Industrial Automation
Product Guide

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.

35 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 35 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

PREMIUMHMI 4

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 PremiumHMI3, 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 office in Verona.
- ASEM starts designing and producing ARM-based HMIs and remote assistance and remote control systems.
- ASEM releases the new PremiumHMI4 visualization software version, including a new and powerful graphic rendering engine and the latest Microsoft® XAML technology.

ASEM and the "**Open Automation**"

Over 20 years of experience in design and production of IPCs for industrial applications and 10 years of specialization on x86-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:

- → 2015 Revenues: 30 million Euros
- → 155 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

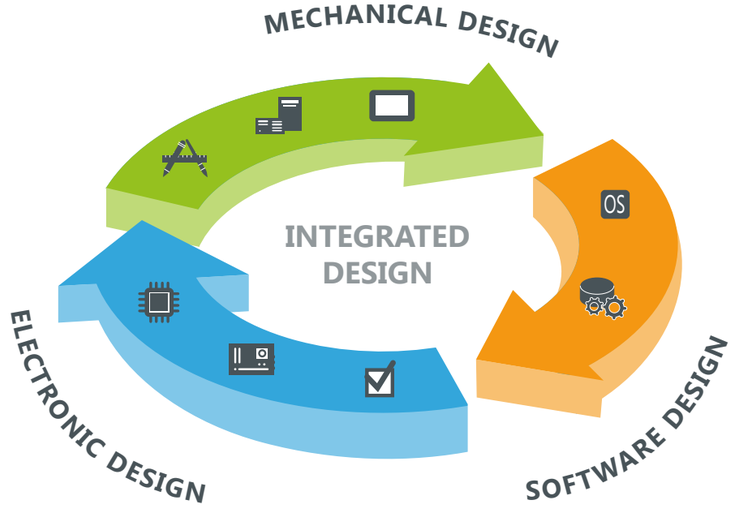
30% of ASEM human resources are dedicated to R&D. The team includes highly specialized engineers with complementary skills that cover all the electronic and mechanical design needs, as well as firmware and software development.

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 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 welding machines for "through all" components, ovens reflow and X-ray inspection ensuring productivity, flexibility and quality.
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 8 hours in special designed climatic chambers. 100% of the assembled systems are subjected to functional tests for 8 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.

PRODUCT PORTFOLIO

HMI SOLUTIONS

ASEM offers a complete range of integrated operator panels, based on the "ARM" and "x86"standard architectures and equipped with PremiumHMI visualization software and Ubiquity remote assistance software.

Visualization software	HMI25	HMI30/31
PREMIUMHMI	 p. 50	 p. 52
Remote Assistance Software		
UBIQUITY		
HMI40	**HMI700**	**HMI2200**
 p. 54	 p. 56	 p. 58

PAC SOLUTIONS

ASEM logics controllers base their PLC functionalities on the widespread and established CODESYS SoftPLC 3.5, that ensures the deterministic execution of PLC control logics with WinCE and Win32/64 OSs. ASEM PAC Solutions also integrate PremiumHMI visualization software and Ubiquity remote assistance Software.

Control Software	LP30/31	LP40
CODESYS	 p. 70	 p. 72
Visualization software	**LP700**	**LP2200**
PREMIUMHMI	 p. 74	 p. 76
Remote Assistance Software	**LB40**	**LB2200**
UBIQUITY	 p. 78	 p. 80

INDUSTRIAL PC SOLUTIONS

ARM based Panels

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

RT25	RT30/31	RT40
 p. 89	 p. 90	 p. 92

PANEL PCs

ASEM Panel PCs 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 True Flat with glass projected capacitive Multitouch-screen.

HT700	HT2000	HT2200
 p. 96	 p. 98	 p. 100
HT3000	**HT3200**	**HT5000**
 p. 102	 p. 104	 p. 106

BOX PCs

ASEM provides a full range of Box PCs 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 and DIN rail mounting.

BM40	BM2200	PB2000
 p. 110	 p. 112	 p. 114
PB2200	**PB3000**	**PB3200**	**PB5000**
 p. 116	 p. 118	 p. 120	 p. 122

ARM MOUNTING PCs

The Arm Mounting PCs 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" TFT LCDs in a full IP65 Aluminium chassis.

VK3200	VPC2200
 p. 126	 p. 128

RACK PCs

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
 p. 131	 p. 132

INDUSTRIAL MONITORS

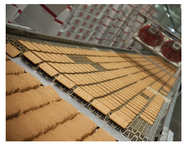
Panel Industrial Monitors are available with 8.4" to 24" LCDs and four front panel variants. Arm Mounting Monitors are compact, fanless, ergonomic and easy to install solutions with a stylish design, and are available with 15.6", 18.5" and 21.5" TFT LCDs in a full IP65 Aluminium chassis.
Industrial Monitor families are available with up to 100 m remotation for digital video and USB 2.0 signals, with a simple and economic CAT5E SF/UTP cable.

MH100 / MHR100	MK100 / MKR100	MV100 / MVR100
 p. 136	 p. 138	 p. 140

2. **HMI & PAC** Solutions

HMI & PAC Solutions
Solutions satisfying all your automation requirements








Industrial machinery design and development time reduction.

Analysis demonstrate that software development costs account for over 80% on the costs of automation design. This is the reason why it is crucial to make use of design tools capable of saving time and money in development, accompanied and supported by a company like ASEM, acknowledged for the excellence of its customer service and technical support.

Openness and flexibility to meet the specific requirements of final customers.

Today machine manufacturers need «open & standard» software solutions providing a high level of flexibility in adapting applications to specific customer needs, protecting investments and know-how.

Perfect integration of Hardware and Software.

All ASEM software solutions are integrated in hardware systems designed, industrialized and entirely manufactured in company facilities and plants.
The technological mastery of all the system components guarantees the high-quality level and the perfect integration between Hardware and Software platforms.

With the HMI Solutions based on Premium HMI 4 software platform, ASEM provides the market with high level HMI systems with a powerful and flexible development tool to implement open and scalable user interface projects.

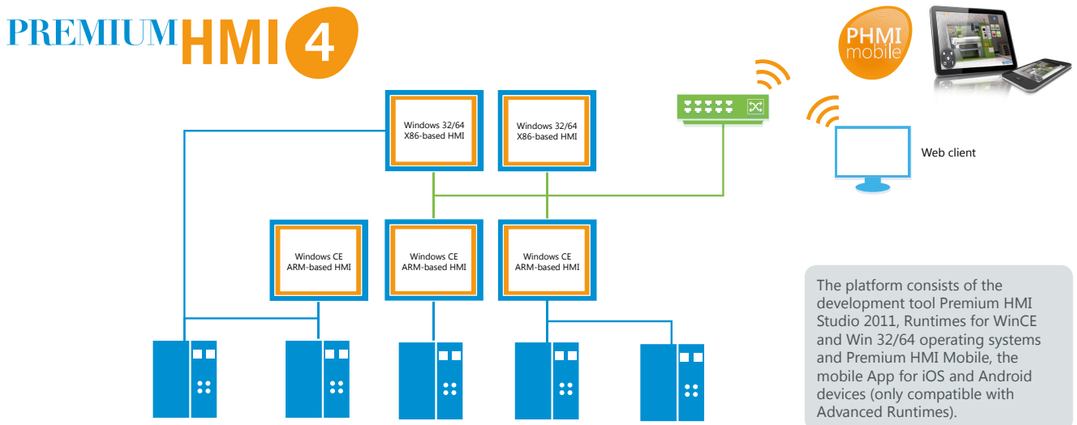
Transversality is an important strength of Premium HMI 4, as it allows the same project to be used either on HMI based on ARM or X86 platforms or with WinCE or WIN 32/64 Runtime, without the need to modify or change the settings of Premium HMI Studio development tool.

This feature is obviously appreciated by machine manufacturers who know the burdens of investments in software design and, in this way, can concentrate their focus on developing the distinctive features of their machinery.

To make Windows CE-based solutions more competitive, ASEM has decided to integrate the innovative remote assistance platform **Ubiquity** in the HMI25, HMI30, HMI600 and HMI700, making it possible to access the system and its Ethernet and Serial sub-networks from remote.

Hardware design and manufacturing combined with software development ability, allow ASEM to offer full-featured HMI solutions suited to meet all requirements, from the simplest to the most complex requiring advanced functionalities as well as openness and flexibility.

Premium **HMI 4**



The platform consists of the development tool Premium HMI Studio 2011, Runtimes for WinCE and Win 32/64 operating systems and Premium HMI Mobile, the mobile App for iOS and Android devices (only compatible with Advanced Runtimes).

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 same project 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.

Premium HMI 4

The new PHMI4 supports the latest **Microsoft® XAML** visualization technologies that enable the design of advanced and modern operator interfaces, typical of latest generation mobile devices.
PHMI 4 supports **16 million colors**, manages transparency and colour shade effects, supports **multitouch gestures** which further improve the user experience of HMI projects and provides a rich library of graphic objects particularly accurate from an aesthetic and ergonomic point of view making it possible to design unprecedented user interface screens.
The **new XAML graphic objects library**, available for Windows CE and Windows 32/64 operating systems, comes together with the existing one, maintaining full compatibility.

The user just needs to make a mouse click in the development tool to **convert existing projects introducing new graphic objects** without making any changes, retaining all scripts assigned to graphic objects or variables linked to properties that vary dynamically.
These characteristics make PHMI4 a unique HMI platform in the competitive context and it becomes particularly interesting due to the fact that it can update the aesthetics and ergonomics of existing projects without investing in new developments and without the need for further application tests.
Another important strength is the availability of **Microsoft® XAML objects under WinCE operating system**, that makes Premium HMI 4 one of the very few platforms on the market providing this feature.

"Total Cost of Ownership" reduction

With the intuitiveness of Premium HMI's object design, the project debugging tools and the possibility to use a single development tool for any type of application (from the simplest on operator panels to the most complex on Panel PCs or the most innovative on smart mobile devices), it becomes easy to save a considerable amount of time in learning, personnel training, application maintenance and end- user support and service.

Runtime versions

To provide supervision systems that can meet different performance, functionality and price requirements ASEM offers two runtime versions for WinCE (Basic and Advanced) and three runtime versions for WIN 32/64 (Basic, Pro and Advanced).

Function	Premium HMI 4.0 BASIC for WinCE	Premium HMI 4.0 ADVANCED for WinCE	Premium HMI 4.0 BASIC for Win 32	Premium HMI 4.0 PRO for Win 32	Premium HMI 4.0 ADVANCED for Win 32
RealTime DB	Max. 1024 byte	Max. 8192 byte	Max. 2048 byte	Max. 2048 byte	Max. 4096 byte
Normalization	✓	✓	✓	✓	✓
ODBC Realtime	✓	✓	-	✓	✓
Trace DB	✓	✓	-	✓	✓
Data Structures	✓	✓	✓	✓	✓
OPC DA Client	✓	✓	✓	✓	✓
OPC UA Client	✓	✓	✓	✓	✓
OPC Client XML DA	-	-	✓	✓	✓
Networking	✓	✓	✓	✓	✓
Script's IntelliSense Tags	✓	✓	-	✓	✓
Graphic User Interface					
Vector Graphics Editor	✓	✓	✓	✓	✓
XAML Vector Graphics	✓(1)	✓ (1)	✓	✓	✓
BMP, GIF, JPG, WMF, EMF support	✓	✓	✓	✓	✓
Gesture Recognition	✓	✓	✓	✓	✓
Objects Drag & Drop	-	-	✓	✓	✓
Dynamic Animation	✓	✓	✓	✓	✓
Symbols library	✓	✓	✓	✓	✓
Import/Export Symbols	✓	✓	✓	✓	✓
Public Symbols	✓	✓	-	✓	✓
Power Template (VBA Symbols)	✓	✓	-	✓	✓
Grid	✓	✓	-	✓	✓
Synapses	✓	✓	-	✓	✓
Schedulers	✓	✓	✓	✓	✓
Editing Menu	✓	✓	✓	✓	✓
Style Reference Management in Symbols	✓	✓	-	✓	✓
Dundas Potentiometer	-	-	✓	✓	✓
IP Video Camera Window	✓	✓	✓	✓	✓
Objects' Alias Management	✓	✓	-	✓	✓
Alarms and logs	Max 1024 alarms	Max 4096 alarms	Max 2048 alarms	Max 2048 alarms	Max 4096 alarms
Alarm Management	✓	✓	✓	✓	✓
Historical Management (CSV)	✓	✓	✓	✓	✓
Historical Management (ODBC)	✓	✓	-	✓	✓
Alarm notification (SMS, E-Mail)	-	✓	-	-	✓
SMS sending via SMPP protocol	-	✓	-	-	✓
Alarm Areas	✓	✓	✓	✓	✓
Comment on ACK alarm	✓	✓	-	✓	✓
Recipes - Data Logger					
Recipes / Data Logger (XML)	✓	✓	✓	✓	✓
Recipes / Data Logger (ODBC)	Max -. 2	✓	-	✓	✓

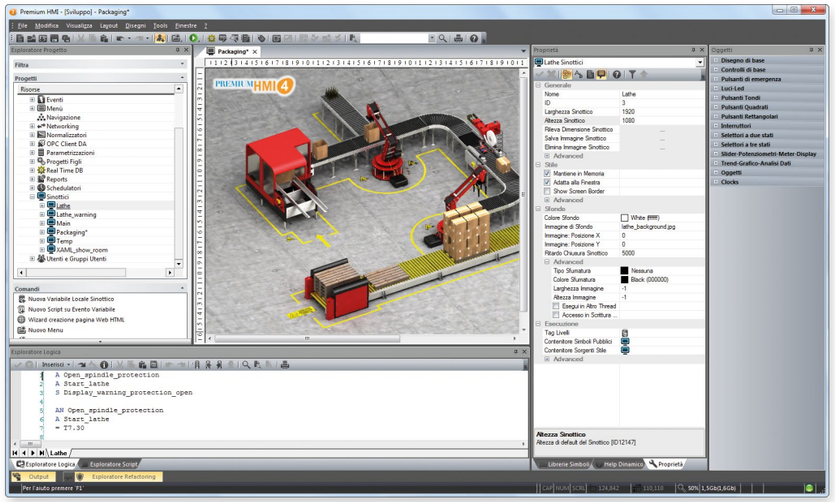
(1) XAML vector graphics supported exclusively by Windows Embedded Compact 7 and newer

Function	Premium HMI 4.0 BASIC for WinCE	Premium HMI 4.0 ADVANCED for WinCE	Premium HMI 4.0 BASIC for Win 32	Premium HMI 4.0 PRO for Win 32	Premium HMI 4.0 ADVANCED for Win 32
Reports					
Text Reports	✓	✓	✓	✓	✓
Graphic Reports and Alarm Statistics	✓	✓	✓ with limitations (access to data only through IMDB)	✓	✓
Trends					
RealTime Trends	✓	✓	✓	✓	✓
Historical Trends on .CSV files	✓	✓	✓	✓	✓
Historical Trends	✓	✓	✓	✓	✓
(linked to Data Logger XML)	✓	✓	✓	✓	✓
Historical Trends on Database (ODBC)	✓	✓	-	✓	✓
Users & Password					
1024 levels management	✓	✓	✓	✓	✓
Users' groups management	✓	✓	✓	✓	✓
CFR21	✓	✓	-	✓	✓
Runtime users	✓	✓	✓	✓	✓
Dynamic Multi-language	✓	✓	✓	✓	✓
Unicode Support	✓	✓	✓	✓	✓
Drivers					
Max number Drivers	Max -. 2	Max -. 4	Max -. 2	Max -. 2	Max -. 4
Tag Importer from PLC	✓	✓	✓	✓	✓
Event Objects	✓	✓	✓	✓	✓
Normaliser Objects	✓	✓	✓	✓	✓
Scheduler Objects	✓	✓	✓	✓	✓
Logic					
IL Logic (Step5-Step7)	✓	✓	✓	✓	✓
VBA Logic (WinWrap Basic)	✓	✓	Reduced (Max 2 scripts)	✓	✓
VBA Interface for communication drivers	✓	✓	-	✓	✓
Synapse Logic	✓	✓	-	✓	✓
Networking	✓	✓	✓	✓	✓
Child Projects	✓	✓	-	✓	✓
Synoptic Navigation	✓	✓	-	✓	✓
Integration to Visual Source Safe	✓	✓	✓	✓	✓
Web Client	-	Max 4 clients	-	-	Max 2 clients
Premium HMI Mobile	-	✓	-	-	✓
Touchscreen Support	✓	✓	✓	✓	✓
Crossed List	✓	✓	✓	✓	✓
Debugger	✓	✓	✓	✓	✓

Protocols / devices	Interface			Operating System		
				WinCE		Win32/64
	Serial	Ethernet	HW add-on	ARM	x86	x86
CODESYS, ELAU, KEB, PARKER,...	-	✓	-	✓(1)	✓	✓
Rockwell DF1 and Data Highway	✓	-	-	✓	✓	✓
Rockwell EtherNet/IP	-	✓	-	✓	✓	✓
Applicon cards	-	-	Applicon Cards	-	-	✓
B&R PVI with protocol INA2000 (2)	✓	✓	-	✓	✓	✓
B&R TCP (3)	-	✓	-	✓	✓	✓
BACNET IP	-	✓	-	-	-	✓
Beckhoff Twincat (ADS protocol) (4)	-	✓	-	✓	✓	✓
CANOpen Master	-	-	NETcoreX CANOpen Master	-	✓	✓
CANOpen Slave only PDO	-	-	NETcoreX CANOpen Slave	-	✓	✓
KNX (EIBUS Konnex)	✓	✓	-	-	-	✓
ELAP	✓	-	-	✓	✓	✓
FATEK TCP	-	✓	-	✓	✓	✓
GE FANUC SNP-X	✓	-	-	-	✓	✓
GE SRTP2	-	✓	-	✓	✓	✓
Hilscher DPM in PROFIBUS, CANOPEN	-	-	CIF cards	-	✓	✓
Hilscher MPI	-	-	CIF card	-	✓	✓
Hilscher NETLINK	-	✓	-	-	✓	✓
Hilscher NETX MPI	-	-	NETCoreX MPI	-	✓	✓
Hilscher NETX PROFIBUS Slave	-	-	NETCoreX PROFIBUS SLAVE	-	✓	✓
Hitachi PLC serie H	✓	-	-	-	-	✓
IBH Softech	-	✓	-	✓	✓	✓
KEB DIN66109-II	✓	-	-	✓	✓	✓
LENZE LECOM AB	✓	-	-	✓	✓	✓
LonWorks	✓	✓	-	-	-	✓
Mitsubishi MELSEC A	-	✓	-	-	-	✓
Mitsubishi MELSEC FX	✓	-	-	✓	✓	✓
Mitsubishi MELSEC Q	✓	✓	-	✓	✓	✓
Mistubishi FX3U TCP	-	✓	-	-	-	✓
Modbus RTU Master / Slave	✓	-	-	✓	✓	✓
Modbus TCP IP	-	✓	-	✓	✓	✓
Moeller SUCOM	✓	-	-	✓	✓	✓
OMRON FINS	✓	✓	-	✓	✓	✓
OMRON Host Link	✓	-	-	✓	✓	✓
OMRON EtherNet/IP	-	✓	-	✓	✓	✓
PANASONIC FP MEWTOCOL	✓	✓	-	✓	✓	✓
ROBOX	-	✓	-	✓	✓	✓
SAIA via SCOMM DLL	✓	✓	-	-	-	✓
SAIA S-BUS	✓	✓	-	✓	✓	✓
SCHNEIDER UNITELWAY SLAVE	✓	-	-	✓	✓	✓
SIEMENS MPI PC ADAPTER	✓	-	-	✓	✓	✓
SIEMENS S5 CPU	✓	-	RS-232 to Current Loop Converter	✓	✓	✓
SIEMENS S5 DK3864R	✓	-	-	✓	✓	✓
SIEMENS S7 200 PPI	✓	-	-	✓	✓	✓
SIEMENS S7 300/400 MPI (5)	✓	-	-	✓	✓(6)	-
SIEMENS S7 TCP 300/400	-	✓	-	✓	✓	✓
SIEMENS SAPI S7	✓	-	SIEMENS CP5611, 5613, 5614, 5412 e SIEMATIC NET	-	-	✓
SIEMENS Simotion	-	✓	-	✓	✓	✓
SIEMENS S7 Profinet (7)	-	✓	-	✓	✓	✓

(1) Requires CODESYS Gateway running on controller side
(2) Requires PLC communication support program supplied by ASEM
(3) PVI communication libraries supplied by B&R are mandatory
(4) ADS communication libraries supplied by Beckhoff are mandatory
(5) "Ethernet-MPI Gateway" function, local or remote using UBIQUITY, supported ONLY with PHMI4
(6) Only OT600/HMI600/Smartbox
(7) Supports variables import from TIA portal and communication with S7-1200 / S7-1500 via absolute and symbolic (Q1 2016) addressing

Premium HMI
Features



Studio

Premium HMI Studio 2014
A unique development tool to realize HMI projects for Windows CE and Windows 32/64 operating systems on ARM and X86 hardware platforms

→ **Object-oriented programming** to drastically reduce use of code in project development, thus saving time not only in designing but also in project debugging and maintenance
→ **Ergonomic** and highly configurable **development tool** (floating and traditional windows, shortcuts and configuration pop-ups) to fully adapt to every kind of requirement

→ **Wizard for project quick development** (templates, automatic creation of project pages, title headings, navigation keys, alarm model and Data Logger model)
→ Project explorer with **hierarchical tree view of resources** (selection of multiple objects and single components of a group, copy/paste function support)
→ Support of **level programming** with level visibility management (configured objects of the various synoptics can be attributed to different levels)

→ **Distributed project planning** with support of "**Father project / Child project**" philosophy which dynamically links and integrates decentralised projects (the Father project includes all the resources of the Child project as if they were its own)
→ Export and import of variables, languages and translations, alarms and logs in .CSV format
→ Wide **graphic symbols library** (also with integrated animation logic), organised in categories with immediate display of preview and Drag&Drop in synoptics. Possibility to create new symbols and new categories.

Latest generation graphic user interface

Premium HMI offers the most advanced graphic technologies based on XAML standards and it is the only visualization solution supporting XAML vector graphics also on Windows CE operating system.

