video output, a DVI-I (DVI-D or VGA with an adapter) and a DVI-D.

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ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Ubiquity remote assistance software providing remote access to the system
- → Fanless Box IPC with 0-50° C operating temperature
- → Intel® Ivy Bridge platform with 3rd generation Core™ i3, Core™ i5, Core™ i7 dual and quad core and Celeron dual core up to 35 W processors soldered
- → Isolated 24 VDC power supply input
- → Integrated UPS with external battery pack (optional)
- → 1 PCI or 1 PCIe x4 expansion slots (S1 version)
- → Wall or DIN rail installation
- → CE, cULus LISTED (508) certification

Gallery

Technical data

	PB3000	PB3010
PROCESSOR (soldered)	Intel® Celeron™ 1047UE, 1.40GHz, 2 cores / 2 threads, 2MB smart cache, 17W	
	Intel® Celeron™ 1020E, 2.20GHz, 2 cores / 2 threads, 2MB smart cache, 35W	
	Intel® Core™ i3-3120ME, 2.40GHz, 2 cores / 4 threads, 3MB smart cache, 35W	
	Intel® Core™ i5-3610ME, 2.70GHz (3.3GHz turbo), 2 cores / 4 threads, 3MB smart cache, 35W	
	Intel® Core™ i7-3612QE, 2.1GHz (3.1GHz turbo), 4 cores / 8 threads, 6MB smart cache, 35W	
CHIPSET	Intel® HM76 Express Chipset	
VIDEO CONTROLLER	Intel® HD Graphics, 650MHz integrated in Celeron™microprocessor	
	Intel® HD Graphics 4000, 650MHz integrated in Core™microprocessor	
SYSTEM MEMORY - RAM	2GB or 4GB or 8GB or 16GB (2 x SODIMM DDR3 modules)	
MASS STORAGE	1 bootable CFast slot on board with external access	
	1 x SSD 2,5" or 1 x HDD 2,5" SATA III	
	1 x mSATA SSD SATA III	
LAN	3 x LAN 10/100/1000Mbps (2 x Intel® 82574L, 1 x Intel® 82579LM)	
USB	2 x USB 3.0 (Type-A)	
	2 x USB 2.0 (Type-A)	
SERIAL	1 x RS232 (DB9M)	
VIDEO OUTPUT	1 x VGA or 1 x DVI-I (DVI-D + VGA)	1 x DVI-I
		1 x DVI-D
ADD-ON INTERFACES (optional, max 1)	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A)	
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)	
	2 x RS232 (DB9M)	
	2 x USB 2.0 (Type-A)	
	1 x Ethernet 10/100/1000Mpbs, Intel® 82574L	
	Unmanaged Ethernet switch 4 x 10/100/1000Mbps	
EXPANSION SLOTS S0	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards	-
S1	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards	-
	1 x PCI or 1 x PCIe x4 (5 Gb/s)	1 x PCI or 1 x PCIe x4 (5 Gb/s)
POWER SUPPLY UNIT	24VDC isolated with or without UPS (optional) with external battery pack	
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Windows XP Pro 32 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Windows Embedded Standard 2009 (XPe SP3) 32 bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit	
OPERATING TEMPERATURE	0°- 50°C	
	0°- 45°C with 24x7 HDD	
	5°- 45°C with standard HDD	
APPROVALS	CE, cULus LISTED	

PB3200

Fanless Box IPC based on Intel® Broadwell™ platform

The PB3200 Box IPCs are based on the x86 Intel® Broadwell ULT platform with Ultra Low Voltage 5th generation Intel® Core™/ Celeron™ processors.
The "all in one" motherboard provides two USB 3.0 and one USB 2.0 ports, three 10/100/1000 Mbps Ethernet ports, one serial RS232, one optional serial RS232/422/485 isolated interface (not available on SL version), one optional 10/100/1000 Mbps Ethernet interface, a DVI-I (DVI-D + VGA) video output, one SATA III CFast slot, one SATA III mSATA SSD slot or one connector for 2,5" SATA III HDD or SSD (not available on SL version) and up to 8 GB RAM with a single DDR3 SODIMM module.
PB3200 systems have an isolated 24 VDC power supply input and optionally an integrated UPS with external battery pack.

ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Ubiquity remote assistance software providing remote access to the system
- → Fanless Box IPC with 0-50° C operating temperature
- → Intel® Broadwell ULT platform
- → SL version with reduced depth
- → Isolated 24 VDC power supply input
- → Integrated UPS with external battery pack (optional)
- → 1 PCI or 1 PCIe x4 expansion slot (S1 version)
- → Wall or DIN rail installation
- → Optional 4th Ethernet 10/100/1000 Mbps interface
- → CE, cULus LISTED (508) certifications

Gallery

Technical data

	PB3200
PROCESSORS	Intel® Celeron 3765U 1,9Ghz, 2 cores - 2 threads - 2MB smart cache - 15W
	Intel® Core™ i3-5010U 2,1Ghz, 2 cores - 4 threads - 3MB smart cache - 15W
	Intel® Core™ i5-5350U 1,8Ghz (2,9GHz Turbo), 2 cores - 4 threads - 3MB smart cache - 15W
	Intel® Core™ i7-5650U 2,2Ghz (3,1GHz Turbo), 2 cores - 4 threads - 4MB smart cache - 15W
CHIPSET	Intel® Broadwell PCH-LP (Platform Controller Hub - Low Power) • Included into processor chip
VIDEO CONTROLLER	Intel® HD Graphics integrated in microprocessor Celeron 3765U, 850MHz Clock Intel® HD Graphics 5500 integrated in microprocessor i3, 900MHz Clock Intel® HD Graphics 6000 integrated in microprocessor i5, i7, 1GHz Clock with LVDS 8bit/color digital interface
SYSTEM MEMORY - RAM	2GB or 4GB or 8GB (1 x SODIMM DDR3 module)
MASS STORAGE SL	1 bootable CFast slot on board with external access
	1 x SSD 2,5" or 1 x HDD 2,5" SATA III
S0/S1	1 bootable CFast slot on board with external access
	1 x SSD mSATA SATA III
	1 x SSD or 1 x HDD 2,5" SATA III
LAN	3 x Ethernet 10/100/1000 Mbps (RJ45 - 2 x Intel® I210-AT, 1 x Intel® I218-LM)
USB	2 x USB 3.0 (Type-A)
	2 x USB 2.0 (Type-A)
SERIAL	1 x RS232 (DB9M)
VIDEO OUTPUT	1 x DVI-I (DVI-D + VGA with adapter)
ADD-ON INTERFACES (optional for S0/S1, max 1)	1 x Ethernet 10/100/1000Mpbs
	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A)
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)
	2 x RS232 (DB9M)
	1 x USB 2.0 (Type-A)
EXPANSION SLOTS S1	1 x PCIe x4 (5 Gb/s)
POWER SUPPLY UNIT	24VDC isolated with or without UPS (optional) with external battery pack
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with 24x7 HDD
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED (508) pending

