

Panel PC Fanless

Panel PC systems with low power consumption, without ventilation, with Atom, Celeron ULV Core 2 Duo ULV processors, touchscreen, from 6.5" to 19" LCD display with plastic, aluminium or stainless steel front panel.

Possibility to integrate NETcore® X fieldbus cards.

Panel PC Performance

Panel PC systems providing computing power and high graphics capabilities, thanks to Pentium M and Core 2 Duo processors. Available with touchscreen, LCD display from 8.4" to 19" with plastic, aluminium or stainless steel front panel.

Possibility to integrate NETcore® X fieldbus cards.

OT600

OT600 is an extremely compact fanless panel PC with LCD display from 6.5" to 12.1", also touchscreen. It uses Compact Flash and SSD for data storage and allows the installation of NETcore® X communication cards. The integration with Premium HMI 4 software platform and CODESYS SoftPLC allows the creation of visualization and control applications.

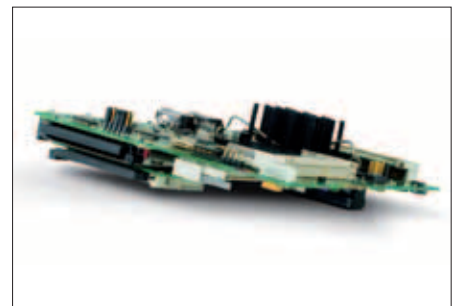


Photo 1: 2 Slots for Compact Flash


Photo 2: Plant supervision with Premium HMI

Photo 3: 2 MiniPCI slots

FEATURES PLUS

- ✓ HARDWARE SUPPORT FOR 187 KBIT/S MPI PROTOCOL (SIEMENS S7-300/S7-400)
- ✓ 2 CFS FOR OPERATING SYSTEM AND DATA STORAGE
- ✓ SUITABLE FOR VISUALIZATION AND CONTROL OF SMALL SYSTEMS
- ✓ 2 MINIPCI SLOTS FOR ADDITIONAL CARDS