→ Premium HMI 4 introduces a **new 16 million colors graphic rendering engine** supporting XAML advanced graphic technologies

→ Sophisticated management of **transparency and shading effects**

→ **Automatic re-Dimensioning of screens** for devices with different graphic resolutions; this feature of Premium HMI allows existing projects to be easily reused on different systems regardless of the graphic resolution of the display

→ **Rich gallery of vector graphic objects** (buttons, switches, analogue displays, sliders, etc.) to realise unprecedented user interface projects

→ Complete set of **graphic animations** (including movement of objects along definable routes)

→ **«Alias» support and inheritance of symbols** with definition of public symbols and automatic propagation of modifications from parent object to child object

→ Integrated support for multi-monitor systems

Recognition of pointing gestures

Support of Multitouch gestures for an intuitive interaction with the HMI project

→ Scroll ↕

→ Flick ↔

→ Dual Touch: simultaneous touch of two different command objects

→ **Objects drag & drop on Win 32/64 runtime**

Scalability

Premium HMI offers a unique development environment to realise the user interface of all ASEM HMI solutions based on ARM Cortex and X86 architectures with Windows CE and Windows 32/64 operating systems

→ Premium HMI allows the company to keep just one software platform to meet all visualization needs, from the simplest projects to more demanding supervision applications, thus saving time in learning, updating and personnel training

Connectivity and communication

Premium HMI has a complete communication drivers library for the most used PLCs on the market

→ Specific **wizards** allow the import and automatic configuration of **project Variables** (Tags) directly from the PLC project, reducing configuration time and errors

→ Premium HMI 4 integrates **OPC UA Client** and **OPC DA Client** technology (the product meets the certification criteria established by the OPC Foundation)

→ Automatic tag import from CODESYS Workbench for a better integration of control and visualization environments

→ VBA interface for dynamic control of communication parametres (in runtime)

Premium HMI also provides:

→ High performance and reactivity of controls to meet the most demanding requirements of machine manufacturers that need **fast data updating and a prompt dispatch of commands** to actuators

→ Support for **multi-protocol** interfacing with data transfer function (**gateway**) between communication channels

→ Real-Time I/O ODBC Link provides connectivity towards company's information systems. Each variable (Tag) has the reading-writing connectivity to an **external relational DB**. Therefore the Real-Time DB of the project can be shared automatically (partially or entirely) on a DB table, allowing sharing of plant's real-time data with the company's ERP

→ Availability of normalisers for the application of **non-linear transformations** to the variables

Networking

Premium HMI 4 has sophisticated Networking technology able to connect different HMI stations via Ethernet with multilevel Client/Server architecture

→ The Client/Server architectures are supported by integrated functionalities that allow online distribution of both dynamic information and projects

→ Local execution of Client projects works by loading the project from servers

→ Efficiency and performance are guaranteed by the "**event-driven**" **architecture** for data synchronisation

→ The **server stations** can be based indifferently on **Windows CE or Windows 32/64**

Openness and flexibility

Premium HMI is based on XML, ODBC, OPC, VBA, TCP/ IP and SQL standard technologies, integrated in the platform to guarantee easy access and data transparency

→ Projects are stored in XML format, which can be edited even with external Editors

→ Support of data sharing on shared memory

→ Data storage management on relational database (MS SQL Server, Oracle, MySQL, MS Access, SQL, etc.)

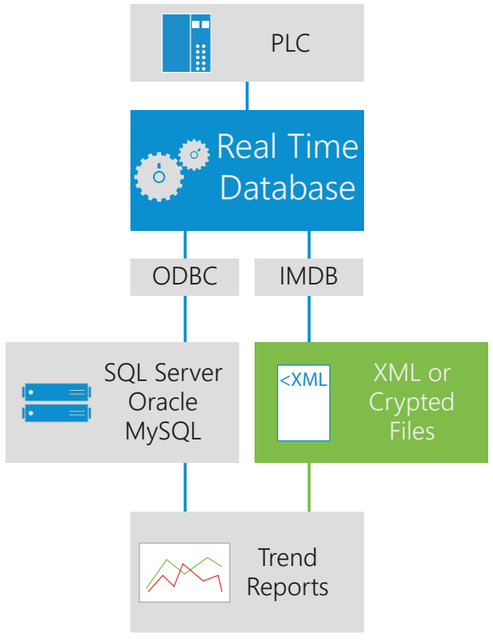
→ Native support of Microsoft Visual Source Safe, a tool allowing online management of projects which is used by development teams to guarantee security, multi-users, changes traceability, maintenance and recovery of project versions

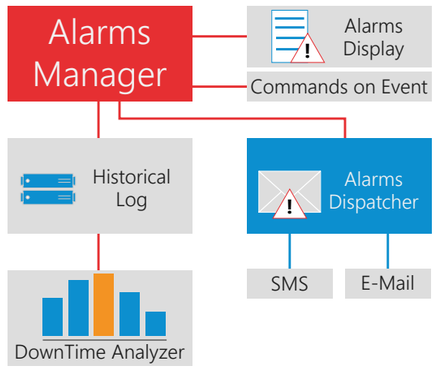
Trend & Data Analysis

Data logger, Trends and Data Analysis - Traceability of data and historical archives

The Data Logger is the main tool for process data recording.
In addition Premium HMI offers sophisticated tools such as Trends and Data Analysis objects to analyse and represent logged data
→ Simple configuration of process data sampling options
→ Data can be recorded by frequency (time), or at event or variation (with dead band)
→ Data storage on Database and text file both in local and remote
→ **Trends** are graphic objects representing curves regarding the tendency of process data
→ Trends can be either dynamic or historical and have multiple features to represent graphically value. They are directly linked to Data Loggers and allow you to represent data by time period or other types of filters, zooms, pen selection, logarithmic scale, average value, compressed representation of the whole graph on one page, etc.
→ Data Analysis objects are more sophisticated than Trends and allow you to analyse and graphically represent logged data recorded by Data Loggers
→ **Data Analysis objects** execute quick analyses at pre-set periods, comparisons and overlapping of curves (analyses with sample curves or comparative analyses of different periods, difference between values of two different graphs, etc.)

Premium HMI provides also:
→ Traceability of variable modifications, with storage of the old and new value and modification's author
→ Visualization of events history, both from local database and network server (view of server HMI alarms from Client interface)
→ Data archive export in .CSV format





Recipes

Recipe manager

Production recipes allow you to manage archives containing operating parameters of the production process of different products
→ Production recipes are managed by objects with the same recording techniques as Data Loggers, both on Database and on text files
→ Selecting the desired product, it is possible to activate parameter values relating to the process variables
→ Possibility to have multiple recipe structures inserted inside one another to design complex modular machines
→ Simplified configuration with project structures for recipe use.

The object technology allows you to create a "recipe" object and, once the related variable has been assigned to it, a specific "wizard" automatically generates the recipe management window, with a fully customisable user interface (fonts, colours, etc.)
→ As an alternative, a simple grid viewer object allows you to manage recipe data traditionally
→ Recipe data can be exported and imported in .CSV format

Alarms

Alarm manager

Premium HMI provides maximum reliability in events management, guaranteeing continuous and immediate system/machine monitoring, improving its efficiency and minimising production downtime
→ Alarms are managed according to **ISA S-18** standards, but they are entirely customizable with high-configurable objects and templates-oriented programming (threshold alarms, digital alarms, warning messages without recognition cycle, etc.)
→ Simple definition and configuration of repetitive alarms using templates
→ Fixed or variable triggering thresholds determine activation of the alarm, managing the four standard operating statuses (ON, OFF, ACK and RST) and the consequent representation of active alarms in visualisation objects, managed by Windows or Banners with several filters (by time, area, priority, period, etc.) and the possibility to dynamically combine help and wizards on external files (CHM, HTML, PDF)
→ Library tools for the organic visualization of active alarms, alarms awaiting acknowledgement and the alarm log with the possibility to apply visualization filters for a simple search and analysis
→ The **Alarms Window** and the **Historic Log Window** are the tools to visualize active or stored alarms and can be inserted and configured as objects in any screen
→ Premium HMI introduces the possibility to select an active alarm and directly view its **history in the alarm window**
→ The Alarm Log automatically records all the events (Alarms, Driver Events or System Events) on the relational database (even on Windows CE) or on text files
→ Alarm Dispatcher to promptly send alarms or messages via **SMS** or **E-mail**; the notification is sent to the specific User or Group of Users and can be customised depending on timetables, calendars, work shifts, etc. SMS notification dispatcher based on SMPP protocol (dispatches SMSs via internet without modem).

Scheduler

Scheduler and Event generator
Scheduler objects offer maximum configurability of commands executed on a temporal base in Runtime
→ Premium HMI schedulers manage **time-based programming** of any control, with flexibly configurable timetables. The operator has full freedom to establish commands, events and periods
→ The schedulers are supported also by Windows CE and Web Client
→ "Event Objects" define lists of commands that can be flexibly configured
"**Event Objects**" drastically reduce the need to use code, executing command actions associated to events generated by variables (Tags) or by actions bound to command objects (e.g. buttons, menus, etc.)

Security

Security and standards
Premium HMI 4 applications guarantee maximum level of safety and reliability in compliance with CFR21 part 11 standards
→ Users and Passwords management has been expressly designed to guarantee simple and integrated implementation of projects conforming with the severe **CFR21 part 11** standards of the American **FDA** (Food & Drug Administration)
→ Maximum protection of data and system access by managing criteria according to **1024** User levels and **16 access areas**
→ Data recording (Data Loggers, Events or any other data) is performed both on safe relational database (e.g. Ms SQL Server or Oracle) and in proprietary format (.DAT or .XML formatted text) encrypted with 128 bit encryption
→ Additional tools: electronic signature, control of tampering attempts, password expiration, automatic log-off and management of **Audit Trails**

Scripting

Scripting and integrated languages
Premium HMI 4 integrates a powerful VBA Engine (both for Windows CE and for Windows 32/64), able to execute codes that are perfectly compatible with the VBA standard (Visual Basic for Application) and to use a wide range of API for the most different project features
→ Scripts can be executed as normal routines or "encapsulated" in objects in response to events (graphic objects, alarm objects, data loggers etc.)
→ Scripts support **multi-threading**, the simultaneous execution of different scripts.
Premium HMI provides also:
→ **VB.Net** syntax support and management of software components based on .Net technology (only on Windows 32/64)
→ VBA expression generator to edit **logic expressions** directly on objects instead of assigning variables
→ Support of sequential combinational language, typical of PLCs (Instructions List IL or AWL)
→ Openness to integration of ActiveX, OCX, DLL software components

Multilingual

Multi-language support
Each Premium HMI project can contain all the text strings in a virtually unlimited number of languages and with any Unicode character, even with UTF-16 code for Asiatic and Arab characters
→ Editing texts in different languages is facilitated by import/export tools.
Texts are managed in the project string table, compatible with Copy/Paste operations of Editors like Microsoft Excel
→ Any language can be changed and activated both in Editor and in Runtime modes
→ A specific language can be activated when a specific Audit Trail user logs on

Reports

Print reports
Premium HMI integrates a simple and flexible tool in the development environment to make multi-language printing reports
→ Possibility to fully customize printing pages with Copy/Paste operations of variables and objects from the project pages (even graphs like trends, plotters, etc.)
Premium HMI provides also:
→ Printing of objects with values which change dynamically over time
→ Printing of variables present in the Data Logger, both on the Database and in .CSV format
→ Printing on file, **printer** and creation of **PDF files**

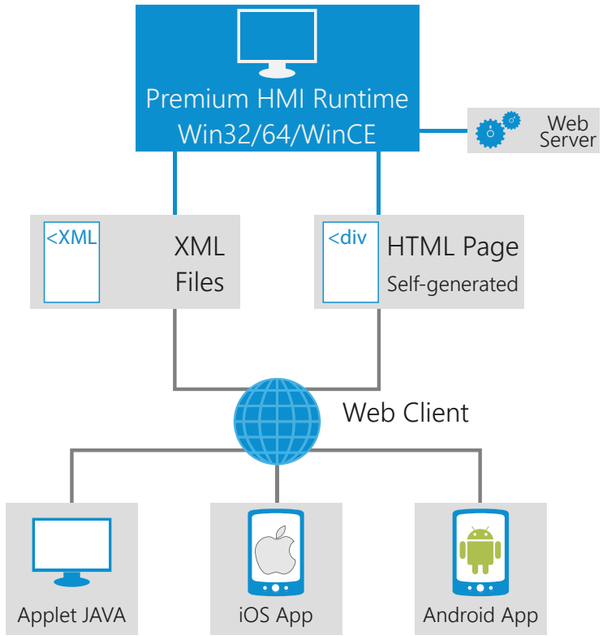
Debug

Debugging tools
Premium HMI has an integrated simulator to execute debugging without transferring the project in the target. The simulator allows communication with the protocols configured in the project
→ Powerful **online debugger** to analyse and simulate the project, both locally and remotely (even during execution)
→ Possibility of full project recovery from the target hardware device for a safe and protected modification of the password (with re-transmission of the modified project to the target device)
→ In case of multi-language projects, control/verification of non-translated text strings

Premium HMI provides also:
→ Verification and reporting of variables not used in the project (**Cross Reference**)
→ "Refactoring" tools for the automatic design error correction

Web Client

Support for Web Client remote control
Premium HMI offers the best Web Client technology with remote access independent from local operation
→ Remote control of projects with "**Premium HMI Mobile**" **App** for iOS and Android devices (needs Premium HMI 3.0.1102 or later releases)
→ The Web Client with JAVA-based architecture allows the server and projects to be accessed via **Internet browser** from any platform and operating system



Premium **HMI Mobile**

Available on the App Store

ANDROID APP ON Google play

iOS

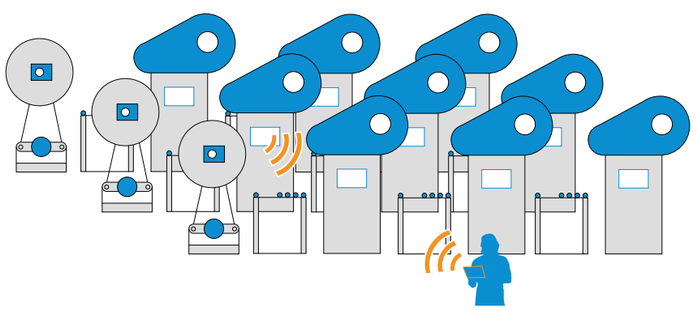
PREMIUM HMI mobile

Premium HMI Mobile is the new App released by ASEM to view and interact with Premium HMI projects, running on Machine HMIs, 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 PCs.

Premium HMI Mobile requires Premium HMI "Advanced" Runtime licence and it is available for free on App Store and Google Play.

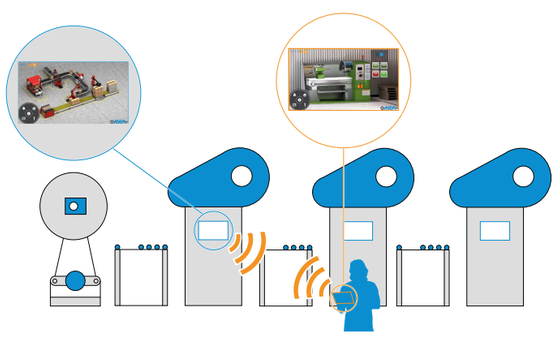
Benefits of
Premium HMI Mobile App

Better control in production lines
With Premium HMI Mobile, machinery supervision becomes more flexible and efficient. The user can control machines directly from the factory floor, even in large plants or applications with several production lines.



Independent project visualization
→ The native configuration of Premium HMI web server, allows you to independently manage projects on PHMI Mobile, while the local user can continue working on the machinery HMI.

→ Premium HMI Mobile manages the iOS/Android device screen resolution independently from the machine LCD resolution.

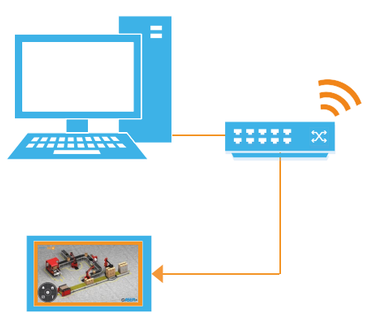


Security and users management
Premium HMI mobile supports the same security and user management features of Premium HMI. The access to pages and commands can be controlled as any Premium HMI project. Whether the application has access protection, all Premium HMI Mobile sessions will be exclusively activated through access credentials.

Premium HMI Mobile
Configuration

1 Enable Premium HMI Mobile connectivity with Premium HMI Studio

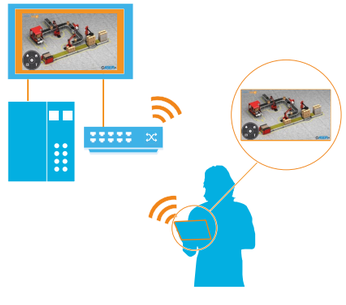
To run a project on Premium HMI Mobile, the user has to include the “System Variables" by right-clicking on the Variable database icon and selecting “Add System Variables".



2 Connect the mobile device to the wireless infrastructure network

When the project is transferred to the Panel PC / HMI, the device must be connected to the wireless network which will be used by the iOS/Android device[1].

1. Premium HMI Mobile performances may vary according to wireless signal strenght and to the processor of the device running Premium HMI Runtime “Advanced" licence.



3 Connect the mobile device to the IPC / HMI

Once the installation of “Premium HMI Mobile" on the iOS/Android device is completed, connect it to the wireless network, insert access credentials on the home screen (IP address, screen name, username, password and resolution desired) and click on the connection button to start remotely interacting with the project.

Ubiquity

Ubiquity
The innovative remote assistance solution

UBIQUITY

In 2011 ASEM presented Ubiquity, the innovative software platform for remote assistance and control.

The development idea came up to solve customer requests for an easy-to-use tool to install and setup machinery and, in particular, to manage post-sales service, phases during which customers often require modifications, customizations and support.

Traditionally, the most challenging aspect of meeting such needs is the availability of qualified technical resources, that would need the gift of **ubiquity**.

Designed for machine builders, the remote assistance and control solution UBIQUITY allows to operate on the remote system and its sub-networks as if it was in your own office.

Ubiquity
Value added for all automation devices

The software solution UBIQUITY enables the access to remote supervision and control systems (based on Windows CE and Windows 32/64 operative systems) and to the automation devices (PLC, drive, etc), connected to the Ethernet and Serial sub-networks of the HMI/controller, 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 directly connected 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 particularly useful during machine setup and commissioning, to monitor remote applications, to modify and update software applications and remotely debug PLCs and other automation devices.

What I can do with Ubiquity

→ Remotely program, debug and update HMI/IPC/Controllers and automation devices (PLCs/drives, etc.) connected to Ethernet and Serial sub-networks
→ Malfunctioning Analysis
→ Software applications updates

How it works

→ Uses a simple internet connection
→ Creates a VPN between the remote assistance PC and the remote device activating sub-networks access
→ Activates safety procedures with end-to-end sessions without any intermediate
→ Ensures reliability and service continuity thanks to a redundant and distributed server infrastructure

Highlights

→ Remote control of the IPC/HMI/Controller
→ Access to Ethernet and Serial devices connected to the IPC/HMI/controller sub-network
→ Additional tools: remote desktop, file transfer, chat, etc.
→ Proprietary VPN technology optimized for industrial communication
→ Available with the same features for Windows 32/64 and Windows CE platforms
→ No additional hardware required
→ SSL/TLS safe connection and use of certificates
→ Simple and easy-to-use interface
→ Distributed and redundant server infrastructure ensuring service continuity
→ Possibility to implement a private server infrastructure
→ SDK (Software Development Kit) for programming the activation of the Control Center functions also by external applications
→ Runtime with multiple connection support
→ Built-in firewall:
  - VPN communication protocols filter
  - Higher security and bandwidth control
→ Advanced user profiling and access control
→ Trace of all Domain administration activities
→ Trace of all session's activities (v7)
→ Internet sharing for LAN devices (v7)

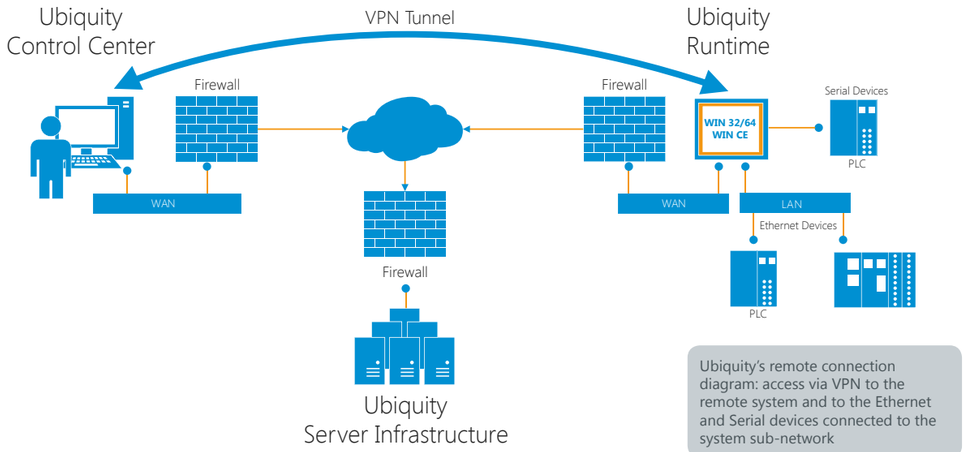
Ubiquity is a simple and ready-to-use solution. Its installation does not require any ICT expertise in network and firewalls configuration. It has a user-friendly interface that enables access to remote systems (PLCs, HMIs, drives, etc.) with a simple click through a VPN optimized for industrial communications.

The solution allows transparent management of remote systems as if they were connected to the enterprise network and it does not require the support of network administrators for any NAT, proxy, firewall, public IP and reserved ports.

Ubiquity adds huge value in ASEM supervision and control system, but it is also a solution delivered as a software component to install on ASEM IPCs and third parties hardware.

Ubiquity is included in ASEM Windows based HMI & PAC Solutions.

Ubiquity
The components



Ubiquity's remote connection diagram: access via VPN to the remote system and to the Ethernet and Serial devices connected to the system sub-network

Ubiquity platform is made up of "Control Center", the software tool to be installed on the remote assistance PC to manage the "Ubiquity Domain", of the Server infrastructure and different versions of Runtime.

The connection between Control Center and the Runtime installed on the remote IPC/HMI/controller leverages on a safe end-to-end connection.

Ubiquity Control Center

Control Center is installed and executed on the remote assistance PC and allows to manage the domain, the users and their privileges, and the connection with remote devices.

Ubiquity Runtime

The runtime is the software component installed and executed on the remote IPC/HMI/controller that supervises or controls the automation process. It requires neither additional hardware nor network configuration and it uses the existing Internet connection.

Ubiquity Domain

Ubiquity Domain is the "customer account" to make use of Ubiquity infrastructure and services.

Ubiquity Server Infrastructure

Communication between Control Center and Runtime is ensured by a redundant server infrastructure built and maintained by ASEM which uses state-of-the-art security technologies for data exchange such as SSL/TLS, public key cryptography, safe, fault tolerant and redundant server farms to secure data privacy and adequacy.

Runtime versions

Runtime component is available in Basic and PRO versions for WinCE and WIN 32/64 operating systems. The Basic version provides access to the IPC/HMI/remote controller and provides remote-desktop, remote task manager, remote file manager and chat with the remote operator. The PRO version enables also the access to all the automation devices (PLCs, drives, etc.) connected to the Ethernet or Serial subnetwork of the IPC/HMI/remote controller.