PB5000

Highly expandable Box IPC based on Intel® Ivy Bridge platform

The PB5000 Box IPC is based on Intel® Ivy Bridge platform and 35 or 45 Watt 3rd generation Core™ i3, Core™ i5, Core™ i7 dual and quad core and Celeron dual core processors on socket.
The all-in-one motherboard provides two USB 3.0, two USB 2.0, three 10/100/1000 Mbps Ethernet with "Jumbo Frame" and "Wake on Lan" support, a serial RS232 interface, one external access CFast SATA II slot, one DVI-I (DVI-D + VGA) video output,
It also has two connectors for 2,5" SATA III HDD or SSD, optionally configured in RAID 0, 1, one connector for mSATA SSD and up to 16 GB RAM with two DDR3 SODIMM modules.

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ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Ubiquity remote assistance software providing remote access to the system
- → Box IPC with 0-50° C operating temperature
- → Intel® Ivy Bridge platform with third generation Core™ i3, Core™ i5, Core™ i7 dual and quad core and Celeron dual core up to 45 W processors on socket
- → RAID 0, 1 configurations, also with extractable drawers (optional)
- → 110/230 VAC or isolated 24 VDC power supply input
- → 1 PCI or 1 PCIe x4 (S1 version) or 3 PCI or 2 PCI and 1 PCIe x4 (S3 version) expansion slots
- → Wall mount or DIN rail installation
- → CE, cULus LISTED (508) certifications

Gallery

Technical data

	PB5000
PROCESSOR (on socket)	Intel® Celeron™ 1020E, 2.20GHz, 2 cores / 2 threads, 2MB Smart cache, 35W
	Intel® Core™ i3-3120ME, 2.40GHz, 2 cores / 4 threads, 3MB Smart cache, 35W
	Intel® Core™ i5-3610ME, 2.70GHz (3.3GHz Turbo), 2 cores / 4 threads, 3MB Smart cache, 35W
	Intel® Core™ i7-3610QE, 2.30GHz (3.3GHz Turbo), 4 cores / 8 threads, 6MB Smart cache, 45W
CHIPSET	Intel® HM76 Express Chipset
VIDEO CONTROLLER	Intel® HD Graphics, 650MHz integrated in Celeron™ microprocessor
	Intel® HD Graphics 4000, 650MHz integrated in Core™ microprocessor
SYSTEM MEMORY - RAM	2GB or 4GB or 8GB or 16GB (2 x SODIMM DDR3 modules)
RAID	RAID 0, 1 (optional) with Intel® QM77 Express Chipset
MASS STORAGE	1 bootable CFast slot on board with external access
	2 x SSD 2,5"or HDD 2,5" SATA III (also in RAID or with extractable drawers)
	1 x mSATA SSD SATA III
LAN	3 x LAN 10/100/1000Mbps (2 x Intel® 82574L, 1 x Intel® 82579LM)
USB	2 x USB 3.0 (Type-A)
	2 x USB 2.0 (Type-A)
SERIAL	1 x RS232 (DB9M)
PS/2	1 x PS/2 for keybaord or mouse
VIDEO OUTPUT	1 x VGA or 1 x DVI-I (DVI-D + VGA)
ADD-ON INTERFACES (optional, max 1)	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A)
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)
	2 x RS232 (DB9M)
	2 x USB 2.0 (Type-A)
	1 x Ethernet 10/100/1000Mpbs, Intel® 82574L
	Unmanaged Ethernet switch 4 x 10/100/1000Mbps
EXPANSION SLOTS S0	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards
S1	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards
	1 x PCI or 1 x PCIe x4 (5 Gb/s)
S3	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards
	3 x PCI or 2 x PCI + 1 x PCIe x4 (5 Gb/s)
POWER SUPPLY UNIT	24VDC isolated with or without UPS (optional) with external battery pack
	110V / 230VAC
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Windows XP Pro 32 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Windows Embedded Standard 2009 (XPe SP3) 32 bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with 24x7 HDD
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED

Arm Mounting IPCs

The Arm Mounting IPCs are compact, fanless, ergonomic and easy to install systems with a stylish design. Based on Intel® Broadwell platform they are available with 15.6", 18.5", 21.5" and 24" TFT Led Backlight LCDs in a full IP65 Aluminium chassis.

VK3200

Arm Mounting IPC based on Intel® Broadwell platform

The VK3200 Arm Mounting IPCs are based on the x86 Intel® Broadwell platform with Ultra Low Voltage 5th generation Intel® Core™ processors. They are made of a full IP65 cast Aluminium chassis, powder coated with anti-scratch treatment, combining robustness with ergonomics and aesthetics. VK3200 systems have two USB 3.0 ports with rear external access, one USB port, one Ethernet port, one RFID interface optional on the front and the possibility to install emergency button, key switches, buttons and light indicators.
The "all in one" motherboard provides two USB 2.0 ports, three 10/100/1000 Mbps Ethernet ports, one serial RS232/422/485 interface (optionally isolated), one SATA III CFast slot, one SATA III mSATA SSD slot and up to 8 GB RAM with a DDR3 SODIMM module.

The VK3200 family is available with 15.6", 18.5", 21.5" and 24" in Wide 16:9 aspect ratio 16 million color TFT LED Backlight LCDs and Aluminium True Flat with 5 wires resistive touchscreen or Aluminium True Flat with glass projected capacitive Multitouch-screen front panels.