Ubiquity Runtime	Windows CE		Win32/64	
	Basic	Pro	Basic	Pro
Remote desktop, file & task management, chat, screenshot	✓	✓	✓	✓
VPN to the remote device	✓	✓	✓	✓
VPN with access to the Ethernet sub-network of the device/router	-	✓	-	✓
VPN with access to the Serial sub-network of the device/router	-	✓	-	✓
Integrated firewall	✓	✓	✓	✓
API to interface proprietary software applications	✓	✓	✓	✓
Runtime operations persistent log	✓	✓	✓	✓
Multiple connections from different Control Center	✓	✓	✓	✓
Structured Domain creation, users and remote devices management	✓	✓	✓	✓
Internet connection via PROXY for Control Center and Runtime	✓	✓	✓	✓
Functioning in local network without license	✓	✓	✓	✓
Runtime update procedure with automatic shutdown and restart of services	✓	✓	-	-
Log & Audit of Domain administration activities	✓	✓	✓	✓
Log & Audit of session's activities (v7)	✓	✓	✓	✓
Internet sharing for LAN devices (v7)	-	✓	-	✓

Domain types

Ubiquity Domain is available in three different versions: Single Entity-Single Access, Single Entity-Multi Access and Multi Entity-Multi Access. Single Entity Domains are accessible by users of one only company, Multi Entity Domains are accessible by users of different companies. Single Access Domains give access to Ubiquity infrastructure and services to one user at a time, Multi Access Domains give access to Ubiquity infrastructure and services to more users at the same time.

	Ubiquity Domain types		
	Single Entity-Single Access	Single Entity-Multi Access	Multi Entity-Multy Access
Domain accessible by	Users of one company	Users of one company	Users of more companies
Remote assistance services enabled for	One user per time	More users at the same time	More users at the same time

Server infrastructure

To provide an excellent service ASEM built a redundant and globally distributed server infrastructure that counts two farms in Europe (Munich and Amsterdam), two in the United States (western and eastern coast) and two in Asia (Singapore and Honk Hong).

ASEM Server Infrastructure, does not give any limitation to the number of configurable users, devices, concurrent remote desktop and VPN sessions.

Private Server Infrastructure

As ASEM provides a redundant and distributed Server infrastructure to manage Ubiquity services, it is possible to replicate and build up a **private server infrastructure** managed autonomously.

Private Server
With the Private Server package, it is possible to install a private server infrastructure in complete autonomy. The server application can be installed on dedicated systems or cloud servers.

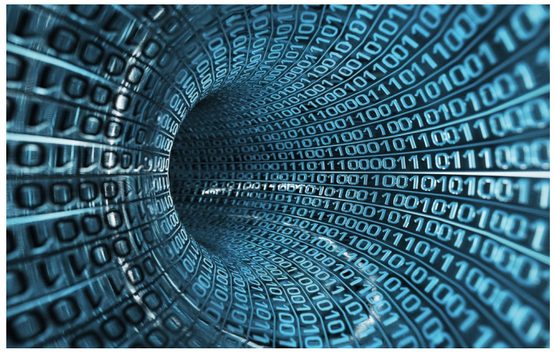
The **Primary Server** is the basic software package and provides autentication security and communications as the ASEM server infrastructure.

Primary Server:
→ Data storage: authentication, permission and security management
→ Ubiquity Runtime licenses management
→ Relay feature to implement end-to-end communication

The **Secondary Server** is an optional package to improve and increase the connectivity performances. It is possible to buy several secondary server licences and install them in different locations worlwide.

Secondary Server (option):
→ Relay feature to implement end-to-end communication
→ You can install multiple instances to reduce latency and balance traffic load.

Ubiquity
Highlights



Proprietary VPN
Differently from VPNs based on the IP layer, Ubiquity VPN works on the data-link layer bringing concrete advantages:
→ Remote assistance PC becomes part of the remote host network using the same physical IP addresses
→ Remote assistant can use broadcast-based protocols
→ It is not necessary to configure the gateway of the remotely accessed devices. The remote assistant connection appears as a locally connected IP.

Remotation of Serial Communication
Ubiquity installs a virtual serial port on the Control Center PC. This virtual serial port can be mapped on a physical port of the remote device executing Ubiquity Runtime.

Benefits:
→ Possibility to carry out supervision and diagnostics tasks on remote serial devices.

Multi-client
Ubiquity Runtime supports multiple concurrent connections from different supervisors whether with interactive session (remote desktop, file transfer, etc) or in VPN. Control Center can activate multiple interactive sessions with different devices and only one VPN connection to a remote device.

Benefits:
→ Maximum productivity being able to operate simultaneously on the same system.

Full compatibility with the existing firewalls
Ubiquity Control Center and Ubiquity Runtime connection are automatically configured using outbound connections which are recognized as safe and therefore allowed by firewall policies.

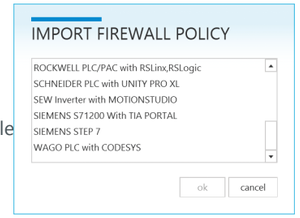
Benefits:
→ No need to configure the end-user's firewall and network. Only an outbound connection is necessary.
→ Ubiquity automatically uses enabled TCP and UDP protocols and can use HTTP, HTTPS or custom ports, ensuring compatibility with existing IT policies.

Industrial Security
Ubiquity infrastructure uses the highest network security standards, such as:
→ SSL/TLS protocol via UDP or TCP
→ Asymmetric cryptography and X509 certificates for authentication sessions
→ Symmetric cryptography for data transimission
→ Message authentication codes (MAC) for data integrity.

Ubiquity
Highlights

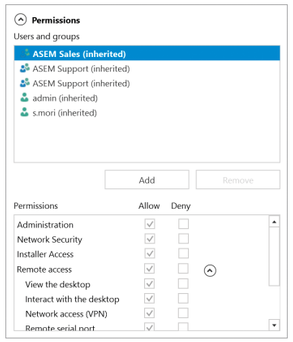
Integrated firewall
Ubiquity's integrated firewall allows to control communication packets passing through the VPN. Introducing firewall policies, it is possible to filter Ethernet datagrams depending on communication protocols and target addresses.

The server infrastructure provides a library of policies that can be imported into the Domain and applied to devices and folders. Filtering rules can be assigned to single users or groups of users.
Benefits:
→ Increased security and bandwidth control
→ Increased flexibility in access permissions.



Access profiling and control
Ubiquity allows the creation of an unlimited number of users, user groups, device groups, each with different access rules.
Permissions can be flexibly configured up to the single device or folder: possibility to create local and global users, and sub-domains.
Ubiquity provides 4 different user profiles: **Administration** enables folders and users management, **Device Installer** allows to add new devices in the Domain,

Network security enables configuration and set up of Firewall rules, **Remote access** allows to practice remote access sessions.
Benefits:
→ Users can implement their own organizational structure (made up of users, administrators, power-users, third parties, limited users, etc.) to reach in a flexible and controlled way all customers around the world
→ Access to remote devices is properly secured and restricted to the required personnel.

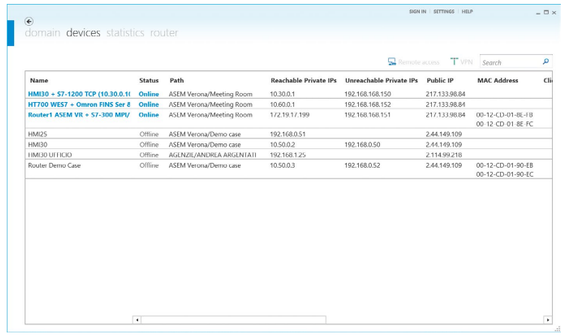


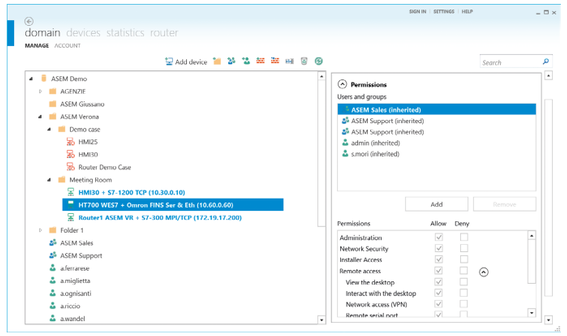
Internet connectivity sharing with LAN devices
Internet connectivity can be shared with specific devices of the LAN network:
Benefits:
→ Internet access from laptops of IP phones connected to the LAN network
→ Usage of Ubiquity runtime services on LAN devices
→ Access to the web servers of LAN devices

Modern user interface
ASEM Ubiquity provides a completely redesigned graphic interface based on Modern-UI standards.

The new design presents additional controls and views, as the new table view that enables the "Search" function using the text field on the right of the tree view that now gives also users (or groups of users) information.

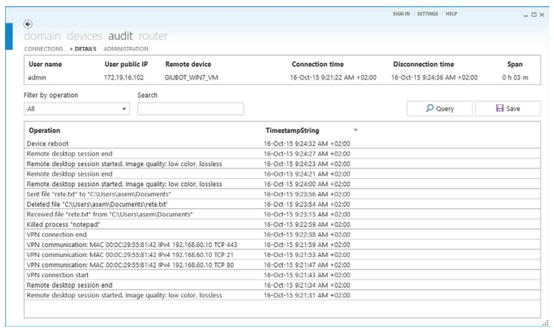
Benefits:
→ Ubiquity Control Center becomes clearer and more intuitive
→ Users' daily operations are simplified and made more immediate.





SDK Control Center
With the SDK (Software Development Kit) it is possibile to program the activaction of Ubiquity Control Center functions also by external applications.
Control Center SDK is made of a .NET assembly and a user manual for the usage of the API (Application Programming Interface) with the related code examples.
With the available interfaces you can execute the following tasks:
→ Domain login/logout
→ Browse domain
→ Connect/disconnect remote device
→ Connect/disconnect VPN
→ Connect/disconnect virtual serial
→ File transfer to and from the remote device
→ Launch application on the remote device
→ End process and restart

Log and Audit of Domain and sessions' activities
→ Trace of all Domain Administration activities with a simple audit tool
→ Trace of all sessions' activities (v7): all activities and chat contents are registered and accessible by domain administrators



Ubiquity
Highlights

Remote desktop
Control center includes remote desktop function.
Benefits:
→ No need to activate RDP services or to install optional utilities like VNC.

File exchange
Control Center includes a complete tool to perform remote files download and upload.
Benefits:
→ No need to open shared folders or to install optional utilities like FTP servers.

Statistics and Audit
Ubiquity records and stores on the Domain all the remote access activities.

Benefits:
→ The network administrator can verify anytime the post-sales support workload, the accuracy of the jobs carried out and get statistics for customers, PCs and operators.

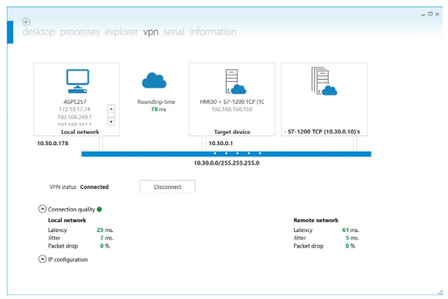
Chat
Control Center and Runtime include a chat.
Benefits:
→ Instead of using the phone to communicate with remote operators, the user can simply take advantage of Ubiquity chat reducing costs.

Cloud-based accessibility
Ubiquity domain is registered on the Cloud. This architectural paradigm allows service continuity and data safety.
Benefits:
→ Wherever the user is located, he can launch Control Center getting access to remote machines worldwide.

Windows Embedded

Full support of Embedded platforms
Ubiquity Runtime is available for the following operative systems:
→ Windows XP, Vista, 7, 8 (32 and 64 bit)
→ Windows Embedded Standard 2009, Windows Embedded Standard 7E and 7P
→ Windows CE 5.0, 6.0, Windows Embedded Compact 7.0

Connectivity quality measurement
Ubiquity provides a simple function that measures connectivity quality on both local and remote network. Performances are measured in terms of latency time, jitter and packet drop.



Requirements

The following tables list the minimum hardware, software and network requirements for the correct installation and usage of Ubiquity.

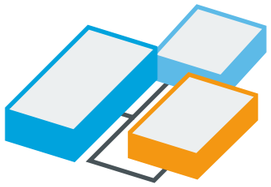
Control Center		
SW Requirements	**Operating System**	**HW Requirements**
.Net Framework 4.0 Client Profile	Windows XP	At least Celeron 1.6 GHz with 512 MB RAM
	Windows Vista 32-bit and 64-bit	
	Windows 7 32-bit and 64-bit	
	Windows 8 32-bit and 64-bit	
	Windows 8.1 32-bit and 64-bit	
	Windows Server 2008 and Server 2008 R2	
	Windows Server 2012	

Runtime		
SW Requirements	**Operating System**	**HW Requirements**
.Net Compact Framework 3.5	Windows CE 5.0 (ARM, x86)	256 MB RAM At least CPU 500 MHz
	Windows CE 6.0 (ARM, x86)	
	Windows CE Compact 7.0 (ARM, x86)	
.NET Framework 2.0 SP1 or 3.5 (distributed with setup)	Windows XP	512 MB RAM At least CPU 500 MHz
	Windows XP Embedded	
	Windows Vista 32-bit and 64-bit	
	Windows 7 32-bit and 64-bit	
	Windows 8 32-bit and 64-bit	
	Windows 8.1 32-bit and 64-bit	
	Windows Server 2008 and Server 2008 R2	
	Windows Server 2012	

Private Servers			
Primary Server		**Secondary Server**	
Hosting	**Software**	**Hosting**	**Software**
2 public IP addresses, one of them associated to an Internet Domain name	Windows 7 64 bit or later	1 public IP address	Windows 7 64 bit or later
	Windows Server 2008 64 bit or later		Windows Server 2008 64 bit or later
	SQL Server 2012 or later, Express edition or greater		
	.NET Framework 4.0 Client		.NET Framework 4.0 Client

HMI Solutions

ASEM System Manager



ASEM SYSTEM MANAGER
ASEM System Manager is a set of utilities developed to improve the usage of ASEM WinCE-based ARM and x86 platforms.
Installed directly in production, ASEM System Manager is accessible from the OS control panel and includes a series of features that allow to backup the whole system or to selectively backup the applications, to manage the screen saver and to implement the antialiasing rendering for a better characters visualization.
ASEM System Manager can be installed also on existing systems.

Clone, Backup and Restore
The Clone feature offers the possibility to backup the OS image (ARM systems) and the registry of the system.
Selective Backup allows to backup only specific and selected files and applications settings.
The backup is saved in a single file with ".ASR" (ASEM System Repository) extension.
With the Restore feature it is possible to retrieve the backup by selecting the files to be restored.

OS update for ARM systems
The ASEM System Manager allows to update the operating system without reinstalling all the applications.
Before the update, ASEM System Manager will automatically make a temporary backup of all ASEM applications and the related settings. Once the update is completed, the backup is automatically restored in a safe and open way.
On the download area of the ASEM website there is a database with all OS image versions in ".ASR" format.

Screen Saver
The Screen Saver function allows to reduce the display brightness or to switch off the display after a period of inactivity when systems are powered but not used in a continuous way by the operator. This feature extends the lifetime of the displays.

Kiosk Mode
The utility enables the execution of Premium HMI Runtime in "kiosk" mode without showing any detail of the operating system. The kiosk mode is very useful when you need the HMI application to be launched with no evidence of the operating system presence.

System reboot
The utility allows you to reboot the device without acting on the power supply.

eMMC Usage
The utility provides useful information about the actual use of the eMMC memory along with an indication of "lifetime" of the support expressed in expected duration time.

Antialiasing
Antialiasing is a technique for minimizing the character edges compared with their matrix enabling a better character visualisation.
The utility allows to choose between two different representation, according to users preferences.

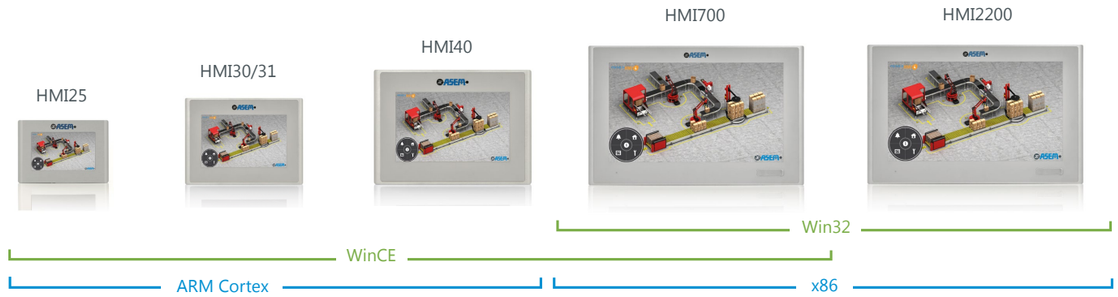
Scrollbar
The utility lets you change the operating system scroll bars dimension Some of these controls are in fact used in the HMI applications so you can freely adapt the size.

Touch Buzzer
The utility allows you to activate the sound feedback of touch activation.

Language Settings
The utility allows you to easily install the font support for non-European languages in the HMI applications.

System compatibility						
Hardware platform (WinCE)	**Preinstalled**	**Post sales installation**	**Backup/Restore**	**Backup/Restore with OS clone**	**Fonte antialiasing setting**	**Screen Saver**
ARM	✓	✓	✓	✓	✓	✓
x86	-	✓	✓	-	-	-
RMxx	-	✓	✓	✓	✓	-
Hardware platform (WinCE)	**Touch Buzzer**	**eMMC Usage**	**Kiosk Mode**	**Language Settings**	**Scrollbar**	**System Reboot**
ARM	✓	✓	✓	✓	✓	✓
x86	-	-	-	✓	✓	-
RMxx	-	✓	-	✓	✓	-

HMI Solutions



HMI Solutions include a wide range of families based on ARM Cortex and X86 architectures.

→ **HMI25**
(ARM Cortex A8, 1 GHz)
→ **HMI30/31**
(ARM Cortex A8, 1 GHz)
→ **HMI40**
(ARM Cortex A9 Dual/Quad Core, 1 GHz)
→ **HMI700**
(Intel® ATOM E640/E680 1,00/1,60 GHz)
→ **HMI2200**
(Intel® Celeron J1900 Quad Core 2,00 GHz)

X86 based solutions have expansion slots that allow the integration of ASEM industrial networking cards supporting a wide range of fieldbuses.

PREMIUM HMI 4

UBIQUITY

x86
Win 32

ARM Cortex
WinCE

HMI25

Entry Level visualization systems

HMI25 are the entry level operator panels of the ASEM portfolio. With competitive price HMI25 provides an incomparable number of functionalities with the advanced features of PHMI4 visualization software, in Basic or Advanced version, and the remote assistance software platform ASEM UBIQUITY. They are available with 16 million colors TFT LED backlight LCD displays in 4.3" and 7" sizes with 16:9 aspect ratio, with Aluminium or Aluminium True Flat front panels. HMI25 are based on an ARM Cortex A8 processor, 1 GHz (Freescale i.MX535) and Windows Embedded Compact 7 Pro operating system.
The motherboard includes the ASEM Smart Memory System, with 1 GB system RAM (DDR3-800), a write-protected 256 MB Nand-Flash for the operating system and Runtime storage, 4 GB eMMC memory for storage and management of HMI project data, an RS-232/422/485 configurable serial port with MPI support, a USB 2.0 interface and a 100 Mbps Ethernet interface.
HMI25 includes the ASEM System Manager, a series of software utilities to improve the operator panels management.

c UL us LISTED

UBIQUITY

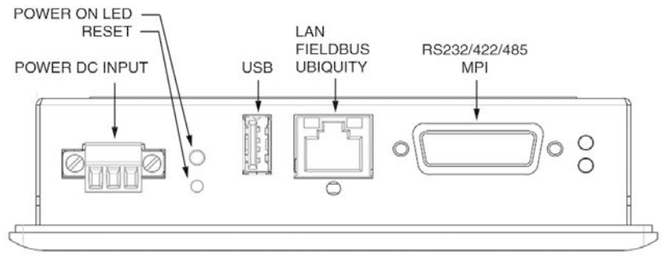
PREMIUM HMI

Highlights

- Ubiquity Remote Assistance Software with remote access to the system and to Ethernet and Serial sub-networks
- ARM Cortex A8 Processor at 1 GHz
- ASEM Smart memory system
- 4.3" and 7" displays in 16:9 aspect ratio
- Front panel in Aluminium or Aluminium True Flat
- IP66 front degree of protection - Enclosure type 4X (Indoor use only)
- Operating temperature 0°C÷+50°C
- UL 508 listed component

Gallery

I/O shield



Technical data

	HMI25 / HMI25-TF
HMI Software	PREMIUM HMI 4 BASIC / ADVANCED
REMOTE ASSISTANCE SW	ASEM UBIQUITY PRO
O.S. INSTALLED	Windows Embedded Compact 7 Pro
PROCESSOR	ARM Cortex A8 1GHz
DRAM / SYSTEM MEMORY	1 GB
MASS STORAGE	256 MB NAND-FLASH
	4 GB eMMC (SSD)
LED backlight TFT LCD	4.3" W - 480x272 7" - 800x480
TOUCHSCREEN	Resistive 4 wires
FRONT PANEL	Aluminium | Aluminium True Flat
PROTECTION DEGREE	IP66 front panel
INTERFACES	1 x LAN 100Mbps
	1 x USB 2.0 (Type-A, rear)
	1 x RS232/422/485 with MPI support (187Kb/s)
POWER SUPPLY UNIT	24VDC input voltage
OPERATING TEMPERATURE	0°- 50°C
APPROVALS	CE, cULus LISTED (508)

HMI30 / HMI31

Visualization systems from 5.7" to 15.6"

HMI30/31 operating panels integrate the numerous and advanced features of Premium HMI visualization software, in Basic or Advanced version, and the remote assistance software platform Ubiquity.
The HMI30/31 operator panel family provides a wide range of sizes with 16 million colors LED backlight TFT LCDs, and Aluminium and Aluminium True Flat front panels.
ASEM HMI30 features a 1 GHz ARM Cortex A8 processor (Freescale i.MX535) with Windows Embedded Compact 7 Pro operating system.

ASEM HMI31 features a 800 MHz ARM Cortex A8 processor (Freescale i.MX537) with Windows Embedded Compact 7 Pro operating system.
The motherboard features 1 GB system RAM (DDR3-800), a writeprotected 256 MB Nand-Flash for the operating system and Runtimes storage, 4 GB eMMC memory for storage and management of HMI project data and a slot for a removable SDHC memory card.

The motherboard has a RS-232/422/485 configurable serial port with MPI support, two USB 2.0 interfaces, one Ethernet interface 10/100 Mbps, one Ethernet interface 100 Mbps and one CAN interface (only HMI31).
The HMI30/31 is equipped with a 24VDC power supply with an optional power backup for micro-interruption with supercapacitors.
HMI30/31 includes the ASEM System Manager, a series of software utilities to improve the operator panels management.

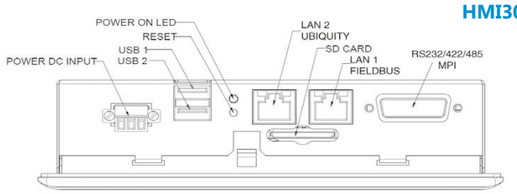
Highlights

- Ubiquity Remote Assistance Software with remote access to the system and to Ethernet and Serial sub-networks
- ARM Cortex A8 Processor at 1 GHz / 800 MHz
- ASEM Smart memory system
- 5.7", 8.4", 10.4", 12.1", 15" displays in 4:3 aspect ratio, 10.1" and 12.1" displays in 16:10 aspect ratio, and 7" and 15.6" displays in 16:9 aspect ratio
- Front panel in Aluminium or Aluminium True Flat
- IP66 front degree of protection - Enclosure type 4X (Indoor use only)
- Operating temperature 0°C÷+50°C
- UL 508 listed component
- ATEX approval Zone 2/22 (only HMI30)

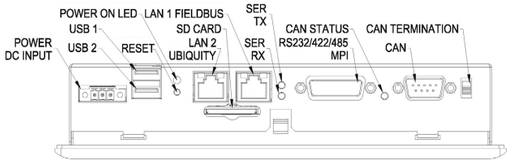
Gallery

I/O shield

HMI30



HMI31



Technical data

	HMI30	HMI30-TF	HMI31	HMI31-TF
HMI Software	PREMIUM HMI 4 BASIC / ADVANCED			
REMOTE ASSISTANCE SW	ASEM UBIQUITY PRO			
OS INSTALLED	Microsoft Windows Embedded Compact 7 Pro			
LED backlight TFT LCD	5.7" - 640x480 7" W - 800x480 8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1" W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6" W - 1366x768		7" W - 800x480 8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1" W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6" W - 1366x768	
TOUCHSCREEN	Resistive 4 wires for 5.7" and 7"			
	Resistive 5 wires for other sizes			
FRONT PANEL	Aluminium	True Flat Aluminium	Aluminium	True Flat Aluminium
PROTECTION GRADE	IP66, Enclosure type 4x - front			
PROCESSOR	ARM Cortex A8 processor Freescale® i.MX535 1 GHz		ARM Cortex A8 processor Freescale® i.MX537 800 MHz	
SYSTEM MEMORY - RAM	1 GB			
MASS STORAGE	256 MB Read-Only NAND-Flash for operating system and runtime			
	4 GB eMMC (Solid State Disk) 8bit, file system organization for projects and applications			
	1 x Slot SD/SDHC v2.0			
LAN	LAN1 Ethernet 100 Mbps (RJ45)			
	LAN2 Ethernet 10/100 Mbps (RJ45)			
USB	2 x USB 2.0 (Type A, rear)			
SERIAL	1 x RS-232/422/485 (DB15M)			
FIELDBUS INTERFACES	-		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), ATEX zone 22, 11 3 D	CE, cULus LISTED (508), ATEX zone 2/22, 11 3 G D	CE, cULus LISTED (508)	

HMI40 [new]

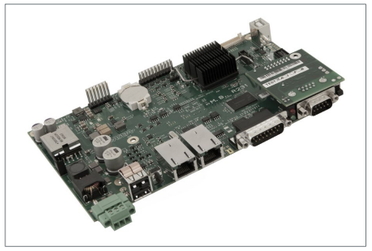
Multicore ARM based visualization systems

HMI40 family combines in a unique solution visualisation and remote assistance functions.
Based on Windows Embedded Compact 7 Pro operating system, HMI40 panels integrate the numerous and advanced features of PHMI4 visualization software, in Basic or Advanced versions and ASEM UBIQUITY remote assistance solution.
They 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).
HMI40 systems are based on the ARM Cortex A9 1.0 GHz processor (Freescale i.MX6 Quad Core, Dual Core or Dual Lite) with 1 or 2 GB system RAM (DDR3-1600/800), 4 or 8 GB eMMC memory and a slot for a removable MicroSD memory card.
The motherboard includes the isolated 24 V DC power supply, two 10/100/1000 Mbps Ethernet interfaces, an RS-232/422/485 configurable serial port with MPI support, two USB 2.0 interfaces and an optional MicroUPS (removable).
HMI40,optionally, can be supplied with an isolated CAN interface or an additional isolated RS-485 serial port.

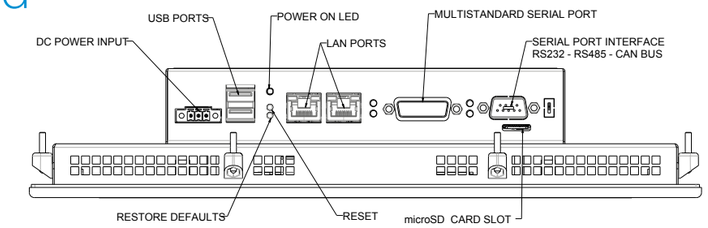
Highlights

- Premium HMI visualisation software
- Ubiquity Remote Assistance Software with remote access via VPN to the system and to Ethernet and Serial sub-networks
- 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 Quad Core, Dual Core or Dual Lite processor (1 GHz)
- 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

Gallery



I/O shield



Technical data

	HMI40	HMI40-TF
HMI Software	PREMIUM HMI 4 BASIC/ ADVANCED	
REMOTE ASSISTANCE SW	ASEM UBIQUITY PRO	
O.S. INSTALLED	Windows Embedded Compact 7 Pro	
LED backlight TFT LCD	7"W - 800x480 8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1"W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6"W - 1366x768 18.5"W - 1366x768	
TOUCHSCREEN	Resistive 4 wires for 7"	
	Resistive 5 wires for other sizes	
FRONT PANEL	Aluminium	Aluminium True Flat
PROTECTION GRADE	IP66, Enclosure type 4x - front	
PROCESSOR	ARM Cortex A9 processor Freescale® i.MX6 1 GHz	
SYSTEM MEMORY - RAM	1/2 GB with DDR3 chips soldered	
MASS STORAGE	4/8 GB eMMC (Solid State Disk) 8bit, file system organization for projects and applications	
	1 x Slot microSD	
LAN	2 x Ethernet 10/100/1000 Mbps (RJ45)	
USB	2 x USB 2.0 (Type-A, rear)	
SERIAL	1 x RS-232/422/485 (DB15M)	
	1 x RS485 isolated (DB9M) with terminations (optional)	
FIELDBUS	1 x CAN isolated channel (DB9M) and terminations (optional)	
POWER SUPPLY UNIT	24VDC isolated	
	Backup for microinterruption, max 500ms, with supercapacitors (optional)	
OPERATING TEMPERATURE	0°- 50°C	
APPROVALS	CE, ATEX pending, cULus (508) pending	

HMI700

Visualization systems with Intel® Atom Tunnel Creek processor

HMI700 visualisation systems are based on the entry level Intel® X86 platform ATOM E640 and E680 with Windows Embedded Compact 7 Pro operating system or Windows Embedded Standard 2009. HMI700 integrates the advanced PHMI4 visualisation software features, in Basic, Pro or Advanced version, and UBIQUITY remote assistance software.
The HMI700 family features a wide range of 16 million colors LED backlight TFT LCD displays in various sizes and aspect ratios, Aluminium and Aluminium True Flat front panels. Displays with 4:3 aspect ratio are available with 6.5", 8.4", 10.4", 12.1" and 15" LCD sizes and displays with 16:9 aspect ratio are available with 7", 15.6" and 18.5" LCD sizes.
The motherboard integrates the ATOM E640 (1 GHz) or the ATOM E680 (1,60 GHz) microprocessor, with 1 GB RAM (DDR2), a Compact Flash, a front-access USB 2.0 interface, two Ethernet 10/100/1000 Mbps interfaces, an RS232 serial port and two PCI mini-slots to install ASEM NETcore® X cards for the support of the most widespread industrial fieldbuses such as Profibus, Profinet*, Ethercat, Ethernet IP* and CANopen.
HMI700 systems have a 24 VDC (18÷32 VDC) power supply with galvanic isolation and an optional integrated UPS (Uninterruptible Power Supply).

c UL us LISTED

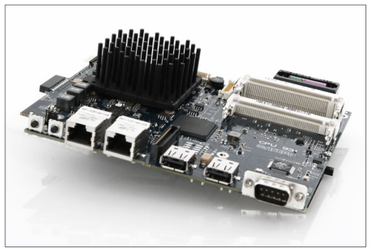
UBIQUITY

PREMIUM HMI

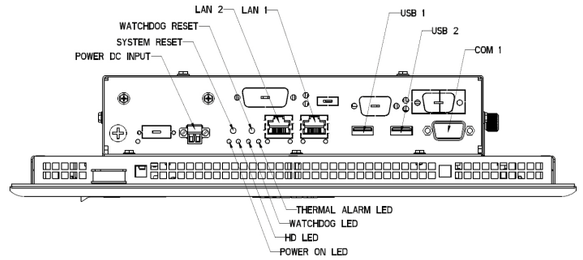
Highlights

- → Ubiquity Remote Assistance Software with remote access to the system and to Ethernet and Serial sub-networks
- → Intel® Atom™ Tunnel Creek E640/E680 1,00/1,60 GHz Processor
- → 6.5", 8.4", 10.4", 12.1", 15" displays in 4:3 aspect ratio and 7", 15.6" and 18.5" displays in 16:9 aspect ratio
- → Front panels in Aluminium and Aluminium True Flat
- → IP66 front degree of protection
- → Compact Flash slot on board with external access
- → 2 MiniPCI Slots on board for ASEM NETcore® X cards (for industrial fieldbuses)
- → Operating temperature 0°C÷+50°C
- → Isolated power supply with galvanic isolation
- → Optional UPS (Uninterruptible Power Supply) for power failures

Gallery



I/O shield



Technical data

	HMI700 / HMI700-TF WinCE	HMI700 / HMI700-TF Win32
HMI Software	PREMIUM HMI 4 BASIC / ADVANCED	PREMIUM HMI 4 BASIC / PRO / ADVANCED
REMOTE ASSISTANCE SW	ASEM UBIQUITY PRO	
O.S. INSTALLED	Windows Embedded Compact 7 Pro	Microsoft Windows Embedded Standard 2009
PROCESSOR	Intel® Atom™ E640 1,00GHz	Intel® Atom™ E680 1,60GHz
CHIPSET	Intel® EG20T	
VIDEO CONTROLLER	Integrated in Intel® Atom™ microprocessor, 320MHz, LVDS 8bit/color digital interface	Integrated in Intel® Atom™ microprocessor, 400 MHz, LVDS 8bit/color digital interface
DRAM / SYSTEM MEMORY	1 GB	1 GB
MASS STORAGE	1GB / 2 GB / 4 GB Compact Flash	16 GB SSD SATA II MLC (for systems with 8.4")
		8 GB SSD Half-Slim SATA II MLC (for systems with 6.5" and 7" LCD)
LED backlight TFT LCD	6.5" - 640x480 7" - 800x480 8.4" - 800x600 10.4" - 800x600 12.1" - 800x600 12.1" - 1024x768 15.0" - 1024x768 15.6" - 1366x768 18.5" - 1366x768	6.5" - 640x480 7" - 800x480 8.4" - 800x600
TOUCHSCREEN	Resistive 5 wires	
FRONT PANEL	Aluminium | Aluminium True Flat	
PROTECTION DEGREE	IP66 front panel	
INTERFACES	2 x LAN 10/100/1000Mbps (RJ45, 1 x Intel® 82574L, 1 x integrated in Intel® EG20T + PHY Realtek® RTL8211E)	
	2 x USB 2.0 (Type-A, rear)	
	1 x USB 2.0 (Type-A, front)	
	1 x RS232 (DB9M)	
ADD-ON INTERFACES	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0	
	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0	
FIELDBUS	NETcore X cards MPI, PROFIBUS Slave, CANopen Master/Slave	
POWER SUPPLY UNIT	24VDC input voltage	24VDC input voltage / UPS
OPERATING TEMPERATURE	0°- 50°C	
APPROVALS	CE, cULus LISTED (508)	

HMI2200

Advanced visualization systems with Intel® Celeron™ processor

ASEM HMI2200 are powered by the Intel® Celeron™ J1900 2,0GHz quad core processor of the Bay Trail SoC platform and based on Windows Embedded Standard 7E/7P operating systems. The HMI2200 family integrates Premium HMI visualization software available in WinCE Basic and Advanced versions and in Win32 Basic, Pro or Advanced versions, characterized by greater openness and functionality compared to WinCE versions. HMI2200 are also equipped with the remote assistance software Ubiquity. HMI2200 operator panels feature a wide range of 16 million colours TFT Led Backlight LCDs in various display sizes. The front panels are available in aluminium, aluminium True Flat with 5 wires resistive touchscreen or in aluminium-true flat Multitouch version with capacitive touchscreen. The all-in-one motherboard includes two rear-access USB 2.0 ports and one rear-access USB 3.0 port, one USB 2.0 port on the front panel (not on the Multitouch front), two 10/100/1000 Mbps Ethernet ports with Jumbo Frame e Wake on Lan support, one RS232 serial interface, one CFast SATA II rear access slot, one DVI-I (DVI-D + VGA) video output and DDR3 1066 MHz system RAM memory configurable up to 8 GB. HMI2200 can be equipped with ASEM NETcore® X boards to communicate with industrial fieldbuses as Profibus, MPI or CANopen. The 24VDC HMI2200 (18÷32 VDC) operator panels feature the optional integrated UPS.

c UL us LISTED

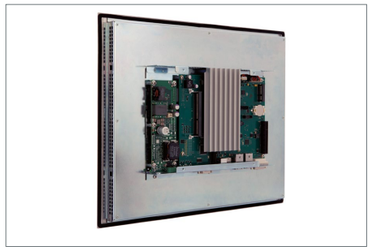
UBIQUITY

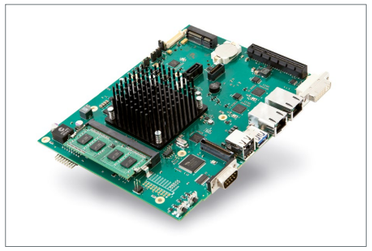
PREMIUM HMI

Highlights

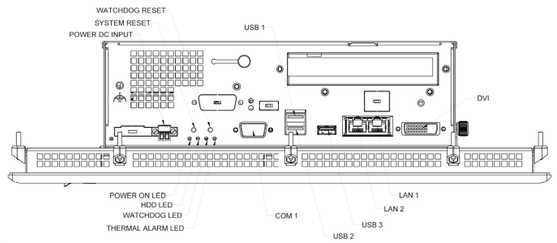
- → Premium HMI 4 WinCE Basic and Advanced and Win 32 Basic, Pro e Advanced Runtimes
- → High performance Intel® Bay Trail SoC Celeron J1900 quad core processor
- → 10.1" and 12.1" in 16:10 wide aspect ratio, 10.4", 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio, 15.6", 18.5", 21.5", 24" in 16:9 wide aspect ratio TFT LCDs
- → Front panels in Aluminium, Aluminium True Flat or Aluminium True Flat Multitouch
- → IP66 front degree of protection
- → Operating temperature 0°C÷+50°C
- → Optional UPS (Uninterruptible Power Supply)
- → UL508 listed component
- → Optional ATX mode push button kit

Gallery





I/O shield



Technical data

	HMI2200 Win32	HMI2200-TF Win32
HMI Software	PREMIUM HMI 4 BASIC / PRO / ADVANCED	
REMOTE ASSISTANCE SW	ASEM UBIQUITY PRO	
O.S. INSTALLED	Microsoft Windows Embedded Standard 7E	
	Microsoft Windows Embedded Standard 7P	
LED backlight TFT LCD	10.1" W - 1280x800 10.4" - 800x601 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 24" - 1920x1080	
TOUCHSCREEN	Resistive 5 wires	Resistive 5 wires
	GFG (optional)	
FRONT PANEL	Aluminium	True Flat Aluminium
PROTECTION GRADE	IP66 - front panel	
PROCESSOR	Intel® Celeron J1900 2.00Ghz, 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	2GB (1 x SODIMM DDR3 module)	
MASS STORAGE	16GB / 32GB SSD mSATA SATA II MLC	
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)	
	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	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A)	
(optional, max 1)	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)	
FIELDBUS & I/O	MPI, PROFIBUS Slave, CANopen Master/Slave	
POWER SUPPLY UNIT	24VDC isolated	
	UPS (optional)	
OPERATING TEMPERATURE	0°- 50°C	
APPROVALS	CE, cULus LISTED (508)	

PAC Solutions Overview

PAC - Programmable Automation Controller

The new frontier of control systems

Industrial automation is moving away from embedded controls, programmable controllers and industrial computers towards a new architecture called PAC, Programmable Automation Controller.

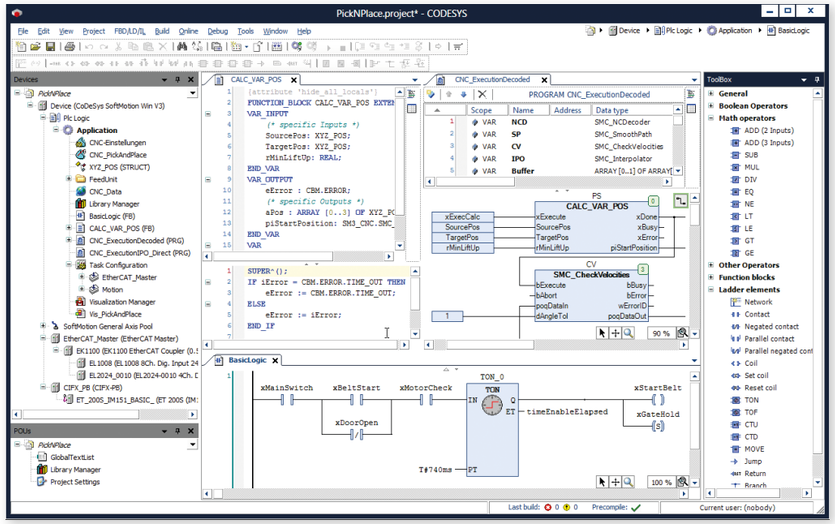
The term **PAC - Programmable Automation Controller** - indicates compact or hybrid modular controllers that combine the features and capabilities of a control system based on PC architecture with those of a typical PLC - programmable logic controller.
The basic difference between a PAC and a PLC is the **software component**, which provides an intuitive graphic programming language, similar to a flow chart, but linked to **real-time operating systems** and with the possibility to program reconfigurable hardware.
The control programs are generally developed with generic software tools that allow to design the program so that it can be shared with several computers, processors, HMI terminals or other components of the control system architecture.
PACs are especially suited for communications that leverage standard protocols and network interfaces. They are usually enclosed in chassis not bigger than a common PLC.

This space provides room for an advanced microprocessor, several storage modules (both volatile and permanent), axis control modules and different types of communication interfaces. The on-board intelligence is supplied with the tools of a typical real-time operating system, capable of offering reduced latency times and a determinism suitable to fulfil critical tasks, and with an advanced application software usually implemented on PC development platforms and then “downloaded" to the device.

In a competitive context where machine manufacturers are compelled to renew their automation solutions by integrating **standard, open and flexible technological structures** that quickly respond to the growing demands of customization, delivery time reduction and lower costs, it becomes suitable for producers to consider and evaluate the possibility to develop control functions with PAC systems, with **enhanced scalability in calculation power, wide availability of communication interfaces for industrial networking, data storage and archiving functions, making use of several storage modules** (both volatile and permanent).

The most advanced PACs support also graphic video interfaces, optimising automation costs by integrating control and visualization activities into a single system.
PACs with high-performance processors further optimize automation costs by integrating Motion Logic (Soft-Motion) and Control Logic (Soft- PLC) into one integrated PLC-CNC control system.

ASEM
PAC Solutions



ASEM logic 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. It transfers projects between various operating systems and hardware platforms without the need to change the project code. Like all traditional PLCs, CODESYS platform also has a development environment, CODESYS Engineering, to realise projects which are then executed by the runtime. CODESYS provides availability of the most used industrial fieldbuses in master mode (such as CANopen, Profibus, Profinet, Ethernet IP, EtherCAT, Modbus RTU and Modbus TCP) to communicate with field devices.

CODESYS - The number 1 control tool in the world

With over a million installations, CODESYS by 3S-Smart Software Solutions has become a global standard in Industrial Automation, being the number one platform (excluding Multinational PLC manufacturers) in the world.

CODESYS

CODESYS
Highlights

CODESYS

Flexible PLC and Motion logic control in a single development tool

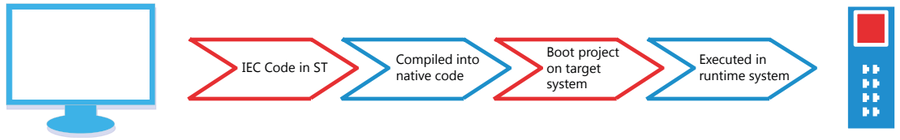
→ Perfect integration of auxiliary components for automation engineering:
  → SoftPLC
  → SoftMotion
  → CNC
→ CODESYS SoftMotion covers all motion functions, from motion management of single axis to 3D CNC interpolations
→ The possibilities offered by the standard IEC 61131-3 give no limits to the complexity of the tasks to be assigned

Transferability of projects to different platforms

→ A project can be used on different platforms and operating systems without the need to modify or change settings in the development tool

5 different programming languages in one flexible development tool

→ **Text editor:**
  → **IL** (Instructions List) similar to the Assembler programming language
  → **ST** (Structured Test) similar to programming in PASCAL or C
→ **Graphic editors:**
  → **LD** (Ladder) allows the programmer to virtually combine relay contacts and coils
  → **FBD** (Function Block Diagram) allows the user to quickly program both Boolean and analogue expressions
  → **SFC** (Sequential Function Chart) suitable to program sequential processes



> CODESYS integrated property compiler functioning

Performance guaranteed with the proprietary compiler integrated in the development tool

→ Proprietary compilers integrated in the development environment transform the code created by CODESYS into native code for machinery (binary code) then downloaded on the controller
  → The compiler does not weigh on the machinery hardware, lightening the load and therefore optimising controller performances
  → Performance is much improved compared to controllers executing an interpreted code

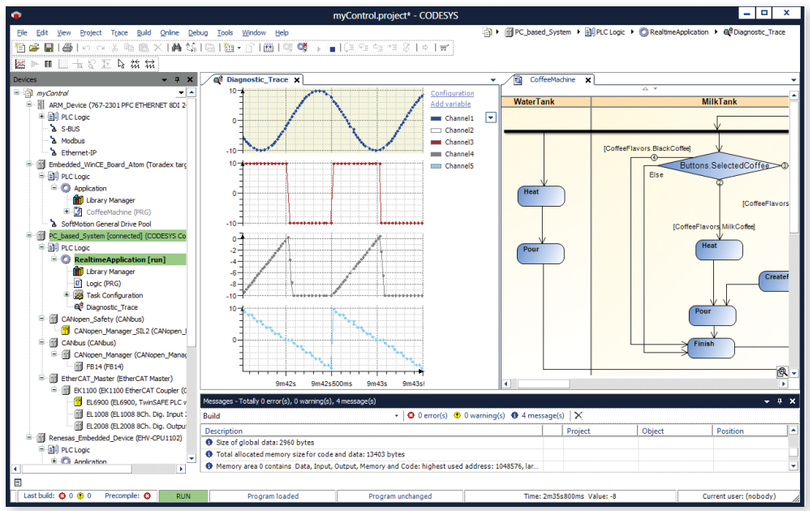
High potential and usability for the effective implementation of complex automation projects

→ Fast machine code for different devices and complex applications, generated by compilers widely tested in industrial environments
→ Scalable function - usable both on simple configurators and potent auxiliary tools for the static analysis of the code or integrated UML diagrams
→ Modular programming philosophy orientated to the repeated use of functional blocks in the libraries

Several debugging functions help in writing and maintaining applications

→ Breakpoint
→ Force
→ Trace
→ Debugging
→ Online change
→ Multi application
→ Recipe
→ Symbol management
→ Multi-user operation

CODESYS
The components



Engineering

CODESYS advanced development tool includes different programming languages for the development of applications in a single expandable platform

→ Modern development platform with editor and debugger compliant with **IEC 61131-3** standards.