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ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Arm mounting fanless PC with 0-50° C operating temperature
- → Full IP65 chassis
- → Intel® Broadwell platform
- → 5 wires resistive touchscreen (VK-TF) or P-CAP Multitouch-screen (VK-TFM)
- → Easy installation and cabling
- → Configuration with emergency button, switches, buttons, lights and RFID and USB interfaces
- → Integrated configurable button module
- → CE, cULus LISTED (508) certifications

Gallery

Technical data

	VK3200-TF	VK3200-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	15.6" W - 1366x768 15.6" W - 1920x1080 18.5"W - 1366x768 18.5"W - 1920x1080 21.5" W- 1920x1080 24" W - 1920x1080
TOUCHSCREEN	Resistive 5 wires	P-CAP Multitouch
FRONT PANEL	Alluminum True Flat	Alluminum True Flat
PROTECTION GRADE	Full IP65	
PROCESSOR (soldered)	Intel® Celeron 3765U 1,9Ghz, 2 cores - 2 threads - 2MB smart cache - 15W Intel® Core™ i3-5010U 2,1Ghz, 2 cores - 4 threads - 3MB smart cache - 15W Intel® Core™ i5-5350U 1,8Ghz (2,9GHz Turbo), 2 cores - 4 threads - 3MB smart cache - 15W Intel® Core™ i7-5650U 2,2Ghz (3,1GHz Turbo), 2 cores - 4 threads - 4MB smart cache - 15W	
VIDEO CONTROLLER	Intel® HD Graphics integrated in microprocessor Celeron 3765U, 200/1000MHz Clock Intel® HD Graphics 4400 integrated in microprocessor i3-5010U, 200/1000MHz Clock Intel® HD Graphics 4400 integrated in microprocessor i5-5350U, 200/1100MHz Clock Intel® HD Graphics 5000 integrated in microprocessor i7-5650U, 200/1100MHz Clock with LVDS 8bit/color digital interface	
SYSTEM MEMORY - RAM	2GB or 4GB or 8GB (1 x SODIMM DDR3 module)	
MASS STORAGE	1 bootable CFast SATA III slot on board, internal access	
	1 x SSD mSATA SATA III	
LAN	3 x LAN 10/100/1000Mbps (2 x Intel® I210-AT, 1 x Intel® I218-LM)	
USB	2 x USB 3.0 (Type-A, external rear, protected, IP65)	
	2 x USB 2.0 (Type-A, internal)	
SERIAL (optional)	1 x RS232/422/485 (DB15M)	
	1 x RS232/422/485 (DB15M) isolated	
CASE Installation	For pole or suspension arm mounting system compatible with RITTAL CP-S/ROLEC TARAPLUS/ HASEKE ULT KUPPLUNG 48	
Material	Alluminum alloy EN AB46400	
Color	Anti-scratchable painted - RAL 9006	
BUTTONS AREA (hard wired or slave modular fieldbus version)	Buttons, lights and interfaces on the front panel are optional. 1 x Emergency stop button (always hard wired), 1 x RFID (internally connected to USB), 1 x USB port, lights, button keys and switches (hard wired or fieldbus). Several industrial fieldbus masters are supported. The push-button panel design allows easy device substitution.	
POWER SUPPLY UNIT	24VDC isolated	
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit	
OPERATING TEMPERATURE	0°- 50°C	
APPROVALS	CE, cULus (508)	

VPC2200

Arm Mounting IPC with Intel® Bay Trail™ System on Chip (SoC) platform

The VPC2200 VESA system is based on the System on Chip (SoC) Intel® Bay Trail platform with the Intel® Celeron™ J1900 2,0GHz (2,41 GHz burst frequency) quad core processor. The VPC2200 is an arm or VESA mounting fanless PC , with 16 million colors 15" 4:3 TFT LED backlight LCD, 5 wires resistive touchscreen, aluminium alloy front panel, two USB 2.0 ports (on the front) and IP65 front protection level.

The “all-in-one" motherboard provides a USB 3.0 port, two USB 2.0 ports, two 10/100/1000 Mbps Ethernet port (a further Ethernet port is available as an option), an RS232 (DB9M) serial interface, a CFast SATA II slot, an mSATA SATA II slot for a SSD, a DVI-I (DVI-D + VGA) video output and RAM configurable up to 8 GB with a DDR3 SODIMM module.

The VPC2200-E version integrates a MiniPCI slot for the installation of ASEM NETcore® X boards for industrial fieldbuses. VPC2200 can be configured with a keyboard module and side modules for emergency buttons, key switches, buttons and light indicators.

ASEM STANDARDS

UBIQUITY INSIDE

Highlights

- → Fanless PC for VESA or arm mounting
- → System on Chip (SoC) Intel® Bay Trail™ platform with Intel® Celeron™ J1900 2,0GHz quad core processor
- → System RAM up to 8GB
- → 15"TFT LCD with 5 wires resistive touchscreen
- → Keyboard module and side module for emergency button, key switches, buttons and lights
- → Pole mounting or arm mounting system, compatible with VESA 75-100 / RITTAL CP40 / ROLEC TARAPLUS systems
- → CE certification

Gallery

Technical data

	VPC2200	VPC2200-E
LED backlight TFT LCD	15.0" - 1024x768	
TOUCHSCREEN	Resistive 5 wires	
FRONT PANEL	Aluminium alloy with polycarbonate foil Pantone 429C color	
PROTECTION GRADE	IP65 frontal	
PROCESSOR	Intel® Celeron J1900 2.0Ghz, 4 cores / 4 threads, 2MB L2 cache, soldered	
VIDEO CONTROLLER	Intel® HD Graphics integrated in microprocessor, 688MHz Clock 854MHz Turbo, LVDS 8bit/color digital interface	
SYSTEM MEMORY - RAM	1GB or 2GB or 4GB or 8GB (1 x SODIMM DDR3 module)	
MASS STORAGE	1 x SSD mSATA/2.5" SATA II	1 x SSD mSATA/2.5" SATA II
	1 bootable CFast SATA II slot on board, internal access	
LAN	2 x LAN 10/100/1000Mbps (2 x Intel® I210)	2 x LAN 10/100/1000Mbps (2 x Intel® I210)
	Optional 1 x LAN 10/100/1000Mbps (1 x Intel® I210)	
USB	2 x USB 2.0 (Type-A, external front, protected)	
	1 x USB 3.0 (Type-A, internal)	
	2 x USB 2.0 (Type-A, internal)	
SERIAL	1 x RS232 (DB9M)	
EXPANSION SLOTS	-	1 x MiniPCI dedicated to ASEM fieldbuses
VIDEO OUTPUT	1 x DVI-I (DVI-D + VGA with adapter)	
CASE Installation	For pole or suspension arm mounting system compatible with VESA / RITTAL CP40 / ROLEC TARAPLUS	
Material	Steel	
Color	Anti-scratchable painted RAL 7035	
BUTTONS & LEDS (optional)	Side modules for emergency stop button, buttons, lights, keys and switches	
KEYBOARD (optional)	US-international layout keyboard module with 86 keys and antiglare protection also with emergency button	
POWER SUPPLY UNIT	24VDC isolated	
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 10 64 bit, Microsoft Windows 10 IoT Enterprise 2016 64 bit	
OPERATING TEMPERATURE	0°- 45°C	
APPROVALS	CE	

Rack IPCs

19" 4U rack solutions with a wide range of configurations, motherboards, expansion slots and Intel® Core™ i3, i5, i7, dual and quad core processors.

PR4046 / PR4146

19" Rack IPC with 3rd generation Intel® Core™ processors

19" 4U Rack PR4x46 systems are based on Intel® Pentium dual core and third generation Core™ i3, i5 and i7 dual and quad core up to 3,4 GHz processors.
The motherboard provides three PCI slots, two PCIe x16 slots, one PCIe x4 slots, four USB 3.0 ports, eight USB 2.0 ports, two 10/100/1000 Mbps Ethernet, one RS232/422/485 port, DVI-I and HDMI video outputs, audio I/O and up to 32 GB system memory.
In the systems is possible to install two 3,5" SATA III HDD also with RAID 0, 1, 5, 10 functionality.
The only difference between PR4046 and PR4146 systems is the chassis depth.

Highlights

- → Intel® Pentium dual core and 3rd generation Intel® Core™ i3, i5 and i7 dual and quad core up to 3,4 GHz processors on socket
- → RAID 0, 1, 5, 10 controller on-board
- → 110/230 VAC power supply input
- → Multi HDD with extractable drawers
- → Expansion slots: 3 PCI, 2 PCIe x16, 2 PCIe x4
- → PR4146 version with compact cabinet

PR4047 / PR4147

19" Rack IPC with 4th generation Intel® Core™ processors

19" 4U Rack PR4x47 systems are based on Intel® Pentium dual core and fourth generation Core™ i3, i5 and i7 dual and quad core up to 3,4 GHz processors.
The motherboard provides three PCI slots, two PCIe x16 slots, one PCIe x8 slot, four USB 3.0 ports, eight USB 2.0 ports, two 10/100/1000 Mbps Ethernet, two RS232 ports, DVI-I and Display Port video outputs, audio I/O and up to 32 GB system memory.
In the systems is possible to install two 3,5" SATA III HDD also with RAID 0, 1, 5, 10 functionality.
The only difference between PR4047 and PR4147 systems is the chassis depth.

Highlights

- → Intel® Pentium dual core and 4th generation Intel® Core™ i3, i5 and i7 dual and quad core up to 3,4 GHz processors on socket
- → Motherboard designed for heavy-duty 24/7 industrial applications
- → RAID 0, 1, 5, 10 controller on-board
- → 110/230 VAC power supply input
- → Multi HDD with extractable drawers
- → Expansion slots: 4 PCI, 2 PCIe x16, 1 PCIe x8
- → PR4147 version with compact cabinet

PR4048 / PR4148

19" Rack IPC with 6th generation Intel® Core™ processors

The 19" Rack IPC PR4x48 systems are based on the Pentium dual core, Core™ i3, i5, i7 and Xeon 64 bit processors of the Intel® Skylake™ platform.
The motherboard includes two Ethernet 10/100/1000Mbps ports, that support "Jumbo Frame" and "Wake on Lan" functionalities, four USB 3.0 ports, four USB 2.0 ports, a RS232 serial interface on the back; an mSATA connector for a SATA III SSD, six SATA III connectors for 2,5" SSD/HDD or 3,5" HDD (also on extractable drawers), the possibility to set the mass storages in RAID 0, 1, 5, 10 configuration and up to 64 GB RAM with four DDR4 SODIMM modules.
Two additional USB 2.0 ports are installed on the front of the chassis. PR4x48 systems have 110/230 VAC power supply input.
The only difference between PR4048 and PR4148 systems is the chassis depth.

Highlights

- → Intel® Skylake™ platform with 6th generation Intel Core processors
- → RAID 0, 1, 5, 10 controller on-board
- → Heavy duty (24/7) motherboard for industrial applications
- → 110/230 VAC power supply input
- → Multi HDD with extractable drawers
- → Expansion slots: 2 PCI, 2 PCIe x16, 1 PCIe x8, 2 PCIe x4
- → PR4148 version with compact cabinet