→ Integrated compilers transform the code created by CODESYS into **native code** for machinery (binary code) then downloaded on the controller, thus enhancing performance of the system for industrial applications. Several ASEM CPUs are supported, from ARM Cortex A8 platforms to different X86 processors.

→ Once online, CODESYS offers debugging features such as monitoring/writing/forcing of variables by setting single passages of breakpoints/performing or recording variable values online in the controller in a ring buffer (Sampling Trace)

→ Availability of additional tools for easier high-level programming language.

→ Modular expandability with specific plug-ins.

Runtime

The installation of CODESYS Control Runtime System converts any type of industrial PC into a powerful scalable PLC, leveraging the performance of the PC itself. Several ASEM systems can be programmed with the CODESYS development tool, becoming real controllers based on ARM Cortex or X86 processors.

→ ASEM offers controllers based on Windows 32/64 or Windows CE operating systems

→ ASEM integrates the CODESYS Control Runtime on three PAC systems (Programmable Automation Controller) dedicated to control:
- → LP30/31 (ARM based)
- → LP40 (ARM based)
- → LP700 (ATOM based)
- → LP2200 (Bay Trail Celeron based)

→ The CODESYS Control Runtime System can also be installed on all other X86 families of the ASEM Industrial PC range, able to support also SoftMotion + CNC applications

CODESYS
The components

Fieldbus

CODESYS - Fieldbus

The CODESYS development environment integrates the support of different fieldbuses such as CANopen, Profibus, EtherCAT or Ethernet IP, including additional protocol stacks

→ Support for the most used fieldbuses with integrated configurator: CANopen, Modbus, Profibus, etc.

→ Support for real-time Ethernet systems: EtherCAT, EtherNET/IP, etc.

→ Management of I/O assignment and diagnosis independent from fieldbuses

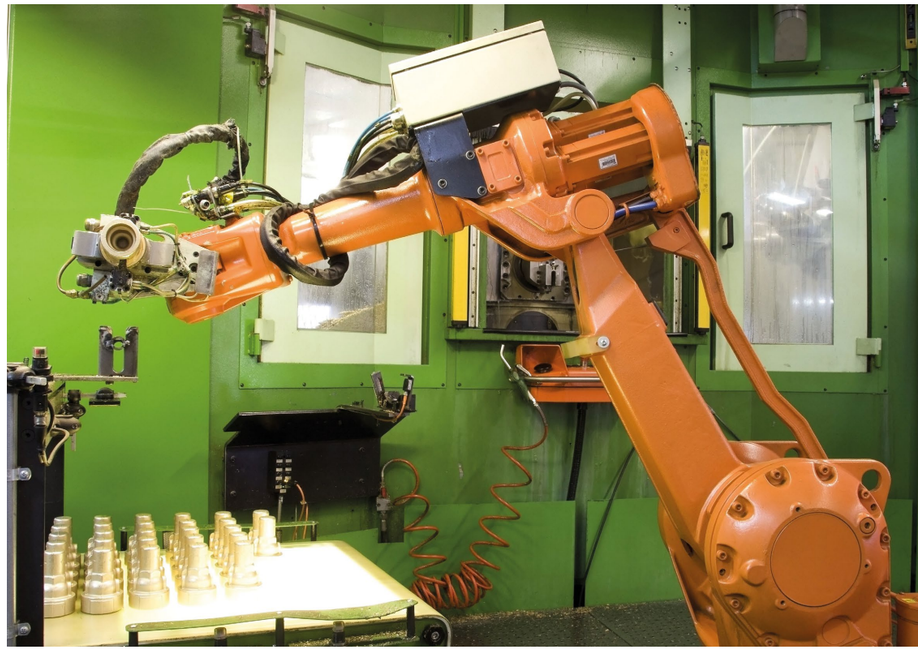
Motion + CNC

CODESYS Motion+CNC

Logic control and Motion control in one development tool. An optional modular solution is completely integrated in the CODESYS programming system to manage complex movements with a IEC 61131-3 programmed controller

→ Management of any type of application, from simple basic Motion applications to complex CNC controls

→ Library modules for the control of interpolations and transformations and for axis control - PLCopen



PAC Solutions Overview

ASEM **PAC** Solutions

The current portfolio of ASEM PAC solutions includes the LP30/31 family with ARM Cortex A8 (Freescale i.MX535 1GHz or or i.MX537 800 MHz) processors and Windows Embedded Compact 7 Pro operating system, the LP40 family with ARM Cortex A9 Dual and Quad Core processors (Freescale i.MX6 1,0 GHz) and Windows Embedded Compact 7 Pro operating system, the LP700 family based on Intel® ATOM E640 1 GHz or E680 1,6 GHz processors and Windows Embedded Compact 7 and WES7. The LP2200 family is based on Intel® Celeron J1900 Quad Core (2,00 GHz) processor and Windows Embedded Standard 7 or Windows Embedded Compact 7 Pro Operating Systems.

LP30/31, LP40, LP700 and LP2200 are the only Panel Programmable Automation Controllers (Panel PAC) on the market that combine control, visualization, and remote assistance functions.

In addition to the PLC logic, ASEM PAC systems provide simultaneous execution of Premium HMI visualisation software and UBIQUITY remote assistance software platform, representing the new frontier of “Ready to Automation" systems.

Aside from being used in PAC solutions, CODESYS SoftPLC Runtime can also be installed as an option on the entire ASEM Industrial PCs range.

Soft-Motion and CNC logic can also be installed on ASEM systems, both with Windows CE and Windows 32/64 operating systems.

For further information regarding CODESYS control software on ASEM Industrial PCs, visit our website: http://www.asem.it/prodotti/industrial-automation/control-software/

LP30 / LP31
Entry Level PAC

LP30/31 systems are the only ARM-based Panel PACs - Programmable Automation Controllers - on the market combining visualisation, control and remote assistance functions. On Windows Embedded Compact 7 Pro, they integrate the numerous and advanced features of PHMI4 visualization software, in Basic or Advanced versions, CODESYS SoftPLC 3.5 and ASEM UBIQUITY.
LP30/31 Panel PAC family is characterised by a wide range of 16 million colors LED backlight TFT LCD sizes with Aluminium or Aluminium True Flat front panels.
Available with 5.7", 8.4", 10.4", 12.1" and 15" LCD sizes in 4:3 aspect ratio and with 7" and 15.6" LCD sizes in 16:9 aspect ratio.
LP30/31 systems are based on a motherboard with an ARM Cortex A8 1 GHz/800 MHz processor (Freescale i.MX535 or Freescale i.MX537) and the ASEM Smart Memory System, with 512 MB system Ram (DDR3-800), 256 MB Nand-Flash, write-protected, for the operating system and Runtime of PHMI4 and CODESYS SoftPLC, a 2 GB eMMC memory for management and storage of HMI project data and a slot for a removable SDHC memory card.
The motherboard has also an RS-232/422/485 configurable serial port with MPI support, two USB 2.0 interfaces and two Ethernet interfaces 10/100 and 100 Mbps.
LP31 has also a CAN interface.

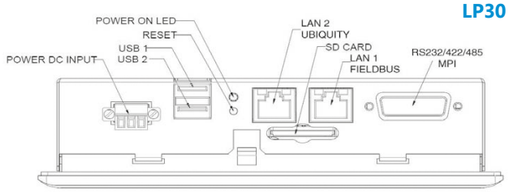
Highlights

- → CODESYS SoftPLC for control applications with retentive data management via MicroUPS
- → EtherCAT, Modbus TCP/IP, Modbus RTU and CANopen fieldbuses
- → Premium HMI 4 visualisation software
- → Ubiquity Remote Assistance Software with remote access to the system and to Ethernet and Serial sub-networks
- → ARM Cortex A8 (1 GHz processor - LP30, 800 MHz processor - LP31)
- → ASEM Smart memory system
- → 5.7", 8.4", 10.4", 12.1", 15" displays in 4:3 aspect ratio, 10.1" and 12.1" displays in 16:10 aspect ratio, and 7" and 15.6" displays in 16:9 aspect ratio
- → Front panel in Aluminium or Aluminium True Flat
- → IP66 front degree of protection - Enclosure type 4X (Indoor use only)
- → Operating temperature 0°C÷+50°C
- → UL 508 listed component
- → ATEX approval Zone 2/22 (only LP30)

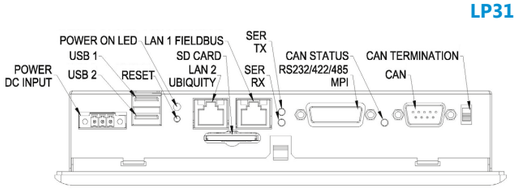
Gallery

I/O shield

LP30



LP31



Technical data

	LP30	LP30-TF	LP31	LP31-TF
CONTROL SOFTWARE	CODESYS SP v3.x			
supported protocols	EtherCAT Master, MODBUS TCP Master, MODBUS RTU Master		EtherCAT Master, MODBUS TCP Master, MODBUS RTU Master, CANopen Master	
HMI Software	PREMIUM HMI 4 BASIC / ADVANCED			
REMOTE ASSISTANCE SW	ASEM UBIQUITY PRO			
OS INSTALLED	Microsoft Windows Embedded Compact 7 Pro			
LED backlight TFT LCD	5.7" - 640x480 7" W - 800x480 8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1" W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6" W - 1366x768		7" W - 800x480 8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1" W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6" W - 1366x768	
TOUCHSCREEN	Resistive 4 wires for 5.7" and 7"			
	Resistive 5 wires for other sizes			
FRONT PANEL	Aluminium	True Flat Aluminium	Aluminium	True Flat Aluminium
PROTECTION GRADE	IP66, Enclosure type 4x - front			
PROCESSOR	ARM Cortex A8 processor Freescale® i.MX535 1 GHz		ARM Cortex A8 processor Freescale® i.MX537 800 MHz	
SYSTEM MEMORY - RAM	1 GB			
MASS STORAGE	256 MB Read-Only NAND-Flash for operating system and runtime			
	4 GB eMMC (Solid State Disk) 8bit, file system organization for projects and applications			
	1 x Slot SD/SDHC v2.0			
LAN	LAN1 Ethernet 100 Mbps (RJ45)			
	LAN2 Ethernet 10/100 Mbps (RJ45)			
USB	2 x USB 2.0 (Type A, rear)			
SERIAL	1 x RS-232/422/485 (DB15M)			
FIELDBUS INTERFACES	-		1 x CAN isolated channel (DB9M) with FlexCAN integrated controller	
POWER SUPPLY UNIT	24VDC		24VDC isolated	
	Backup for microinterruption, max 500ms, with supercapacitors			
OPERATING TEMPERATURE	0°- 50°C			
APPROVALS	CE, cULus LISTED (508), ATEX zone 22, 11 3 D	CE, cULus LISTED (508), ATEX zone 2/22, 11 3 G D	CE, cULus LISTED (508)	

LP40 [new]

PAC based on ARM Cortex A9 processor

LP40 family combines in a unique solution visualisation, control and remote assistance functions. Based on the real-time Windows Embedded Compact 7 Pro OS, LP40 panels integrate the numerous and advanced features of PHMI4 visualization software, in Basic or Advanced versions, CODESYS SoftPLC 3.5 and ASEM UBIQUITY. They 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). LP40 systems are based on the ARM Cortex A9 1.0 GHz processor (Freescale i.MX6 Quad Core, Dual Core, and Dual Lite) with 1 or 2 GB system RAM (DDR3-1600/800), 4 or 8 GB eMMC memory and a slot for a removable MicroSD memory card and 4 Mb MRAM memory (Magnetoresistive RAM) for retentive data storage at power down to be used in combination with the MicroUPS.
The motherboard includes the isolated 24 V DC power supply, two 10/100/1000 Mbps Ethernet interfaces, an RS-232/422/485 configurable serial port with MPI support, two USB 2.0 interfaces and the MicroUPS (removable and easily exchangeable). LP40, optionally, can be supplied with an isolated CAN interface or an additional isolated RS-485 serial port.

c UL us LISTED

UBIQUITY

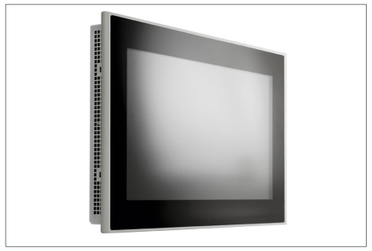
PREMIUM HMI

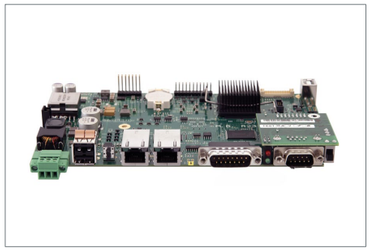
CODESYS

Highlights

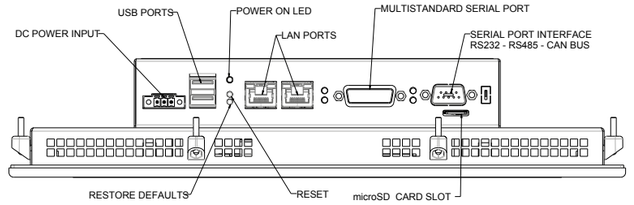
- CODESYS SoftPLC for control applications with retentive data management via MicroUPS
- EtherCAT, Modbus TCP/IP, Modbus RTU and CANopen fieldbuses
- Premium HMI visualisation software
- Ubiquity Remote Assistance Software with remote access via VPN to the system and to Ethernet and Serial sub-networks
- 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 Quad Core, Dual Core or Dual Lite processor (1 GHz)
- 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

Gallery





I/O shield



Technical data

	LP40	LP40-TF
CONTROL SOFTWARE	CODESYS SP v3.x	
supported protocols	EtherCAT Master, MODBUS TCP Master, MODBUS RTU Master, CANopen Master	
HMI Software	PREMIUM HMI 4 BASIC/ ADVANCED	
REMOTE ASSISTANCE SW	ASEM UBIQUITY PRO	
SoftPLC SW	CODESYS SP	
O.S. INSTALLED	Windows Embedded Compact 7 Pro	
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 18.5"W - 1366x768	
TOUCHSCREEN	Resistive 4 wires for 7"	
	Resistive 5 wires for other sizes	
FRONT PANEL	Aluminium	Aluminium True Flat
PROTECTION GRADE	IP66, Enclosure type 4x - front	
PROCESSOR	ARM Cortex A9 processor Freescale® i.MX6 1 GHz	
SYSTEM MEMORY - RAM	1/2 GB with DDR3 chips soldered	
MASS STORAGE	4/8 GB eMMC (Solid State Disk) 8bit, file system organization for projects and applications	
	1 x Slot microSD	
	4 Mb MRAM memory (Magnetoresistive RAM) for retentive data storage	
LAN	2 x Ethernet 10/100/1000 Mbps (RJ45)	
USB	2 x USB 2.0 (Type-A, rear)	
SERIAL	1 x RS-232/422/485 (DB15M)	
	1 x RS485 isolated (DB9M) with terminations (optional)	
FIELDBUS	1 x CAN isolated channel (DB9M) and terminations (optional)	
POWER SUPPLY UNIT	24VDC isolated	
	Backup for microinterruption, max 500ms, with supercapacitors	
OPERATING TEMPERATURE	0°- 50°C	
APPROVALS	CE, ATEX pending, cULus (508) pending	

LP700

PAC based on Intel® Atom™ Tunnel Creek processor

LP700 systems are the only ATOM-based Panel PACs - Programmable Automation Controllers - on the market combining visualization, control and remote assistance functions. Based on Windows Embedded Compact 7 Pro or Windows Embedded Standard 7, they integrate CODESYS SoftPLC 3.5, the advanced features of PHMI4 visualization software, in Basic, Pro or Advanced versions, and ASEM UBIQUITY.
LP700 Panel PAC family features a wide range of 16 million colors LED backlight TFT LCD sizes with Aluminium or Aluminium True Flat front panels and is available with 6.5" and 8.4" LCD sizes in 4:3 aspect ratio and with 7" sizes in 16:9 aspect ratio.
The motherboard integrates an ATOM E640 (1GHz) or an ATOM E680 (1,6 GHz) microprocessor, with 1 or 2 GB RAM (DDR2), a Compact Flash slot, a front-access USB 2.0 interface, two Ethernet 10/100/1000 Mbps interfaces, an RS232 serial port and two mini-PCI slots to install ASEM NETcore® X cards for the support of the most widespread industrial fieldbuses and the 512 KB NV RAM card that allows to save retentive data in case of power supply interruptions.
LP700 systems have a 24 VDC (18÷32 VDC) power supply with galvanic isolation and an optional integrated UPS (Uninterruptible Power Supply).
The LP700 PAC family, by means of CODESYS SoftPLC, can manage EtherCAT, Modbus TCP/IP and Modbus RTU (serial). Together with ASEM NETcore® X cards LP700 support also CANopen, Profibus, Profinet* and Ethernet IP* master fieldbuses to control automation I/Os and devices.
LP700 systems are the PC-based cost-effective solution to meet automation requirements previously managed exclusively by classical PLC + Operator Panel architecture.

c UL us LISTED

UBIQUITY

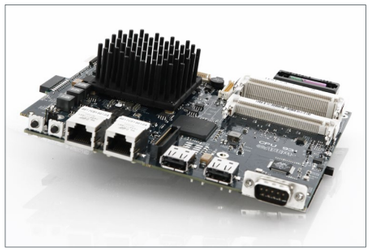
PREMIUM HMI

CODESYS

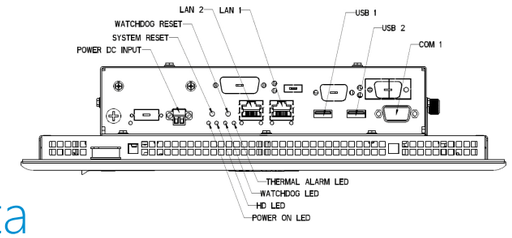
Highlights

- → CODESYS SoftPLC for control applications with retentive data management via NV RAM card
- → EtherCAT, Modbus TCP/IP, Modbus RTU, CANopen, Profibus, Profinet and Ethernet IP fieldbuses
- → Premium HMI 4 visualisation software
- → Ubiquity Remote Assistance Software with remote access to the system and to Ethernet and Serial sub-networks
- → Intel® Atom™ Tunnel Creek E640/E680 1,00/1,60 GHz Processor
- → 6.5", 8.4" displays in 4:3 aspect ratio and 7" displays in 16:9 aspect ratio
- → Front panel in Aluminium or Aluminium True Flat
- → IP66 front degree of protection - Enclosure type 4x (Indoor use only)
- → Operating temperature 0°C÷+50°C
- → Isolated power supply with galvanic isolation
- → Optional UPS (Uninterruptible Power Supply) for power failures
- → UL 508 listed component

Gallery



I/O shield



Technical data

	LP700 WinCE	LP700-TF WinCE	LP700 Win32	LP700-TF Win32
CONTROL SOFTWARE	CODESYS SP v3.x		CODESYS SP RTE v3.x	
supported protocols	EtherCAT Master, MODBUS TCP Master, MODBUS RTU Master, PROFIBUS Master, CANopen Master		EtherCAT Master, MODBUS TCP Master, MODBUS RTU Master, PROFIBUS Master, CANopen Master, Profinet IO Controller, Ethernet IP	
HMI Software	PREMIUM HMI 4 BASIC / ADVANCED		PREMIUM HMI 4 BASIC / PRO / ADVANCED	
REMOTE ASSISTANCE SW	ASEM UBIQUITY PRO			
OS INSTALLED	Microsoft Windows Embedded Compact 7 Pro		Microsoft Windows Embedded Standard 7E	
			Microsoft Windows Embedded Standard 7P	
LED backlight TFT LCD	6.5" - 640x480 7" - 800x480 8.4" - 800x600			
TOUCHSCREEN	Resistive 5 wires	Resistive 5 wires	Resistive 5 wires	Resistive 5 wires
	GFG (Optional)		GFG (Optional)	
FRONT PANEL	Aluminium	Aluminium True Flat	Aluminium	Aluminium True Flat
PROTECTION GRADE	IP66 - front			
PROCESSOR	Intel® Atom™ E640 1,00GHz		Intel® Atom™ E680 1,60GHz	
	Intel® Atom™ E680 1,60GHz			
CHIPSET	Intel® EG20T			
VIDEO CONTROLLER	Integrated in Intel® Atom™ microprocessor, 320/400 MHz, LVDS 8bit/color digital interface		Integrated in Intel® Atom™ microprocessor, 400 MHz, LVDS 8bit/color digital interface	
SYSTEM MEMORY - RAM	1 GB		2 GB	
MASS STORAGE	16 GB SSD Half-Slim SATA II MLC (for systems with 6.5" and 7" LCD)		16/32 GB SSD SATA II MLC (for systems with 8.4")	
	16 GB SSD SATA II MLC (for systems with 8.4" or greater LCD)		16/32 GB SSD Half-Slim SATA II MLC (for systems with 6.5" and 7" LCD)	
LAN	2 x LAN 10/100/1000Mbps (RJ45, 1 x Intel® 82574L, 1 x integrated in Intel® EG20T + PHY Realtek® RTL8211E)			
USB	2 x USB 2.0 (Type-A, rear)			
	1 x USB 2.0 (Type-A, front)			
SERIAL	1 x RS232 (DB9M)			
ADD-ON INTERFACES	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0			
(optional, max 1)	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0			
FIELDBUS INTERFACES (optional)	NETcore X cards for MPI, PROFIBUS Master, CANopen Master		NETcore X cards MPI, PROFIBUS Master, CANopen Master, Profinet IO Controller	
RITENTIVE MEMORY (optional)	512KB NVRAM			
POWER SUPPLY UNIT	24VDC isolated		24VDC isolated	
			UPS (optional)	
OPERATING TEMPERATURE	0°- 50°C			
APPROVALS	CE, cULus LISTED (508)			

LP2200 [new]