	PR4046	PR4146	PR4047	PR4147	PR4048	PR4148
19" RACK CABINET	long	short	long	short	long	short
MOTHERBOARD	ATX format, CL630-CRM (DFI)		ATX format, D3236-S (Fujitsu)		ATX format, D3446-S (Fujitsu)	
PROCESSOR	Intel® Pentium™ G2030, 3.00GHz, 2 cores / 2 threads, 3MB L2, 22nm technology		Intel® Pentium™ G3250, 3.20GHz, 2 cores / 2 threads, 3MB L2, 22nm technology		Intel® Pentium™ G542, 3.60 GHz, 2 cores / 2 threads, 3MB L2, 14nm technology	
	Intel® Core™ i3-3250, 3.50GHz, 2 cores / 4 threads, 3MB L2, 22nm technology		Intel® Core™ i3-4150, 3,5 GHz, 2 cores / 4 threads, 3MB L2, 22nm technology		Intel® Core™ i3-6100, 3,7 GHz, 2 cores / 4 threads, 3MB L2, 14nm technology	
	Intel® Core™ i5-3470S, 2.9GHz, 4 cores / 4 threads, 6MB L2, 22nm technology		Intel® Core™ i5-4460, 3,2 GHz, 4 cores / 4 threads, 6MB L2, 22nm technology		Intel® Core™ i3-6300, 3,8 GHz, 2 cores / 4 threads, 3MB L2, 14nm technology	
	Intel® Core™ i7-3770S, 3.1GHz, 4 cores / 8 threads, 8MB L2, 22nm technology Intel® Core™ i7-4790, 3,6 GHz, 4 cores / 8 threads, 8MB L2, 22nm technology				Intel® Core™ i5-6600, 3,3 GHz (3,9 GHz Turbo), 4 cores / 4 threads, 6MB L2, 14nm technology	
					Intel® Core™ i7-6700, 3,4 GHz (4,0 GHz Turbo), 4 cores / 8 threads, 8MB L2, 14nm technology	
					Intel® Xeon™ E3-1225 V5, 3,3 GHz (3,7 GHz Turbo), 4 cores / 4 threads, 8MB L2, 14nm technology	
	Intel® Core™ i7-3770S, 3.1GHz, 4 cores / 8 threads, 8MB L2, 22nm technology		Intel® Core™ i7-4790, 3.6GHz, 4 cores / 8 threads, 8MB L2, 22nm technology		Intel® Xeon™ E3-1275 V5, 3,6 GHz (4,0 GHz Turbo), 4 cores / 8 threads, 8MB L2, 14nm technology	
CHIPSET	Intel® C216 Express Chipset		Intel® Q87 Chipset		Intel® C236 Express Chipset	
O.S. CERTIFIED	Microsoft Windows 8 32/64 bit, Microsoft Windows 7 Pro/Ultimate 32/64 bit, Microsoft Windows XP Professional 32/64 bit		Microsoft Windows 8 32/64 bit, Microsoft Windows 7 Pro/Ultimate 32/64 bit		Microsoft Windows 10 IoT Enterprise 64 bit, Microsoft Windows 8.1 Industry Pro 32/64 bit, Microsoft Windows 7 32/64 bit, Microsoft Windows Server 2012 R2 64 bit Standard Edition	
VIDEO CONTROLLER	Intel® HD Graphics, 650MHz integrated into Pentium G2030		Intel® HD Graphics, 650MHz integrated into Pentium		Intel® HD Graphics 510 integrated in Core i5-6402P processor, 350MHz/950MHz	
	Intel® HD Graphics 2500, 650MHz integrated into Core™ i3 and Core™ i5		Intel® HD Graphics 4400, 350MHz integrated into Core™ i3		Intel® HD Graphics 530 integrated in Pentium G3240, Core i3-6100 processors, 350MHz/1,05GHz	
	Intel® HD Graphics 4000, 650MHz integrated into Core™ i7		Intel® HD Graphics 4600, 650MHz integrated into Core™ i5 and Core™ i7		Intel® HD Graphics 530 integrated in Core i3-6300, Core i5-6600, Core i7-6700 processors, 350MHz/1,15GHz	
	DX11 and OpenGL 3.0 support		DX11 and OpenGL 3.0 support		Intel® HD Graphics P530 integrated in Xeon processors, 400MHz/1,15GHz DirextX 12 and OpenGL 4.4 support	
SYSTEM MEMORY	4GB / 8GB / 16GB / 32GB		4GB / 8GB / 16GB / 32GB		4GB / 8GB / 16GB / 32GB / 64GB DDR4	
EXPANSION SLOTS	3 x PCI full size (32 bit, 33MHz, Rev.2.3)		4 x PCI full size (32 bit, 33MHz, Rev.2.3)		2 x PCI full size (32 bit, 33MHz, Rev.2.3)	
	2 x PCIe x16 (1 x16 se Gen3, 2 x8 se Gen2)		2 x PCIe x16 (16 lanes, Gen2, 4 lanes, Gen2)		2 x PCIe x16 (16 lanes, Gen3, 4 lanes, Gen3)	
	2 x PCIe x4 (1 x4 Gen2, 1 x1/x4 Gen2)		1 x PCIe x8 (1 lane, Gen2)		1 x PCIe x8 (1 lane, Gen3)	
	1 x MiniPCIe (PCI 2.0)				2 x PCIe x4 (4 lanes, Gen3, 1 lane, Gen3)	
DRIVE BAY	3 x 5,25" external	3 x 5,25" external	3 x 5,25" external	3 x 5,25" external	3 x 5,25" external	3 x 5,25" external
	1 x 3,5" external + 2 x 3,5" internal	1 x 3,5" external + 3 x 3,5" internal	1 x 3,5" external + 2 x 3,5" internal	1 x 3,5" external + 3 x 3,5" internal	1 x 3,5" external + 2 x 3,5" internal	1 x 3,5" external + 3 x 3,5" internal
SPECIAL FEATURES			24/7 operation		24/7 operation	
DRIVE INTERFACES	4 x SATA II 3Gbit/s 2 x SATA III 6Gbit/s		1 x mSATA 3 6Gbit/s 6 x SATA 3 6Gbit/s		1 x mSATA 3 6Gbit/s 6 x SATA 3 6Gbit/s	
MASS STORAGE	up to 4 x HDD 3,5" SATA 2/3 without or with extractable drawer in a 5,25" bay (max 3)		up to 4 x HDD 3,5" SATA 3 without or with extractable drawer in a 5,25" bay (max 3)		up to 4 x HDD 3,5" SATA 3 without or with extractable drawer in a 5,25" bay (max 3)	
	up to 4 x SSD 2,5" SATA 2/3 without or with extractable drawer in a 3,5" bay (max 2)		up to 4 x SSD 2,5" SATA 3 without or with extractable drawer in a 3,5" bay (max 2)		up to 4 x SSD 2,5" SATA 3 without or with extractable drawer in a 3,5" bay (max 2)	
RAID	RAID 0, 1, 5, 10 on SATA 2		RAID 0, 1, 5, 10 on SATA 3		RAID 0, 1, 5, 10 on SATA 3	
OPTICAL DRIVE	1 x DVD-RW		1 x DVD-RW		1 x DVD-RW	
LAN	2 x LAN 10/100/1000Mbps (1 x Intel® 82574L, 1 x Intel® 82579LM)		2 x LAN 10/100/1000Mbps (1 x Intel® I210AT, 1 x Intel® I217LM)		2 x LAN 10/100/1000Mbps (1 x Intel® I210AT, 1 x Intel I219LM)	
USB	4 x USB 3.0 (Type-A, rear)		2 x USB 3.0 (Type-A, rear)		4 x USB 3.0 (Type-A, rear)	
	2 x USB 2.0 (Type-A, rear)		6 x USB 2.0 (Type-A, rear)		4 x USB 2.0 (Type-A, rear)	
	2 x USB 2.0 (Type-A, front)		2 x USB 2.0 (Type-A, front)		2 x USB 3.0 (Type-A, front)	
SERIAL	1 x RS232/422/485 (DB9M)		1 x RS232 (DB9M)		1 x RS232 (DB9M)	
KEYBOARD & MOUSE	1 x PS/2 (K/M)		2 x PS/2 (K/M)		2 x PS/2 (K/M)	
VIDEO OUTPUT	1 x DVI-I		1 x DVI-I		1 x DVI-I	
	1 x DVI-D		2 x DisplayPort		2 x DisplayPort	
	1 x HDMI					
AUDIO	Realtek ALC886, 5.1-channel, High Definition Audio Codec		Realtek ALC886, 5.1-channel, High Definition Audio Codec		Realtek ALC671, 5.1-channel, High Definition Audio Codec, S/PDIF	
	Audio Mic In, Line in, Line out		Audio Mic In, Line in, Line out		Audio Mic In, Line in, Line out	
ADDITIONAL INTERFACES	2 x RS232 (DB9M)		1 x RS232 (DB9M)		1 x RS232 (DB9M)	
	4 x USB 2.0 internal on connector		1 x USB 2.0 for internal dongle		1 x USB 2.0 for internal dongle	
			1 x LPT EPP, ECP bidirectional			
POWER SUPPLY UNIT	230VAC 400/650W	230VAC 400/650W	230VAC 400/650W	230VAC 400/650W	230VAC 400/650W	230VAC 400/650W
	230VAC 2 x 500W		230VAC 2 x 500W		230VAC 2 x 500W	
DIMENSIONS w-h-d	48.3 x 17.8 x 50.3 cm	48.3 x 17.8 x 46.5 cm	48.3 x 17.8 x 50.3 cm	48.3 x 17.8 x 46.5 cm	48.3 x 17.8 x 50.3 cm	48.3 x 17.8 x 46.5 cm
OPERATING TEMPERATURE	0°- 40°C with 24x7 HDD 5°- 40°C with standard HDD		0°- 40°C with 24x7 HDD 5°- 40°C with standard HDD		0°- 40°C with 24x7 HDD 5°- 40°C with standard HDD	
APPROVALS	CE		CE		CE	

Industrial Monitors

Panel Industrial Monitors are available with 8.4" to 24" LCDs and four front panel variants.
Arm Mounting Monitors are compact, fanless, ergonomic and easy to install solutions, and are available with 15.6", 18.5", 21.5" and 24" TFT LCDs in a full IP65 Aluminium chassis.
Industrial Monitor families are available with up to 100 mt remotation for digital video and USB 2.0 signal.

MH100 / MHR100
Panel Mounting Industrial Monitor

MH100/MHR100 industrial monitors are available with 8.4", 10.4", 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio, 10.1" and 12.1" in 16:10 aspect ratio, 15.6", 18.5", 21.5" and 24" in 16:9 aspect ratio 16 million color TFT LED Backlight LCDs with aluminium (MH100) or aluminium True Flat (MH100-TF) front panel with 5 wires resistive touchscreen and USB port. Wide LCDs versions are also available with Aluminium True Flat and glass projected capacitive Multitouch-screen (MH100-TFM) front panels. Monitors with 12.1", 15", 17" and 19" LCDs are also available with Stainless Steel True Flat front panels (MH100-TFX). MH100 monitors have VGA and DVI-D input, 110/230 VAC or isolated 24 VDC power supply input and two rear access USB ports. MHR100 version integrates remotation of digital video and USB 2.0 signals up to 100 meters with Cat 5e SF/UTP or Cat 6A S/FTP cable.

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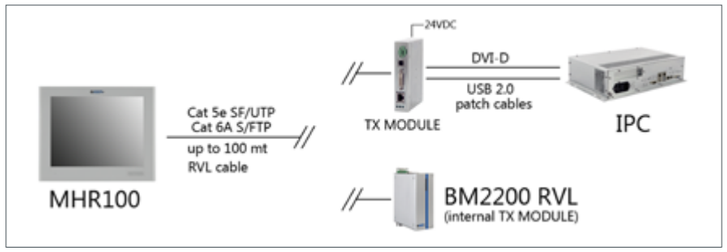
ASEM STANDARDS

Highlights

- 8.4", 10.4", 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio, 10.1", 12.1" in 16:10 aspect ratio, 15.6", 18.5", 21.5" and 24" in 16:9 aspect ratio LCDs
- Built-in remotation of digital video and USB 2.0 signals up to 100 mt (MHR100)
- 110/230 VAC or isolated 24 VDC power supply input
- IP66 front panel protection degree
- CE, cULus LISTED (508) certification

Gallery

Remotation



Technical data

	MH	MH-TF	MH-TFX	MH-TFM	MHR100	MHR100-TF	MHR100-TFX	MHR100-TFM
LED backlight TFT LCD	8.4" - 800x600 10.1" W - 1280x800 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 19" - 1280x1024 21.5" W- 1920x1080 24" W- 1920x1080		12.1" - 800x600 12.1" - 1024x768 15.0" - 1024x768 17" - 1280x1024 19" - 1280x1024	10.1" W - 1280x800 12.1" W - 1280x800 15.6" W - 1366x768 15.6" W- 1920x1080 18.5" W - 1366x768 21.5" W -1920x1080 24" W- 1920x1080	8.4" - 800x600 10.1" W - 1280x800 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 19" - 1280x1024 21.5" W- 1920x1080 24" W- 1920x1080		12.1" - 800x600 12.1" - 1024x768 15.0" - 1024x768 17" -1280x1024 19" -1280x1024	10.1" W - 1280x800 12.1" W - 1280x800 15.6" W - 1366x768 15.6" W- 1920x1080 18.5" W - 1366x768 21.5" W -1920x1080 24" W- 1920x1080
TOUCHSCREEN	Resistive 5 wires GFG (optional)	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch	Resistive 5 wires GFG (optional)	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch
T/S CONTROLLER	USB / Serial			USB	USB			
FRONT PANEL	Aluminium	True Flat Aluminium	Stainless Steel True Flat	True Flat Aluminium	Aluminium	True Flat Aluminium	Stainless Steel True Flat	True Flat Aluminium
PROTECTION GRADE	IP66 - frontal							
VIDEO INPUT	1 x VGA 1 x DVI-D				DVI-D remotation with Cat 5e SF/UTP or Cat 6A S/FTP cable			
USB	2 x USB 2.0 (Type-A, rear) 1 x USB 2.0 (Type-A, front)		2 x USB 2.0 (Type-A, rear)		2 x USB 2.0 (Type-A, rear) 1 x USB 2.0 (Type-A, front)		2 x USB 2.0 (Type-A, rear)	
REMOTATION					Remotation of DVI-D and USB 2.0 signals up to 100mt with Cat 5e SF/UTP cable or Cat 6A S/FTP cable			
POWER SUPPLY UNIT	24VDC 24VDC isolated (optional) 230VAC (optional)				24VDC isolated 230VAC (optional)			
OPERATING TEMPERATURE	0° ÷ +50°C							
APPROVALS	CE, cULus LISTED (508)							