PAC with advanced functionalities

The LP2200 family, based on Windows Embedded Compact 7 Pro and Windows Embedded Standard 7 operating systems, integrates the SoftPLC CODESYS 3.X, PremiumHMI 4 visualization software and ASEM UBIQUITY remote assistance platform.
The motherboard is equipped with the low consumption Celeron J1900 quad core 2,0GHz processor, based on the System on Chip (SoC) Intel® Bay Trail platform, with 1 GB or 4 GB (DDR3) RAM System memory, 2 USB 2.0 + 1 USB 3.0 interfaces, 2 Ethernet 10/100/1000 Mbps interfaces and 1 RS232 serial port, 1 DVI-I (DVI-D + VGA) video output, 1 CFast SATA II slot and 1 PCI slot to install ASEM NETcore® X cards (to support the most widespread industrial fieldbuses) or the 512 KB NV RAM card (that allows to save retentive data in case of power supply interruptions).
LP2200 systems have a 24 VDC (18÷32 VDC) power supply with galvanic isolation and an optional integrated UPS (Uninterruptible Power Supply).
The LP2200 Panel PAC family has a wide range of 16 million colors TFT LED backlight LCD sizes with aluminium and aluminium-True Flat front panel.
The LP2200 PAC family, by means of CODESYS SoftPLC, can manage EtherCAT, Modbus TCP/IP and Modbus RTU (serial). Together with ASEM NETcore® X cards, LP2200 support also CANopen, Profibus, Profinet and Ethernet IP master fieldbuses to control automation I/Os and devices.
The LP2200 is a PC-based cost-effective and powerful solution that meets the needs of automation previously managed exclusively by the classical architecture PLC + Operating Panel.

c UL us LISTED

UBIQUITY

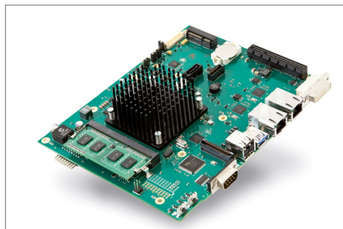
PREMIUM HMI

CODESYS

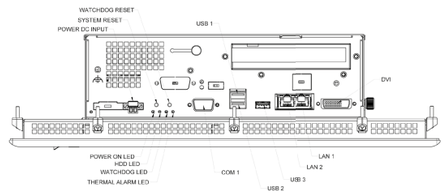
Highlights

- → SoftPLC CODESYS for control applications with retentive data management via NV RAM card or UPS
- → Supported fieldbuses: EtherCAT, Modbus TCP/IP, Modbus RTU, CANopen, Profibus, Profinet, Ethernet IP
- → Premium HMI 4 visualization software
- → Ubiquity remote assistance software with remote access to the system and to the Ethernet and Serial sub-networks
- → Intel® Celeron J1900 quad core (2,0GHz) processor
- → Front panel in Aluminium or Aluminium True Flat
- → IP66 front degree of protection - Enclosure type 4x (Indoor use only)
- → Operating temperature 0°C÷+50°C
- → Isolated power supply with galvanic isolation
- → Optional UPS (Uninterruptible Power Supply) for power failures
- → Optional ATX mode push button kit
- → UL 508 listed component

Gallery



I/O shield



Technical data

	LP2200 WinCE	LP2200-TF WinCE	LP2200 Win32	LP2200-TF Win32
CONTROL SOFTWARE	CODESYS SP v3.x		CODESYS SP RTE v3.x	
supported protocols	EtherCAT Master, MODBUS TCP Master, MODBUS RTU Master, PROFIBUS DP Master, CANopen Master		EtherCAT Master, MODBUS TCP Master, MODBUS RTU Master, PROFIBUS Master/Slave, CANopen Master, Profinet IO Controller/Device	
HMI SOFTWARE	PREMIUM HMI 4 BASIC / ADVANCED		PREMIUM HMI 4 BASIC / PRO / ADVANCED	
REMOTE ASSISTANCE SW	ASEM UBIQUITY PRO			
OS INSTALLED	Microsoft Windows Embedded Compact 7 Pro		Microsoft Windows Embedded Standard 7E	
			Microsoft Windows Embedded Standard 7P	
LED backlight TFT LCD	10.1" W - 1280x800 10.4" - 800x601 12.1" W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6" - 1366x768 17" - 1280x1024 18.5" - 1366x768 19" - 1280x1024 21.5" - 1920x1080 24" - 1920x1080			
TOUCHSCREEN	Resistive 5 wires	Resistive 5 wires	Resistive 5 wires	Resistive 5 wires
	GFG (Optional)		GFG (Optional)	
FRONT PANEL	Aluminium	True Flat Aluminium	Aluminium	True Flat Aluminium
PROTECTION GRADE	IP66 - front			
PROCESSOR	Intel® Celeron J1900 quad core 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 (1 x SODIMM DDR3 module)		4GB (1 x SODIMM DDR3 module)	
MASS STORAGE	16GB SSD mSATA SATA II MLC		16GB / 32GB SSD mSATA SATA II MLC	
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)			
	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	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A)			
(optional, max 1)	1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A)			
FIELDBUS & I/O (optional, on PCI slot)	PROFIBUS Master, CANopen Master		PROFIBUS Master/Slave, CANopen Master, Profinet IO Controller/Device	
RITENTIVE MEMORY (optional, on PCI slot)	512KB NVRAM			
POWER SUPPLY UNIT	24VDC isolated		24VDC isolated	
			UPS (optional)	
OPERATING TEMPERATURE	0°- 50°C			
APPROVALS	CE, cULus LISTED (508)			

LB40 [new]

Book Mounting PAC based on ARM Cortex A9 processor

LB40 Programmable Automation Controller is based on the real-time Windows Embedded Compact 7 PRO operating system and integrates the SoftPLC CODESYS 3.X, ASEM UBIQUITY remote assistance software solution and, as an option, Premium HMI 4 visualization software.
LB40 is a fanless ARM based Din Rail Mounting PAC with 0°÷50°C operating temperature range, based on the ARM Cortex A9 1.0 GHz processor (Freescale i.MX6 Quad Core, Dual Core, or Dual Lite) with 1 or 2 GB system RAM (DDR3-1600/800), 4 or 8 GB eMMC memory, a slot for a removable MicroSD memory card (without external access), to be used as an alternative mass storage, and 4 Mb MRAM (Magnetoresistive RAM) for retentive data storage at power down, to be used in combination with the MicroUPS.
Interfaces and LED signalling are on the front side, to simplify system cabling and to provide a clear view of operating signals.
LB40 provides one 10/100/1000 Mbps Ethernet interface, one EtherCAT interface, two USB 2.0 interfaces, one isolated RS-232/485 configurable serial port with MPI support or, as an alternative, one CAN 2.0B (up to 1Mbps), a DVI-D video output or a 24 V DC isolated power supply input.

c UL us LISTED

UBIQUITY

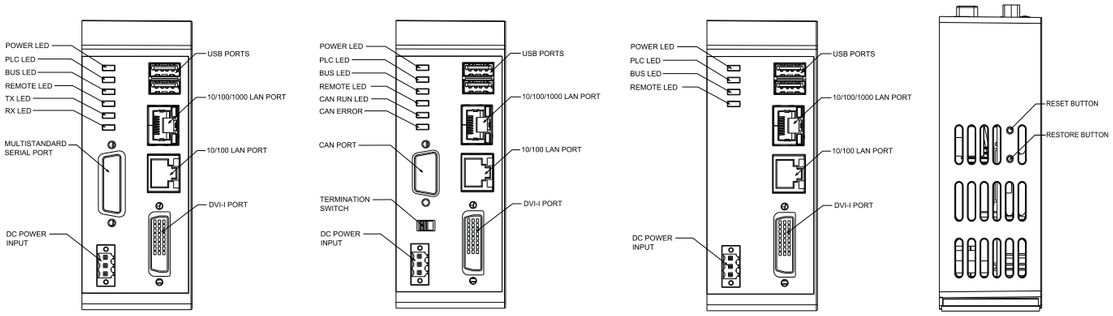
CODESYS

Highlights

- → Fanless Din Rail Mounting PAC with 0-50 °C operating temperature
- → CODESYS SoftPLC 3.5 for control applications
- → Built-in MicroUPS with supercapacitors to save retentive data in control applications
- → EtherCAT, Modbus TCP/IP, Modbus RTU and CANopen fieldbuses
- → Ubiquity remote assistance software with remote access to the system and to the Ethernet and Serial sub-networks
- → Premium HMI 4 visualisation software (option)
- → Designed to facilitate cabling and operation in control cabinets
- → ARM Cortex A9 1.0 GHz processor (Freescale i.MX6 Quad Core, Dual Core, or Dual Lite)
- → CE and cULus LISTED 508 certification

Gallery

I/O shield



Technical data

	LB40
OS AVAILABLE	Microsoft Windows Embedded Compact 7 Pro
	Embedded Linux distribution based on Yocto Project
	No OS
PROCESSOR	ARM Cortex A9 processor Freescale® i.MX6 1 GHz
SYSTEM MEMORY - RAM	1 GB with DDR3 chips soldered
NVRAM	512KB magnetic RAM
MASS STORAGE	4 GB eMMC (Solid State Disk) 8bit, file system organization for projects and applications
	1 x Slot microSD
LAN	1 x Ethernet 10/100/1000 Mbps (Intel 82574L, RJ45); 1 x Ethernet 10/100 Mbps (RJ45)
USB	2 x USB 2.0 (Type-A)
SERIAL	1 x RS-232/422/485 (DB15M)
	1 x RS232/485 isolated (DB15M) (optional, alternative to CAN)
FIELDBUS	1 x CAN isolated channel (DB9M) with terminations (optional, alternative to RS232/485)
BATTERY	1 x CR2032 Removable (internal)
VIDEO OUTPUT	1 x DVI-D
POWER SUPPLY UNIT	24VDC isolated
	Backup for microinterruption, max 500ms, with supercapacitors
OPERATING TEMPERATURE	0°- 50°C
APPROVALS	CE, cULus (508) pending

LB2200 [new]

Book mounting PAC with advanced functionalities

The fanless LB2200 is the new ASEM book mounting Programmable Automation Controller designed, for installation in industrial cabinets. LB2200 is based on the Intel® Bay Trail™ SoC (System on chip) platform, with a Quad Core Celeron J1900 processor 2.0 GHz (2.42 GHz Burst Frequency), and Windows 7 or Windows 10 (Embedded and PRO versions) operating systems, and integrates the SoftPLC CODESYS 3.X, ASEM UBIQUITY remote assistance software solution and, as an option, Premium HMI 4 visualization software.

Cooled by an internal passive sink placed inside the aluminium housing, that enables fanless operation up to 50°C, LB2200 provides one DVI-I (DVI-D + VGA) output, two Ethernet 10/100/1000 Mbps interfaces and two USB 2.0 ports on the top side, to simplify the cabling of the unit inside the control cabinet. On the front side, LB2200 provides LED signalling to give a better view of operating signals and, behind the front cover, it provides an external access Sata II Cfast slot, a system battery slot and one USB 3.0 port.

The system provides one SATA II mSATA SSD slot or one connector for 2,5" SATA II HDD or SSD and RAM configurable up to 8 GB with a single DDR3 SODIMM module. LB2200 has a 24 V DC power supply unit with galvanic isolation and an optional integrated UPS (Uninterruptible Power Supply), with an external battery pack (also with wall book mounting), or an optional integrated MicroUPS, based on 4 supercapacitors, that enable the back up of retentive data on the MRAM (Magnetoresistive RAM) memory.

LB2200, as an alternative to the DVI-D output, can integrate the ASEM Remote Video Link, providing remotation of DVI-D and USB 2.0 signals up to 100 m, with an RJ45 connector output (to be used in combination with a standard CAT5 SF-UTP cable). The PAC solution can also be equipped with add-on cards, providing 1 x Ethernet 10/100/1000 Mbps + 1 x RS232/422/485 (DB15 male, optionally isolated), or 2 x RS232 (DB9 male), or 2 x CAN RAW interfaces (DB9 male).

c UL us LISTED

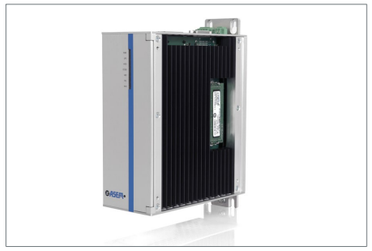
UBIQUITY

CODESYS

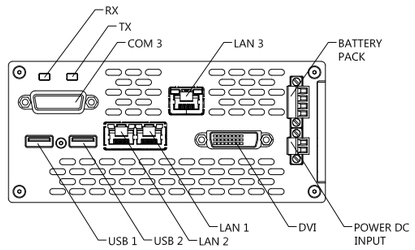
Highlights

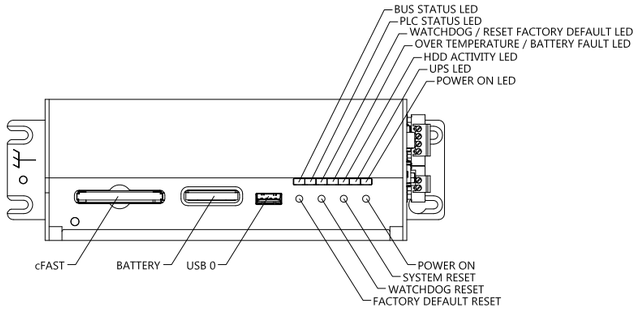
- Fanless wall book mounting PAC with 0-50 °C operating temperature
- CODESYS SoftPLC 3.5 for control applications with retentive data management via MicroUPS/UPS and MRAM
- EtherCAT, Modbus TCP/IP, Modbus RTU, Ethernet IP and CANopen fieldbuses Ubiquity remote assistance software with remote access to the system and to the Ethernet and Serial sub-networks
- Premium HMI 4 visualisation software (option)
- Designed to facilitate cabling and operation in control cabinets
- High performance Intel® Bay Trail™ Celeron J1900 Quad Core processor
- Built-in MicroUPS with supercapacitors to save retentive data on the MRAM for control applications
- Built-in UPS with external battery pack (optional)
- Built-in remotation of DVI-D and USB 2.0 signals up to 100 m with an RJ45 connector output (optional)
- CE and cULus LISTED 508 certifications

Gallery



I/O shield





Technical data

	LB2200
PROCESSOR	Intel® Celeron J1900 2.00Ghz, 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 embedded on board with external access (front)
	1 x SSD mSATA SATA II or 1 x SSD or 1 x HDD 2,5" SATA II
	4 Mb MRAM memory (Magnetoresistive RAM) for retentive data storage
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 (front)
VIDEO OUTPUT	1 x DVI-I (DVI-D + VGA with adapter, top)
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)
REMOTATION	Transmission module integrated for Video signals and USB transmission up to 100mt (optional)
POWER SUPPLY UNIT	24VDC isolated
	24VDC isolated with microUPS (optional) with supercapacitors
	24VDC isolated with UPS (optional) with external battery pack
CASE Installation	Wall book mounting
Material	Alluminium alloy 6082/5754/5056
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32/64bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with HDD 24x7
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED (508) pending

3. **Industrial PC** Solutions

Industrial **PC & Monitor features**

More than 20 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 PCs with LCDs from 6.5" to 24" in 4:3 and Wide 16:9 aspect ratios, Arm Mounting PCs with 15.6", 18.5" and 21.5" Wide LCDs, Box PCs 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 21.5" 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.
The expertise on heat dissipation methods has allowed ASEM to manufacture fanless systems integrating high performance and high power consumption quad core processors.

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 PCs 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 PCs 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 PCs families of the HT series, for MH and MH-R panel monitor families and for all future panel PCs and monitor families.

Interchangeability and continuity

With a product life cycle of at least 7/10 years, ASEM designs Panel PCs 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 PC 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.
ARM based systems can integrate a Micro-UPS with super capacitors.

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 5th generation Intel® Core™ microprocessors Broadwell ULT and ARM-based systems equipped with Dual and Quad Core Freescale® 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 8 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’ motherboards released by ASEM in the last three years include an embedded slot dedicated to 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 8 consecutive hours, and sample systems are subjected to functional tests at temperature ranging from 0 to 50 °C for 8 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:
→ development of a different backplane;
→ 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 plastic and mechanical components as well as electronic boards.

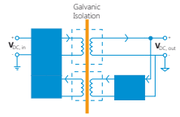
The **ASEM Standards**

ASEM STANDARDS

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

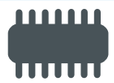
A unique cut-out for each different size of LCD to ensure:
→ Interchangeability among different families of Panel PCs and Monitors
→ Mechanical compatibility with future families

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

ARM based Panels

The ARM based Panels, with Cortex A8 and Cortex A9 processors, are available with Microsoft Windows Embedded Compact 7 Pro or Linux operating systems.
They include a wide range of 16 million colors TFT LED Backlight LCDs, from 4.3" up to 18.5" with 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 own applications and/or using Linux version of SoftPLC CODESYS.

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

c UL us LISTED

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" Wide 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 own applications and/or using Linux version of SoftPLC CODESYS.

The RT30/31 panels are available with 16 million color TFT LED Backlight LCDs, from 5.7" up to 15.6" Wide, 4 and 5 wires resistive touchscreens and Aluminium or Aluminium True Flat front panels.

c UL us LISTED

Highlights

- → 1 GHz / 800 MHz ARM Cortex A8 processors
- → From 5.7" to 15.6" Wide LCDs
- → Microsoft Windows Embedded Compact 7 PRO / Linux operating system
- → 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 (only RT30)

Technical Data

	RT25	RT25-TF	RT30	RT30-TF	RT31	RT31-TF
OS AVAILABLE	Microsoft Windows Embedded Compact 7 Pro					
	Embedded Linux distribution based on Yocto Project					
	No OS					
LED backlight TFT LCD	4.3" - 480x272 7" - 800x480		5.7" - 640x480 7" - 800x480 8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 10.1" - 1280x800 12.1" W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6" - 1366x768		7" - 800x480 8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1" W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6" - 1366x768	
TOUCHSCREEN	Resistive 4 wires		Resistive 4 wires for 5.7" and 7"			
			Resistive 5 wires for other sizes			
FRONT PANEL	Aluminium	Aluminium True Flat	Aluminium	Aluminium True Flat	Aluminium	Aluminium True Flat
PROTECTION GRADE	IP66, Enclosure type 4x - front					
PROCESSOR	ARM Cortex A8 processor Freescale® i.MX535 1 GHz				ARM Cortex A8 processor Freescale® i.MX537 800 MHz	
SYSTEM MEMORY - RAM	1 GB with DDR3 chips soldered					
MASS STORAGE	256 MB Read-Only NAND-Flash for operating system and runtime					
	4 GB eMMC (Solid State Disk) 8 bit, file system organization for projects and applications					
	-		1 x Slot SD/SDHC v2.0			
LAN	LAN1 EtherNET 100 Mbps (RJ45)		LAN1Ethernet 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, 11 3 D	CE, cULus LISTED (508), ATEX zone 2/22, 11 3 G D	CE, cULus LISTED (508)	

RT40 [new]

ARM 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 processor (Freescale i.MX6 Quad Core, Dual Core or Dual Lite) with 1 or 2 GB system RAM (DDR3- 1600/800), 4 or 8 GB eMMC memory and a slot for a removable MicroSD memory card and, as an option, 4 Mb MRAM (Magnetoresistive RAM) for retentive data storage at power down to be used in combination with the MicroUPS.
The motherboard includes the isolated 24 V DC power supply, two 10/100/1000 Mbps Ethernet interfaces, an RS-232/422/485 configurable serial port with MPI support, two USB 2.0 interfaces and an optional MicroUPS (removable). RT40,optionally, can be supplied with an isolated CAN interface or an additional isolated RS-485 serial port.

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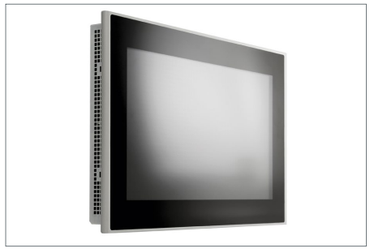
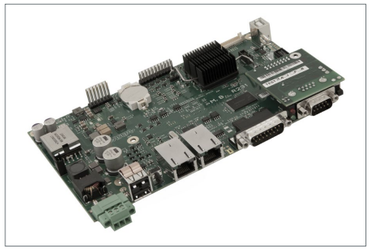
Highlights

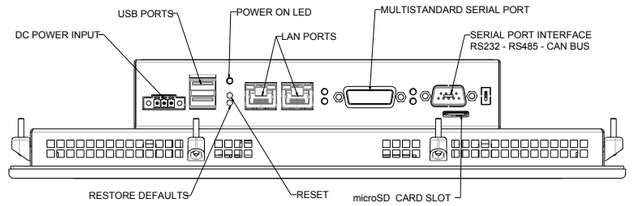
- Windows Embedded Compact 7 PRO or Linux operating system
- 8.4", 10.4", 12.1", 15" displays in 4:3 aspect ratio; 10.1" and 12.1" displays in 16:10 aspect ratio, 7", 15.6" and 18.5" displays in 16:9 aspect ratio
- ARM Cortex A9 Quad Core, Dual Core or Dual Lite processor (1 GHz)
- Optional MicroUPS (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

Gallery





I/O shield



Technical data

	RT40	RT40-TF
OS AVAILABLE	Microsoft Windows Embedded Compact 7 Pro	
	Embedded Linux distribution based on Yocto Project	
	No OS	
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 18.5"W - 1366x768	
TOUCHSCREEN	Resistive 4 wires for 7"	
	Resistive 5 wires for other sizes	
FRONT PANEL	Aluminium	Aluminium True Flat
PROTECTION GRADE	IP66, Enclosure type 4x - front	
PROCESSOR	ARM Cortex A9 processor Freescale® i.MX6 1 GHz	
SYSTEM MEMORY - RAM	1 GB with DDR3 chips soldered	
MASS STORAGE	256 MB Read-Only NAND-Flash for operating system and runtime	
	4 GB eMMC (Solid State Disk) 8bit, file system organization for projects and applications	
	1 x Slot microSD	
LAN	2 x Ethernet 10/100/1000 Mbps (RJ45)	
USB	2 x USB 2.0 (Type-A, rear)	
SERIAL	1 x RS-232/422/485 (DB15M)	
	1 x RS485 isolated (DB9M) with terminations (optional)	
FIELDBUS	1 x CAN isolated channel (DB9M) and terminations (optional)	
POWER SUPPLY UNIT	24VDC isolated	
	Backup for microinterruption, max 500ms, with supercapacitors (optional)	
OPERATING TEMPERATURE	0°- 50°C	
APPROVALS	CE, ATEX pending, cULus pending	

Panel PCs

ASEM Panel PCs 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 True Flat with glass projected capacitive Multitouch-screen.

HT700

Fanless Panel PC based on Intel® Tunnel Creek platform

The entry-level, cost-effective fanless HT700 Panel PC family is based on 1 GHz E640 and 1,6 GHz E680 Intel® Tunnel Creek processors.
The all-in-one motherboard features two 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 Compact Flash slot and 1 GB or 2 GB on-board RAM configurations with 800 MHz DDR2 chips.
HT700 family is available with 6.5", 8.4", 10.4", 12.1" and 15" in 4:3 aspect ratio and 7", 15.6" 18.5" 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 15.6" and 18.5" Wide LCDs are also available with Aluminium True Flat front panels with glass projected capacitive Multitouch-screen (HT-TFM). Panels with 12.1", 15" LCDs are also available with Stainless Steel True Flat front panels (HT-TFX).