MK100 / MKR100

Arm Mounting Industrial Monitor

MK100 and MKR100 arm mounting monitors are made of a full IP65 cast Aluminium chassis, powder coated with anti-scratch treatment, combining robustness with ergonomics and aesthetics.
MK100 systems have two USB 3.0 ports with rear external access, one USB port, one Ethernet port, one RFID interface optional on the front and the possibility to install emergency button, key switches, buttons and light indicators.
MK100 and MKR100 families are available with 15.6", 18.5", 21.5" and 24" in Wide 16:9 aspect ratio 16 million color TFT LED Backlight LCDs and Aluminium True Flat with 5 wires resistive touchscreen or Aluminium True Flat with glass projected capacitive Multitouch-screen front panels.
MK100 monitor family has VGA and DVI-D input, isolated 24 VDC power supply input and two external access USB 2.0 ports.
MKR100 family integrates up to 100 meters remotation for digital video and USB 2.0 signal, with a simple and economic CAT5E SF/UTP cable.

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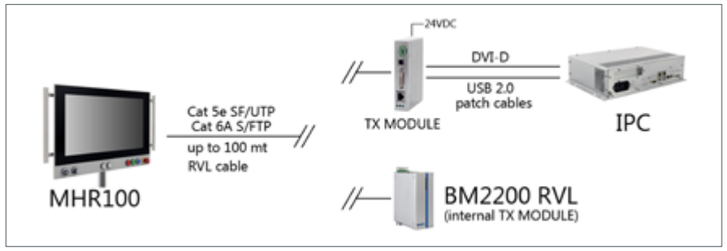
ASEM STANDARDS

Highlights

- → Full IP65 protection degree
- → Easy installation and cabling
- → 5 wires resistive screen (MK100-TF) or P-CAP Multitouch-screen (MK100-TFM)
- → Integrated remotation of DVI-D and USB 2.0 signals up to 100 mt (MKR100)
- → Integrated configurable button area
- → CE, cULus LISTED (508) certification

Gallery

Remotation



Technical data

	MK100-TF	MK100-TFM	MK100R-TF	MK100R-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			
TOUCHSCREEN	Resistive 5 wires	P-CAP Multitouch	Resistive 5 wires	P-CAP Multitouch
T/S CONTROLLER	USB 2.0			
FRONT PANEL	True Flat Aluminium	True Flat Aluminium	True Flat Aluminium	True Flat Aluminium
PROTECTION GRADE	Full IP65			
VIDEO INPUT	1 x VGA 1 x DVI-D		DVI-D remotation with Cat 5e SF/UTP or Cat 6A S/FTP cable	
USB	2 x USB 2.0 (Type-A, rear, protected, IP65)			
CHASSIS Installation	For pole or suspension arm mounting system compatible with RITTAL CP40 / ROLEC TARAPLUS / HASEKE HLT KUPPLUNG 48			
Material	Alluminum alloy EN AB46400			
Color	Anti-scratchable painted - RAL 9006			
BUTTONS AREA (hard wired or slave modular fieldbus version)	Buttons, lights and interfaces on the front panel are optional. 1 x Emergency stop button (always hard wired), 1 x RFID (internally connected to USB), 1 x USB port, lights, button keys and switches (hard wired or fieldbus). Several industrial fieldbus masters are supported. The push-button panel design allows easy device substitution.			
REMOTATION			Remotation of DVI-D and USB 2.0 signals up to 100mt with Cat 5e SF/UTP cable	
POWER SUPPLY UNIT	24VDC isolated			
OPERATING TEMPERATURE	0°- 50°C			
APPROVALS	CE, cULus LISTED (508)			

Configurations & Options

Front panels

True Flat technology

ASEM realizes the True Flat front panel through a special manufacturing process which takes place in a clean room to avoid environmental contamination such as dust or airborne microbes.

In this process, using an Optically Clear Adhesive (OCA) a thin polyester film is glued on the touchscreen, then the two components are attached on the Aluminium front panel.

Stainless Steel True Flat Front Panel

Panel IPCs with Stainless Steel True Flat front panels without USB port on the front are particularly used in pharmaceutical and food & beverage industries.

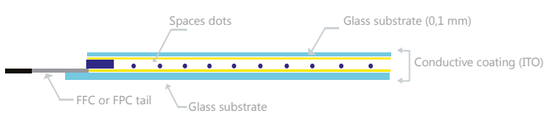
Glass Multitouch technology

All Panel IPC and monitor families are available with the new generation of Multitouch front panels in 7", 10.1", 12.1", 15.6", 18.5", 21.5" and 24" screen sizes with Wide aspect ratio.
Glass projected Capacitive Touchscreen Technology allows mobile gestures such as zoom, swipe and rotate (even with work gloves), now increasingly adopted in the factory automation.
New multitouch front panels are made of a robust aluminium frame and a tempered glass surface in a completely true-flat design that gives maximum resistance to environmental influences and facilitates cleaning.