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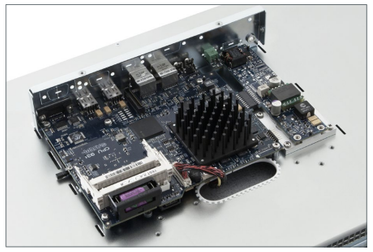
ASEM STANDARDS

Highlights

- → Fanless Panel PC with 0-50 °C operating temperature
- → Intel® Tunnel Creek platform and 1 GHz E640 and 1,6 GHz E680 processors
- → 6.5", 8.4", 10.4", 12.1" and 15" in 4:3 aspect ratio and 7", 15.6" 18.5" in 16:9 Wide aspect ratio TFT LCDs
- → Built-in UPS with external battery pack (optional)
- → IP66 front panel protection degree
- → CE, cULus LISTED (508) certifications

Gallery



Technical data

	HT700	HT700-TF	HT700-TFX	HT700-TFM
LED backlight TFT LCD	6.5" - 640x480 7" - 800x480 8.4" - 800x600 10.4" - 800x600 12.1" - 800x600 12.1" - 1024x768 15.0" - 1024x768 15.6" - 1366x768 18.5" - 1366x768		12.1" - 800x600 12.1" - 1024x768 15.0" - 1024x768	15.6" - 1366x768 18.5" - 1366x768
TOUCHSCREEN	Resistive 5 wires GFG (optional)	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch, 4 fingers
FRONT PANEL	Aluminium	True Flat Aluminium	True Flat Stainless Steel	True Flat Aluminium
PROTECTION GRADE	IP66 - front			
PROCESSOR	Intel® Atom™ E640 1,00 GHz, 1 core / 2 threads, 512KB L2 cache, soldered			
	Intel® Atom™ E680 1,60 GHz soldered, 1 core / 2 threads, 512KB L2 cache, soldered			
CHIPSET	Intel® EG20T			
VIDEO CONTROLLER	Integrated in Intel® Atom™ microprocessor, 320MHz (E640) or 400MHz (E680), LVDS 8bit/color digital interface			
SYSTEM MEMORY - RAM	1 GB or 2 GB with DDR2 chips soldered			
MASS STORAGE	1 bootable CompactFlash on board with external access			
	1 x SSD or 1 x HDD 2,5" SATA II (ONLY for systems with 8.4" or greater LCD)			
	1 x SSD Half-Slim SATA II (ONLY for systems with 6.5" and 7" LCD)			
LAN	2 x LAN 10/100/1000Mbps (RJ45, 1 x Intel® 82574L, 1 x integrated in Intel® EG20T + PHY Realtek® RTL8211E)			
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)	
SERIAL	1 x RS232 (DB9M)			
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	2 x MiniPCI dedicated to ASEM fieldbuses, I/O and NVRAM boards			
POWER SUPPLY UNIT	24VDC isolated with or without UPS (optional) with external battery pack			
O.S. CERTIFIED	Microsoft Windows 7 Pro/Ultimate 32bit, Windows XP Pro 32bit, Microsoft Windows Embedded Standard 7E/7P 32 bit, Windows Embedded Standard 2009 (XPe SP3) 32bit, Microsoft Windows Embedded Compact 7 Pro			Microsoft Windows 7 Pro/ Ultimate 32bit, Microsoft Windows Embedded Standard 7P 32 bit
OPERATING TEMPERATURE	0°- 50°C			
	0°- 45°C with HDD 24x7			
	5°- 45°C with standard HDD			
APPROVALS	CE, cULus LISTED (508)			

HT2000

Fanless Panel PC based on Intel® Cedar Trail platform

The fanless HT2000 Panel PC family is based on Intel® Cedar Trail platform with 1,86 GHz dual core D2550 third 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 RAM configuration up to 4 GB DDR3 SODIMM.
HT2000 family is available with 10.4", 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio, 15.6", 18.5" and 21.5" 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 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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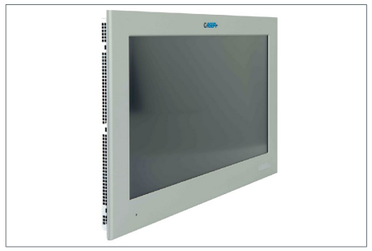
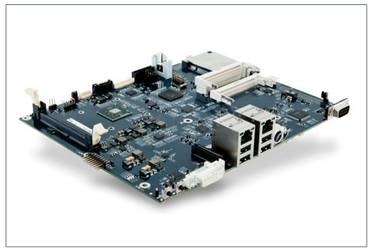
ASEM STANDARDS

Highlights

- → Fanless Panel PC 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, 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	10.4" - 800x600 12.1" - 800x600 12.1" - 1024x768 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	15.6" - 1366x768 18.5" - 1366x768 21.5"- 1920x1080
TOUCHSCREEN	Resistive 5 wires GFG (optional)	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch, 4 fingers
FRONT PANEL	Aluminium	True Flat Aluminium	True Flat Stainless Steel	True Flat Aluminium
PROTECTION GRADE	IP66 - front			
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 embedded 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 32bit, Windows XP Pro 32bit, Microsoft Windows Embedded Standard 7E/7P 32 bit, Windows Embedded Standard 2009 (XPe SP3) 32bit, Microsoft Windows Embedded Compact 7 Pro			Microsoft Windows 7 Pro/ Ultimate 32bit, Microsoft Windows Embedded Standard 7P 32 bit
OPERATING TEMPERATURE	0°- 50°C			
	0°- 45°C with HDD 24x7			
	5°- 45°C with standard HDD			
APPROVALS	CE, cULus LISTED (508)			

HT2200

Fanless Panel PC based on Intel® Bay Trail platform

The fanless HT2200 Panel PC family 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 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 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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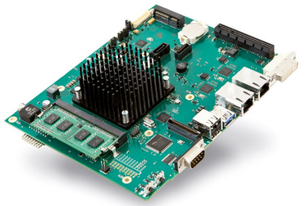
ASEM STANDARDS

Highlights

- → Fanless Panel PC with 0-50 °C operating temperature
- → High performance Intel® Bay Trail SoC Celeron J1900 quad core processor
- → 10.1" 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 (max 52 mm in the HT2200 SL)
- → IP66 front panel protection degree
- → Optional ATX mode push button kit
- → 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" W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6" - 1366x768 17" - 1280x1024 18.5" - 1366x768 19" - 1280x1024 21.5"- 1920x1080 24" - 1920x1080		12.1" - 800x600 12.1" - 1024x768 15.0" - 1024x768 17" - 1280x1024 19" - 1280x1024	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, 4 fingers
FRONT PANEL	Aluminium	True Flat Aluminium	True Flat Stainless Steel	True Flat Aluminium
PROTECTION GRADE	IP66 - front			
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 embedded on board with external access			
	1 x SSD mSATA SATA II			
S0/S1	1 bootable CFast 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)			
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 32/64bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro			Microsoft Windows 7 Pro/ Ultimate 32/64bit, Microsoft Windows Embedded Standard 7P 32/64 bit, Microsoft Windows 8.1 Industry Pro
OPERATING TEMPERATURE	0°- 50°C			
	0°- 45°C with HDD 24x7			
	5°- 45°C with standard HDD			
APPROVALS	CE, cULus LISTED (508)			

HT3000

Fanless Panel PC based on Intel® Ivy Bridge platform

The fanless HT3000 Panel PC family is based on the Intel® Ivy Bridge platform and 17 or 35 Watt third 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, an additional standard 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 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).

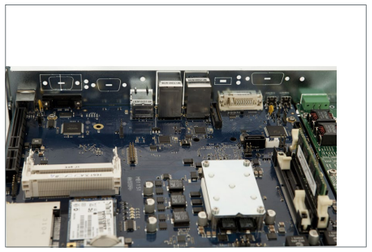
c UL us LISTED

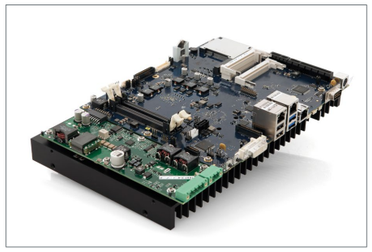
ASEM STANDARDS

Highlights

- → Fanless Panel PC 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 35 W
- → 12.1" and 15" in 4:3 aspect ratio, 17" and 19" in 5:4 aspect ratio and 15.6", 18.5", 21.5" Wide 16:9 aspect ratio TFT LCDs
- → 1 PCI or 1 PCIe x4 expansion slots (S1 version)
- → IP66 front panel protection degree
- → Optional ATX mode push button kit
- → CE, cULus LISTED (508) certifications

Gallery





Technical data

	HT3000	HT3000-TF	HT3000-TFX	HT3000-TFM
LED backlight TFT LCD	12.1" W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6" - 1366x768 17" - 1280x1024	18.5" - 1366x768 19" - 1280x1024 21.5"- 1920x1080 24" - 1280x1080	12.1" - 800x600 12.1" - 1024x768 15.0" - 1024x768 17" - 1280x1024 19" - 1280x1024	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, 4 fingers
FRONT PANEL	Aluminium	True Flat Aluminium	True Flat Stainless Steel	True Flat Aluminium
PROTECTION GRADE	IP66 - front			
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 embedded 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 32/64bit, Windows XP Pro 32bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Windows Embedded Standard 2009 (XPe SP3) 32bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro			Microsoft Windows 7 Pro/ Ultimate 32bit, Microsoft Windows Embedded Standard 7P 32 bit, Microsoft Windows 8.1 Industry Pro
OPERATING TEMPERATURE	0°- 50°C			
	0°- 45°C with HDD 24x7			
	5°- 45°C with standard HDD			
APPROVALS	CE, cULus LISTED			

HT3200 [new]

Fanless Panel PC based on Intel® Broadwell™ platform

The HT3200 Panel PCs are based on the X86 Intel® Broadwell platform with Ultra Low Voltage fifth 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 opto-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 RAM configurable up to 8 GB 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" 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"(4:3), 15", 17" and 19" LCDs are also available with Stainless Steel True Flat front panels (HT-TFX).

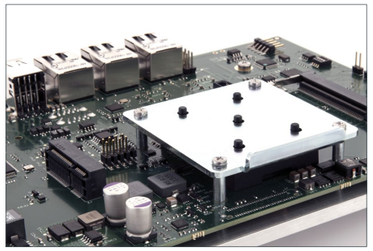
c UL us LISTED

ASEM STANDARDS

Highlights

- → Fanless Panel PC with 0-50°C operating temperature
- → Intel® 5th generation Core and Celeron processors
- → Displays: 12.1" and 15" in 4:3; 17" and 19" in 5:4;12.1" in 16:10 and 15.6", 18.5", 21.5", 24" in 16:9
- → 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 kit for ATX mode push button
- → 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	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 18.5" W - 1366x768 21.5" W - 1920x1080
TOUCHSCREEN	Resistive 5 wires GFG (optional)	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch, 4 fingers
FRONT PANEL	Aluminium	True Flat Aluminium	True Flat Stainless Steel	True Flat Aluminium 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	1GB or 2GB or 4GB or 8GB (1 x SODIMM DDR3 module)			
MASS STORAGE SL	1 bootable CFast SATA II embedded on board with external access 1 x SSD mSATA SATA II			
S0/S1	1 bootable CFast SATA II embedded on board with external access 1 x SSD mSATA SATA II 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 32/64bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro 32/64bit			Microsoft Windows 7 Pro/ Ultimate 32/64bit, Microsoft Windows Embedded Standard 7P 32/64 bit, Microsoft Windows 8.1 Industry Pro 32/64bit
OPERATING TEMPERATURE	0°- 50°C 0°- 45°C with HDD 24x7 5°- 45°C with standard HDD			
APPROVALS	CE, cULus LISTED (508) pending			

HT5000

Highly expandable Panel PC based on Intel® Ivy Bridge platform

The HT5000 Panel PC family is based on Intel® Ivy Bridge platform and 35 or 45 Watt third generation Core™ i3, Core™ i5, Core™ i7 Dual and Quad Core and Celeron dual core processors on socket.
The all-in-one motherboard feature 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 features one connector for mSATA SSD, a serial RS232 interface, one rear external access CFast SATA II slot, an additional standard 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 DD3 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" and 21.5" 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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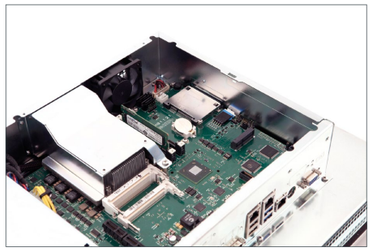
ASEM STANDARDS

Highlights

- Panel PC 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
- 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 24 VDC power supply
- 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
- Optional kit for ATX mode push button
- 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 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 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, 4 fingers
FRONT PANEL		Aluminium	True Flat Aluminium	True Flat Stainless Steel	True Flat Aluminium
PROTECTION GRADE		IP66 - front			
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 embedded 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 32/64bit, Windows XP Pro 32bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Windows Embedded Standard 2009 (XPe SP3) 32bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro			Microsoft Windows 7 Pro/ Ultimate 32bit, Microsoft Windows Embedded Standard 7P 32 bit, Microsoft Windows 8.1 Industry Pro
OPERATING TEMPERATURE		0°- 50°C 0°- 45°C with HDD 24x7 5°- 45°C with standard HDD			
APPROVALS		CE, cULus LISTED			

Box PCs

ASEM provides a full range of Box PCs 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 book, wall or DIN rail mounting.

BM40 [new]

Book Mounting Box PC based on ARM Cortex A9 processor

BM40 fanless ARM based Din Rail Mounting IPC with 0°÷50°C operating temperature range, is based on Windows Embedded Compact 7 PRO or Linux operating system.
BM40 is based on the ARM Cortex A9 1.0 GHz processor (Freescale i.MX6 Quad Core, Dual Core, or Dual Lite) with 1 or 2 GB system RAM (DDR3-1600/800), 4 or 8 GB eMMC memory, a slot for a removable MicroSD memory card (without external access), to be used as an alternative mass storage, and 4 Mb MRAM (Magnetoresistive RAM), for retentive data storage at power down, to be used in combination with the MicroUPS.
Interfaces and LED signalling are on the front side, to simplify system cabling and to provide a clear view of operating signals.
The system provides one 10/100/1000 Mbps Ethernet interface, one EtherCAT interface, two USB 2.0 interfaces, one isolated RS-232/485 configurable serial port with MPI support or, as an alternative, one CAN 2.0B (up to 1Mbps), a DVI-D video output or a 24 V DC isolated power supply input.

c UL us LISTED

Highlights

- → Fanless Din Rail Mounting IPC with 0-50 °C operating temperature
- → Designed to facilitate cabling and operation in control cabinets
- → ARM Cortex A9 1.0 GHz processor (Freescale i.MX6 Quad Core, Dual Core, or Dual Lite)
- → Built-in MicroUPS with supercapacitors to save retentive data in control applications
- → CE and cULus LISTED 508 certifications

Gallery

Technical data

	BM40
OS AVAILABLE	Microsoft Windows Embedded Compact 7 Pro
	Embedded Linux distribution based on Yocto Project
	No OS
PROCESSOR	ARM Cortex A9 processor Freescale® i.MX6 1 GHz
SYSTEM MEMORY - RAM	1/2 GB with DDR3 chips soldered
NVRAM	512KB magnetic RAM
MASS STORAGE	4/8 GB eMMC (Solid State Disk) 8bit, file system organization for projects and applications
	1 x Slot microSD
LAN	1 x Ethernet 10/100/1000 Mbps (Intel 82574L, RJ45); 1 x Ethernet 10/100 Mbps (RJ45)
USB	2 x USB 2.0 (Type-A)
SERIAL	1 x RS-232/422/485 (DB15M)
	1 x RS232/485 isolated (DB15M) (optional, alternative to CAN)
FIELDBUS	1 x CAN isolated channel (DB9M) with terminations (optional, alternative to RS232/485)
BATTERY	1 x CR2032 Removable (internal)
VIDEO OUTPUT	1 x DVI-D
POWER SUPPLY UNIT	24VDC isolated
	Backup for microinterruption, max 500ms, with supercapacitors
OPERATING TEMPERATURE	0°- 50°C
APPROVALS	CE, cULus (508) pending

BM2200 [new]

Book Mounting Box PC based on Intel® Bay Trail™ platform

The fanless BM2200 is the new ASEM wall book mounting BOX PC, designed for installation in industrial control cabinets.
BM2200 is based on the Intel® Bay Trail™ SoC (System on chip) platform, with a Quad Core Celeron J1900 processor 2.0 GHz (2.42 GHz Burst Frequency), cooled by an internal passive sink placed inside the aluminium housing, that enables fanless operation up to 50°C.
BM2200 provides one DVI-I (DVI-D + VGA) output, two Ethernet 10/100/1000 Mbps interfaces and two USB 2.0 ports on the top side, to simplify the cabling of the unit inside the control cabinet. On the front side, BM2200 provides LED signalling to give a better view of operating signals and, behind the front cover, it provides an external access Cfast slot, a system battery slot and one USB 3.0 port.
The system provides one SATA II mSATA SSD slot or one connector, for 2,5" SATA II HDD or SSD, and RAM configurable up to 8 GB with a single DDR3 SODIMM module.
BM2200 has a 24 V DC power supply unit with galvanic isolation and an optional integrated UPS (Uninterruptible Power Supply), with an external battery pack (also with wall book mounting), or an optional integrated MicroUPS, based on 4 supercapacitors, that enable the back up of retentive data on the MRAM (Magnetoresistive RAM) memory.
BM2200, as an alternative to the DVI-D output, can integrate the ASEM Remote Video Link, providing remotation of DVI-D and USB 2.0 signals up to 100 m, with an RJ45 connector output (to be used in combination with a standard CAT5 SF-UTP cable).
The IPC can also be equipped with add-on cards providing 1 x Ethernet 10/100/1000 Mbps + 1 x RS232/422/485 (DB15 male, optionally isolated), or 2 x RS232 (DB9 male), or 2 x CAN RAW interfaces (DB9 male).

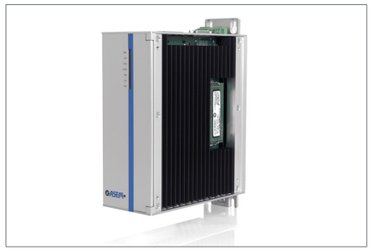
c UL us LISTED

ASEM STANDARDS

Highlights

- → Fanless wall book mounting IPC with 0-50 °C operating temperature
- → Designed to facilitate cabling and operation in control cabinets
- → High performance Intel® Bay Trail™ Celeron J1900 Quad Core processor
- → Built-in UPS with external battery pack (optional)
- → Built-in MicroUPS with supercapacitors to save retentive data in control applications (optional)
- → Built-in ASEM Remote Video Link, providing remotation of DVI-D and USB 2.0 signals up to 100 m with an RJ45 connector output (optional)
- → CE and cULus LISTED 508 certifications

Gallery

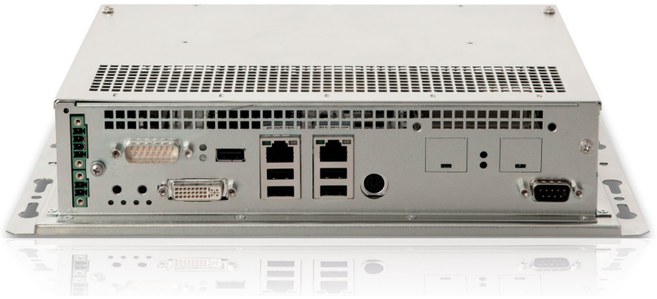


Technical data

	BM2200
PROCESSOR	Intel® Celeron J1900 2.00Ghz, 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 embedded 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 (front)
VIDEO OUTPUT	1 x DVI-I (DVI-D + VGA with adapter, top)
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)
REMOTATION	Transmission module integrated for Video signals and USB transmission up to 100mt (optional)
POWER SUPPLY UNIT	24VDC isolated
	24VDC isolated with uUPS (optional) with supercapacitors
	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 32/64bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with HDD 24x7
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED (508) pending

PB2000

Fanless Box PC with Intel® Atom D2550 processor



The fanless PB2000 Box PC is based on Intel® Cedar Trail platform with 1,86 GHz dual core D2550 third generation Atom processor.

The all-in-one motherboard features 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 and RAM configuration up to 4 GB DDR3 SODIMM.

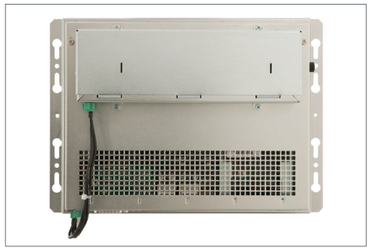
c UL us LISTED

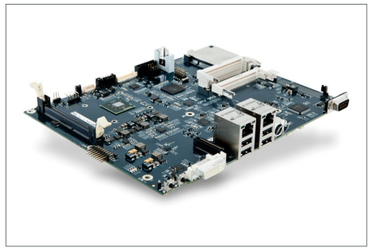
ASEM STANDARDS

Highlights

- → Fanless Box PC with 0-50 °C operating temperature
- → Intel® Cedar Trail platform and 1,86 GHz D2550 dual core processor
- → Built-in 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 embedded 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 32bit, Windows XP Pro 32bit, Microsoft Windows Embedded Standard 7E/7P 32 bit, Windows Embedded Standard 2009 (XPe SP3) 32bit, Microsoft Windows Embedded Compact 7 Pro
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with HDD 24x7
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED (508)

PB2200

Fanless Box PC based on Intel® Bay Trail platform

The fanless PB2200 Box PC 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 features 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 and RAM configuration up to 8 GB DDR3 SODIMM.

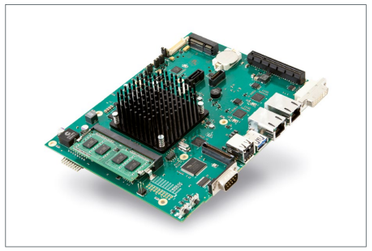
c UL us LISTED

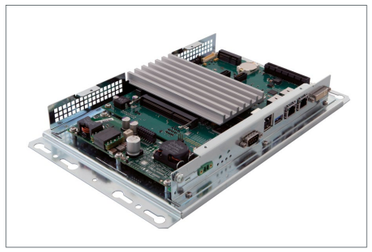
ASEM STANDARDS

Highlights

- → Fanless Box PC with 0-50 °C operating temperature
- → High performance Intel® Bay Trail SoC Celeron J1900 quad core processor
- → SL version with reduced depth (max 35 mm)
- → Built-in UPS with external battery pack (optional)
- → 1 PCI or 1 PCIe x1 expansion slot (S1 version)
- → Wall or DIN rail installation
- → Optional kit for ATX mode push button
- → 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 on board with external access
	1 x SSD mSATA SATA II
S0/S1	1 bootable CFast embedded 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 32/64bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with HDD 24x7
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED (508)

PB3000

Fanless Box PC with Intel® Ivy Bridge platform

The fanless PB3000 Box PC is based on the Intel® Ivy Bridge platform and 17 or 35 Watt third 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 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 external access CFast SATA II slot, an additional standard 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.