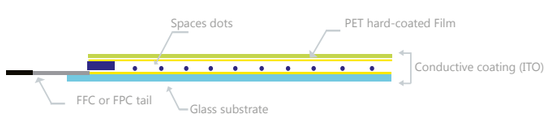
Touchscreen Glass-Film-Glass Technology

The option Glass-Film-Glass (GFG) for 12", 15" and 17" touchscreen is available for most of the ASEM IPCs and monitors. In GFG touchscreen, there is an additional thin glass (0,1 mm) on the touch surface that provides greater resistance to scratches and a better products cleaning.

GFG technology



Standard technology



Fieldbuses boards

NETcore® X
NETcore®X fieldbus boards are the link between the IPC and the I/O devices on field and enable control and visualization applications to receive data from the field according to the industrial fieldbuses available.

NETcore® X Industrial Ethernet
APCI / MiniAPCI format

NETcore® X Profibus
APCI / MiniAPCI format

NETcore® X CANopen
APCI / MiniAPCI format

Dual CAN-RAW
PCI / MiniPCI format

Board	Protocols	PCI/APCI	MiniPCI / MiniAPCI
NETcore X PROFIBUS	Profibus DP Master/Slave, MPI	✓	✓
NETcore X CANopen	CANopen Master/Slave	✓	✓
NETcore X Industrial EtherNET	EtherCAT Master/Slave	✓	✓
	PROFINET IO Controller/Device	✓	✓
	EtherNET/IP Scanner/Adapter	✓	✓
CAN RAW	CANopen Master in combination with CODESYS (2 x isolated channels also with 512kB NVRAM)	✓	✓
NVRAM	512kB static RAM for SoftPLC	-	✓
ETHERNET	EtherCAT Master in combination with CODESYS		✓

NETcore®X and proprietary application
A DLL library is available for developing applications under Win32 or WinCE operating systems. All DLL programming languages such as C, C++ or .NET are available.

NETcore®X with CODESYS
Using NETcore®X fieldbus boards, the integration with CODESYS is automatic and does not require any code to implement the communication stack.

NETcore®X with PremiumHMI
Premium HMI uses NETcore®X boards with SIEMENS MPI and PROFIBUS Slave protocols, using a dedicated communication driver.

Configurable button area
for Arm Mounting IPCs and Monitors

The button area of the VK3200 and MK100/ MKR100 Arm Mounting systems is totally configurable at the order, depending on customer's requirements, and allows front access for further modifications and/or integrations.

Connections
The single elements of the button area can be connected in two ways: hard wired or via fieldbus.

Hard wiring
With the hard wired connection it is possible to install up to eight elements (excluding the USB, Ethernet and RFID interfaces), whose wiring is brought to two clamps, accessible from the back.

Fieldbus button area
The implemented fieldbus standard is EtherCAT. The quantity of elements that is possible to install on the systems with fieldbus button area depends on the display size: up to 9 with the 15,6" LCD, up to 11 with the 18,5" LCD, up to 13 with the 21,5" LCD and up to 15 with the 24" LCD, including USB, Ethernet, RFID interfaces and the emergency stop button.

Front access to the wiring of the button area

Wiew of the rear clamps of a hard wired button area

A wide range of elements is available to compose the button area of the Arm Mounting systems.

LED indicators
→ LED lit (5 colours available)

Push buttons
→ unlit
→ LED lit (4 colours available)
→ with custom exchangeable symbol

Emergency stop button
→ with rotating unlock movement
→ double contact

Keylock switch and levers
→ with key
→ keyless LED lit
→ with 2 or 3 positions

Buzzer

Communication ports
Communication portsWith IP65 protection cap
→ USB port
→ Ethernet port

RFID
→ LF (125 kHz)
→ HF (13,56 MHz MIFARE)
→ on Ø 22 element

Mechanical accessories
for Arm Mounting IPCs and Monitors

Side handles
Kit composed of two aluminium side handles is available for simplifying system moving.

Perimetral handle
A perimetral handle to simplify system movements and protect the operator from accidental impacts.

Keyboard holder kit
Keyboard holder kit, including a cable hole on the rear cover, with a rubber wire holder.

Technical support
& Services

Technical support and service

Customer oriented philosophy
Providing a meticulous attention and a complete pre and post sales service are the foundational concept of our costumer oriented service. All internal processes aim to ensure an excellent product quality and a higher degree of flexibility, in order to be responsive to the ever-changing market needs. To ensure product and process quality, ASEM has adopted the standard UNI EN ISO 9001:2008 for its quality management system.

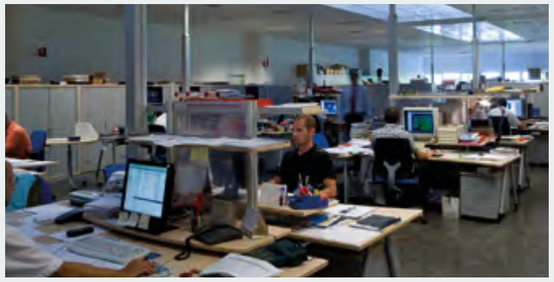
Intertek
9809792

Customer care
The customer care service is led by a team of technical specialists that answer with immediacy and clarity to customers' needs, not only by telephone and via the Internet, but also with on-site visits and technical training courses. To optimize the process of support and repair of systems and to minimize response time, ASEM offers some effective services:

''HELP DESK PHONE" **SERVICE** can be accessed calling +39/0432/967250, from Monday to Friday from 09:00 to 12:30 and from 14:00 to 17:30 A qualified technician provides initial assistance, or starts the procedure for repairing or replacing the product (Return Material Authorization). Based on needs and the type of support required, the call may be turned to the most suitable ASEM specialist.

''HELP DESK ONLINE" **SERVICE** allows access to the ASEM customer care service directly online, through the company website www.asem.it This easy and quick tool allows to request technical assistance for any repair service, with real-time monitoring of the request status. In addition to these services, you can send any request for hardware, firmware and software support to the e-mail address suptec@asem.it.

Technical support
ASEM offers an excellent service of hardware and software consulting and assistance. It also includes a prompt and efficient system service assistance with the creation of ad hoc operating system images, which allows to shrink the memory space needed for the installation of the operating systems (Microsoft Windows® CE, Windows® XP and Windows® XP Embedded, Windows® 7, Windows® 7 Embedded, Microsoft Windows, Windows 8.1, Windows 10 2016, Windows 10 IoT Enterprise 2016, Linux and OS real time) maintaining only the necessary components for the proper functioning of the industrial PCs and the integration with the main applicative software.



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