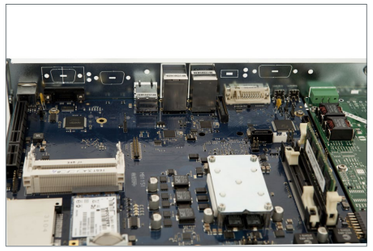
c UL us LISTED

ASEM STANDARDS

Highlights

- → Fanless Box PC 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 35 W processors soldered
- → 1 PCI or 1 PCIe x4 expansion slots (S1 version)
- → Wall or DIN rail installation
- → Optional kit for ATX mode push button
- → CE, cULus LISTED (508) certification

Gallery

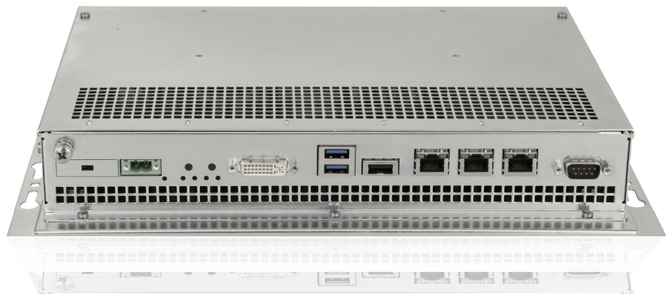


Technical data

	PB3000
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 embedded 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)
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
	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 32/64bit, Windows XP Pro 32bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Windows Embedded Standard 2009 (XPe SP3) 32bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with HDD 24x7
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED

PB3200 [new]

Fanless Box PC based on Intel® Broadwell™ platform



The PB3200 Box PCs are based on the X86 Intel® Broadwell ULT platform with Ultra Low Voltage fifth 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 RAM configurable up to 8 GB with a single DDR3 SODIMM module.

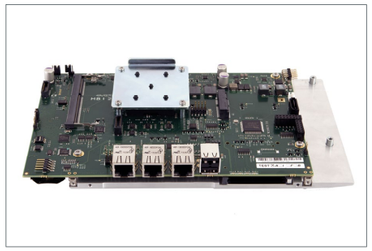
c UL us LISTED

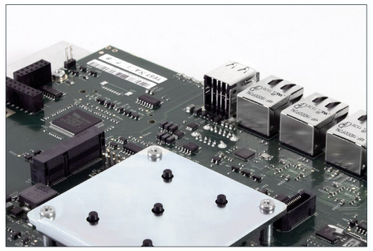
ASEM STANDARDS

Highlights

- → Fanless Box PC with 0-50°C operating temperature
- → Intel® Broadwell ULT platform
- → SL version with reduced depth
- → Built-in UPS with external battery pack (optional)
- → 1 PCI or 1 PCIe x4 expansion slot (S1 version)
- → Wall or DIN rail installation
- → Optional kit for ATX mode push button
- → Optional TPM module
- → 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	1GB or 2GB or 4GB or 8GB (1 x SODIMM DDR3 module)
MASS STORAGE SL	1 bootable CFast embedded on board with external access
	1 x SSD 2,5" or 1 x HDD 2,5" SATA III
S0/S1	1 bootable CFast embedded on board with external access
	1 x SSD mSATA SATA II
	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 32/64bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro 32/64bit
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with HDD 24x7
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED (508) pending

PB5000

Highly expandable Box PC based on Intel® Ivy Bridge platform

The PB5000 Box PC is based on Intel® Ivy Bridge platform and 35 or 45 Watt third generation Core™ i3, Core™ i5, Core™ i7 Dual and Quad Core and Celeron dual core processors on socket.
The all-in-one motherboard feature two USB 3.0, two USB 2.0, three 10/100/1000 Mbps Ethernet with "Jumbo Frame" and "Wake on Lan" support.
It also features one connector for mSATA SSD, a serial RS232 interface, one external access CFast SATA II slot, an additional standard 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 DD3 SODIMM modules.

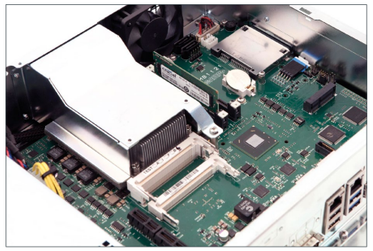
c UL us LISTED

ASEM STANDARDS

Highlights

- → Box PC 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 24 VDC power supply
- → 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
- → Optional kit for ATX mode push button
- → 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 on board with external access
	2 x SSD or HDD 2,5" SATA III (also in RAID or with extractable drawers)
	1 x mSATA SSD
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 32/64bit, Windows XP Pro 32bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Windows Embedded Standard 2009 (XPe SP3) 32bit, Microsoft Windows Embedded Compact 7 Pro, Microsoft Windows 8.1 Industry Pro
OPERATING TEMPERATURE	0°- 50°C
	0°- 45°C with HDD 24x7
	5°- 45°C with standard HDD
APPROVALS	CE, cULus LISTED

Arm Mounting PCs

The Arm Mounting PCs 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" TFT Led Backlight LCDs in a full IP65 Aluminium chassis.

VK3200 [new]

Arm Mounting PC based on Intel® Broadwell platform

The VK3200 arm mounting PCs are based on the X86 Intel® Broadwell platform with Ultra Low Voltage thirth 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 optional USB port and one optional RFID interface on the front with the possibility to install emergency button, key switches, buttons and light indicators.
Inside the systems the “all in one" motherboard provides two additional USB 2.0 ports, three 10/100/1000 Mbps Ethernet ports, one serial RS232/422/485 interface (optionally opto-isolated), one SATA III CFast slot, one SATA III mSATA SSD slot and RAM configuration up to 8 GB with a DDR3 SODIMM module.
The VK3200 family is available with 15.6", 18.5" and 21.5" 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.

c UL us LISTED

ASEM STANDARDS

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" - 1366x768 18.5" - 1366x768 21.5"- 1920x1080	15.6" - 1366x768 18.5" - 1366x768 21.5"- 1920x1080
TOUCHSCREEN	Resistive 5 wires	P-CAP Multitouch, 4 fingers
FRONT PANEL	True Flat Aluminium	
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 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 & LIGHTS (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 32/64bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro	Microsoft Windows 7 Pro/Ultimate 32/64bit, Microsoft Windows Embedded Standard 7P 32/64 bit, Microsoft Windows 8.1 Industry Pro
OPERATING TEMPERATURE	0°- 50°C	
APPROVALS	CE, cULus (508) pending	

VPC2200

Arm Mounting PC 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.

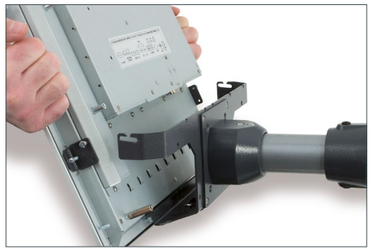
The “all-in-one" motherboard provides a USB 3.0 port, two USB 2.0 ports, two 10/100/1000 Mbps Ethernet port (a further Ethernet port is available as an option), an RS232 (DB9M) serial interface, a CFast SATA II slot, an mSATA SATA II slot for a SSD, a DVI-I (DVI-D + VGA) video output and RAM configurable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

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 extendable 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 CP-S / 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 front	
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 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 CP-S / 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 32/64bit, Microsoft Windows Embedded Standard 7E/7P 32/64 bit, Microsoft Windows 8.1 Industry Pro	
OPERATING TEMPERATURE	0°- 45°C	
APPROVALS	CE	

RACK PCs

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 PC with third 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 features 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 functionality.
The only difference between PR4046 and PR4146 systems is the chassis depth.

Highlights

- → Intel® Pentium dual core and third generation Intel® Core™ i3, i5 and i7 dual and quad core up to 3,4 GHz processors on socket
- → Controller RAID 0, 1 on-board
- → Multi HDD with extractable drawers
- → Expansion PCI slot: 3 PCI, 2 PCIe x16, 2 PCIe x4
- → Compact cabinet (PR414X version)

PR4047 / PR4147

19" Rack PC with fourth 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 features 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 functionality.
The only difference between PR4047 and PR4147 systems is the chassis depth.

Highlights

- → Intel® Pentium dual core and fou'th 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
- → Controller RAID 0, 1 on-board
- → Multi HDD with extractable drawers
- → PCI expansion slot: 4 PCI, 2 PCIe x16, 1 PCIe x8
- → Compact cabinet (PR414X versions)

Technical Data

	PR4046	PR4146	PR4047	PR4147
19" RACK CABINET	long	short	long	short
MOTHERBOARD	ATX format, CL630-CRM (DFI)		ATX format, D3236-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® 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™ 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™ 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	
CHIPSET	Intel® C216 Express Chipset		Intel® Q87 Chipset	
O.S. CERTIFIED	Microsoft Windows 8 32/64bit, Microsoft Windows 7 Pro/ Ultimate 32/64bit, Microsoft Windows XP Professional 32/64 bit		Microsoft Windows 8 32/64bit, Microsoft Windows 7 Pro/ Ultimate 32/64bit	
VIDEO CONTROLLER	Intel® HD Graphics, 650MHz integrated into Pentium G2030		Intel® HD Graphics, 650MHz integrated into Pentium	
	Intel® HD Graphics 2500, 650MHz integrated into Core™ i3 and Core™ i5		Intel® HD Graphics 4400, 350MHz integrated into Core™ i3	
	Intel® HD Graphics 4000, 650MHz integrated into Core™ i7		Intel® HD Graphics 4600, 650MHz integrated into Core™ i5 and Core™ i7	
	DX11 and OpenGL 3.0 support		DX11 and OpenGL 3.0 support	
SYSTEM MEMORY - RAM	4GB / 8GB / 16GB / 32GB		4GB / 8GB / 16GB / 32GB	
EXPANSION SLOTS	3 x PCI full size (32bit, 33MHz, Rev.2.3)		4 x PCI full size (32bit, 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 x4 (1 x4 Gen2, 1 x1/x4 Gen2)		1 x PCIe x8 (1 lane, Gen2)	
	1 x MiniPCIe (PCI 2.0)			
SPECIAL FEATURES	2 x HDD with extractable drawer	1 x HDD with extractable drawer	24/7 operation	
			2 x HDD with extractable drawer	1 x HDD with extractable drawer
MASS STORAGE	2 x HDD 3,5" SATA III		2 x HDD 3,5" SATA III / 1 x mSATA SSD / SATA III	
RAID	RAID 0, 1		RAID 0, 1	
OPTICAL DRIVE	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)	
USB	4 x USB 3.0 (Type-A, rear)		2 x USB 3.0 (Type-A, rear)	
	2 x USB 2.0 (Type-A, rear)		6 x USB 2.0 (Type-A, rear)	
	2 x USB 2.0 (Type-A, front)		2 x USB 2.0 (Type-A, front)	
SERIAL	1 x RS232/422/485 (DB9M)		1 x RS232 (DB9M)	
KEYBOARD & MOUSE	1 x PS/2 (K/M)		2 x PS/2 (K/M)	
VIDEO OUTPUT	1 x DVI-I		1 x DVI-I	
	1 x DVI-D		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	
	Audio Mic In, Line in, Line out		Audio Mic In, Line in, Line out	
ADDITIONAL INTERFACES	2 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 LPT EPP, ECP bidirectional	
POWER SUPPLY UNIT	230VAC 400/650W	230VAC 400/650W	230VAC 400/650W	230VAC 400/650W
	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
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	
APPROVALS	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 with a stylish design, and are available with 15.6", 18.5" and 21.5" 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 signals, with a simple and economic CAT5E SF/UTP cable.

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 24 VDC input voltage with or without galvanic isolation and two rear access USB ports. MHR100 version features a built-in remotation of digital video and USB 2.0 signals up to 100 meters with a simple and economic CAT5E SF/UTP cable.

c UL us LISTED

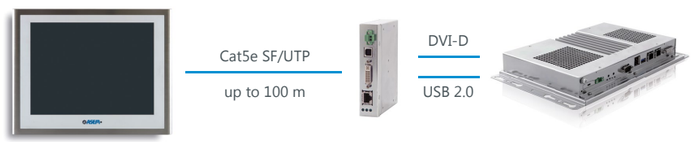
ASEM STANDARDS

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 metres (MHR100)
- 110/230 VAC or 24 VDC power input with or without galvanic isolation
- IP66 front panel protection degree
- CE, cULus LISTED (508) certification

Gallery

Remotation



MHR100 industrial monitors integrate DVI-D and USB 2.0 signal remotation that allow PC connection up 100 meters with a Cat5e SF/UTP cable

Technical data

	MH100	MH100-TF	MH100-TFX	MH100-TFM	MHR100	MHR100-TF	MHR100-TFX	MHR100-TFM
LED backlight TFT LCD	8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1" W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6" W - 1366x768 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" - 1280x800 12.1" - 1280x800 15.6" - 1366x768 18.5" - 1366x768 21.5" - 1920x1080	8.4" - 800x600 10.1" W - 1280x800 10.4" - 800x600 12.1" W - 1280x800 12.1" - 800x600 / 1024x768 15.0" - 1024x768 15.6" W - 1366x768 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" - 1280x800 12.1" - 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, 4 fingers	Resistive 5 wires GFG (optional)	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch, 4 fingers
T/S CONTROLLER	USB / Serial			USB	USB			
FRONT PANEL	Aluminium	True Flat Aluminium	True Flat Stainless Steel	True Flat Aluminium	Aluminium	True Flat Aluminium	True Flat Stainless Steel	True Flat Aluminium
PROTECTION GRADE	IP66 - front							
VIDEO INPUT	1 x VGA 1 x DVI-D				DVI-D remotation with Cat5e SF/UTP 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 Cat5e SF/UTP 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 [new]

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 and MKR100 families are available with 15.6", 18.5" and 21.5" 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, 110/230 VAC or 24 VDC with galvanic isolation power input and two external access USB 2.0 ports.

MKR100 family feature a built-in up to 100 meters remotation for digital video and USB 2.0 signal, with a simple and economic CAT5E SF/UTP cable.

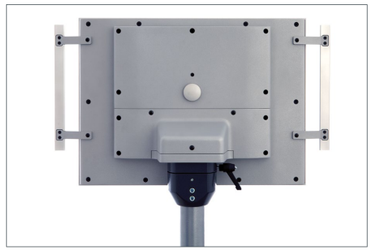
c UL us LISTED

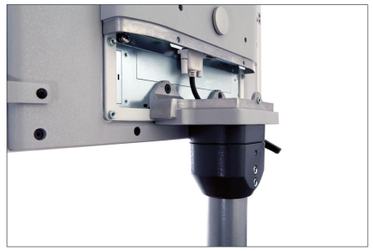
ASEM STANDARDS

Highlights

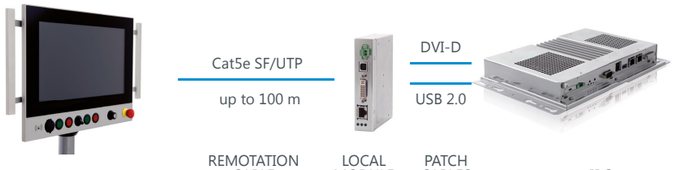
- → Full IP65 protection degree
- → Easy installation and cabling
- → 5 wires resistive screen (MK100-TF) or P-CAP Multitouch-screen (MK100-TFM)
- → Integrated remotation of DVI-D and USB 2.0 signals up to 100 m (MKR100)
- → Integrated configurable button module
- → CE, cULus LISTED (508) certification

Gallery





Remotation



MKR100 industrial monitors integrate DVI-D and USB 2.0 signal remotation that allow PC connection up 100 meters with a Cat5e SF/UTP cable

Technical data

	MK100-TF	MK100-TFM	MKR100-TF	MKR100-TFM
LED backlight TFT LCD	15.6" - 1366x768 18.5" - 1366x768 21.5"- 1920x1080			
TOUCHSCREEN	Resistive 5 wires	P-CAP Multitouch, 4 fingers	Resistive 5 wires	P-CAP Multitouch, 4 fingers
T/S CONTROLLER	USB			
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 Cat5e SF/UTP cable	
USB	2 x USB 2.0 (Type-A, rear, protected, IP65)			
CHASSIS Installation	For pole or suspension arm mounting system compatible with RITTAL CP-S / ROLEC TARAPLUS / HASEKE HLT KUPPLUNG 48			
Material	Alluminum alloy EN AB46400			
Color	Anti-scratchable painted - RAL 9006			
BUTTONS & LIGHTS (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. The push-button panel design allows easy device substitution.			
REMOTATION			Remotation of DVI-D and USB 2.0 signals up to 100mt with Cat5e SF/UTP cable	
POWER SUPPLY UNIT	24VDC isolated			
OPERATING TEMPERATURE	0°- 50°C			
APPROVALS	CE, cULus LISTED (508)			

MV100 / MVR100

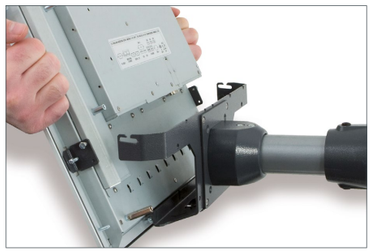
Arm Mounting Industrial Monitor

The MV100 / MVR100 is an arm or VESA mounting industrial monitor, with reduced thickness and designed to be compatible with the most common attachment standards.
It is available with a 15" 16 million colours TFT LED Backlight LCD in 4:3 aspect ratio, resistive 5 wires touch-screen, aluminium front panel and IP65 front protection level.
The MVR version features a built-in remotation up to 100 meters for digital video and USB 2.0 signals, with a simple and economic CAT5E SF/UTP cable.
MV100 can be configured with a keyboard module and side modules for emergency buttons, key switches, buttons and light indicators.

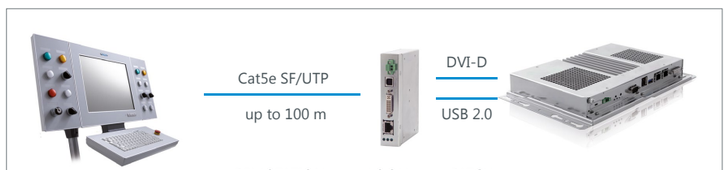
Highlights

- → Arm mounting or VESA installation
- → 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 CP-S / ROLEC TARAPLUS systems

Gallery



Remotation



MVR100 industrial monitors integrate DVI-D and USB 2.0 signal remotation that allow PC connection up 100 meters with a Cat5e SF/UTP cable

Technical data

	MV100	MVR100
LED Backlight TFT LCD	15" - 1024x768 (XGA)	
TOUCHSCREEN	Resistive 5 wires	
	GFG (optional)	
T/S CONTROLLER	USB / Serial	USB
FRONT PANEL	Aluminium alloy with polycarbonate foil Pantone 492C color	
PROTECTION GRADE	IP65 front	
VIDEO INPUT	1 x DVI-I (DVI-D + VGA with adapter)	DVI-D remotation with Cat5e SF/UTP cable
USB	2 x USB 2.0 (Type-A, rear)	
	2 x USB 2.0 (Type-A, front, protected)	
REMOTATION	-	Remotation of DVI-D and USB 2.0 signals up to 100mt with Cat5e SF/UTP cable
CASE Installation	For pole or suspension arm mounting system compatible with VESA / RITTAL CP-S / ROLEC TARAPLUS	
Material	Steel	
Color	Anti-scratchable painted - RAL 7035	
BUTTONS & LIGHTS (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	
OPERATING TEMPERATURE	0° - 50°C	
APPROVALS	CE	

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 gived on the touchscreen, then the two components are attached on the Aluminium front panel.

Stainless Steel True Flat Front Panel

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

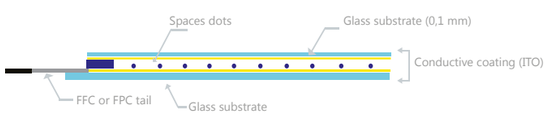
Glass Multitouch technology

All Panel PC and monitor families are available with the new generation of Multitouch front panels in 10.1" and 12.1" sizes with 16:10 aspect ratio, 15.6", 18.5" and 21.5" screen sizes with 16:9 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.

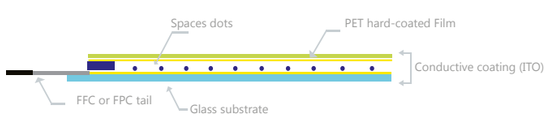
Touchscreen Glass-Film-Glass Technology

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 products cleaning.

GFG technology

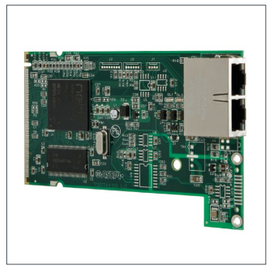


Standard technology

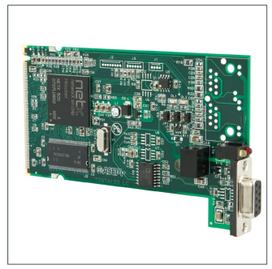


Fieldbuses boards

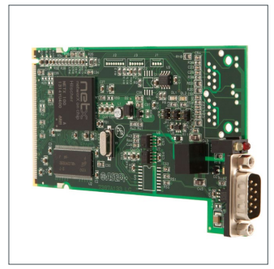
NETcore® X
NETcore®X fieldbus boards are the link between the IPC and the I/O devices on field and enable control and visualization applications to receive data from the field according to the industrial fieldbuses available.



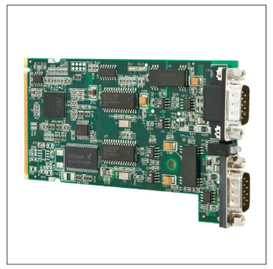
NETcore® X Industrial Ethernet
APCI / MiniAPCI / MB1021 format



NETcore® X Profibus
APCI / MiniAPCI / MB1021 format



NETcore® X CANOpen
APCI / MiniAPCI / MB1021 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.

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.

Introduced in 1999 and certificated by Intertek Moody Certification, the quality system is up-to-date to improve efficiency and effectiveness of our operations.

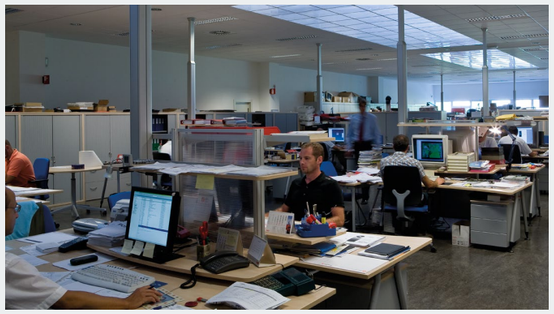
ISO 9001:2008 ICERTIFICATION™
Intertek
9809792

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, 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.



Notes

PG-Rev-1511-EN

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