HMI600
OT600+Premium HMI
See p.14

System characteristics				
Display	Size Type Resolution Colors Pixel pitch Backlight Luminance Contrast Viewing angle L:R/U:L (typ.) Lifetime (min.)	6,5" Color LCD TFT 640 x 480 (VGA) 256K 0,207 x 0,207mm LED 800cd/m ² 600:1 80°:80°/70°:70° 50.000h	8,4" Color LCD TFT 800 x 600 (SVGA) 256K 0,213 x 0,213mm LED 400cs/m ² 370:1 60°:60°/45°:55° 70.000h	12,1" Color LCD TFT 800 x 600 (SVGA) 256K 0,307 x 0,307mm LED 450cd/m ² 700:1 80°:80°/65°:75° 50.000h
Touchscreen Optional	Technology Light transmission Lifetime Linearity deviation Interface Glass Film Glass	4 wires – analog - resistive 80% ±2% 35mln activations < 1 % Serial No	5 wires – analog - resistive 80% ±2% 35mln activations < 1 % Serial No	5 wires – analog - resistive 80% ±2% 35mln activations < 1 % Serial Optional
Motherboard	Model HW monitor Watch-dog	All-in-one, ASEM MB831-V Temperature monitor Time programmable		
CPU	Processor Cache Socket	AMD LX800 500MHz 128KB L2 Soldered on board		
Graphic	Controller Memory	Integrated on board Shared - 2MB÷128MB system selectable		
System memory	Type Size Socket	DDR PC2700 512 MB, 1 GB 1 x SODIMM module		
Serial interfaces	Type UART Transfer rate Optoisolation	1 x RS232 (DB9M) 16550 compatible (FIFO 16 byte) 115Kbps max No		
Ethernet interfaces	Type Controller	1 x RS-232/422/485 (DB15M) / compatible MPI 187Kbit/s (Siemens S7-300/S7-400) 16550 compatible (FIFO 16 byte) 115Kbps max No		
USB interfaces	Type Transfer rate	1 x 10/100Mbps (RJ45) Intel 82551QM		
Compact Flash slots	Type <i>optional</i>	2 x USB 2.0 (rear, TYPE-A, host port, protected), 1 x USB 2.0 (front, TYPE-A, host port, protected) Up to 480Mbit/s (high speed)		
Mass storage interfaces	Parallel	1 x Type II (external access) 1 x Type II (internal access)		
Expansion slots	Type	1 x ATA/66 Master/Slave (dedicated for CF Slots)		
Battery	Type Removable Lifetime	2 x MiniPCI type III		
Buttons, leds and keys	Reset button LEDs	½AA Lithium (3.6V) Yes 5 years		
		Yes Power		
Electrical characteristics				
Power supply	Type Input voltage Power consumption	AT, Integrated on board, auto ranging 9÷36 VDC 10W – 13W basic configuration (without add-on)		
Mechanical characteristics				
Case	Type Material	Panel mount Steel, nickel treatment		
Front panel	Protection Construction	IP65 Aluminum alloy		
Measurements mm	6,5" 8,4" 12,1"	Dimensions (W x H x D) 201 x 168 x 68 240 x 202 x 73 321 x 262 x 73	Cutout (W x H) 176 x 149 213 x 179 292 x 239	Weight (Kg) 1,6 2,2 3,2
Environmental characteristics				
Temperature	Operation Storage	0° ÷ +50°C -20° ÷ +60°C		
Humidity	Operation/Storage	80% (non-condensing)		
Warranty & Approvals				
CE	Emission Immunity Safety	Conforms to EN 55022 Information technology equipment – Radio disturbance characteristics Conforms to EN 61000-3-2 – Limits for harmonic current emissions Conforms to EN 61000-3-3 – Limits of voltage fluctuation and flicker Conforms to EN 55024 Information technology equipment – Immunity characteristics Conforms to EN 60950-1 – Information technology equipment – Safety		
UL	Marks Safety Certificate N°	 Conforms to UL-60950-1 – Information technology Equipment - Safety 2090306-E315863		
Warranty	Management Standard Extended	By ASEM headquarters 12 months 18 / 24 / 36 months (optional)		

OPEN AUTOMATION SYSTEMS

HMI SOLUTIONS

HT700 [new]

HT700 is the new entry-level fanless Panel PC family based on the new Intel® Atom™ TunnelCreek E6xx low power consumption processors up to 1.6 GHz. The new Intel® Atom™ Tunnel Creek architecture is highly integrated, delivering 3D graphics, video encode/decode, and memory and display controllers in one package increasing the overall performance of the platform.

HT700 is the first family of the next-generation ASEM panel PCs featuring the NEW ASEM STANDARDS: a unique CUT-OUT for each LCD size guaranteeing interchangeability among different families of Panel PCs and Monitors and future mechanical compatibility, 3 different front panel variants (Aluminium, Aluminium True Flat, Stainless Steel True Flat), isolated power supply and UPS integrated. H700 gives you the best price / performance ratio in the implementation of monitoring and control applications integrating the new Intel® Atom™ E6xx processor and the communication cards ASEM NETcore® X with Premium HMI4, Ubiquity and CODESYS Soft PLC software platform.

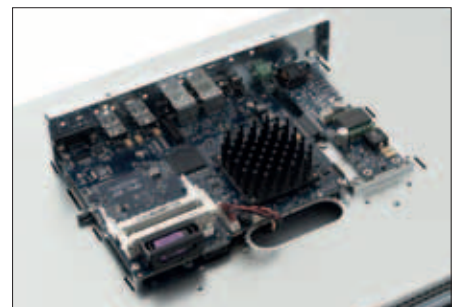


Photo 1: Optional UPS

Photo 2: CF Slot

Photo 3: Embedded design

FEATURES PLUS

- ✓ INTEL® ATOM™ TUNNEL CREEK TECHNOLOGY (E640, E680)
- ✓ OPTIONAL INDUSTRIAL FIELDBUS
- ✓ 2 MINIPCI SLOTS FOR ADDITIONAL CARDS
- ✓ ASEM CUT-OUT
- ✓ 3 DIFFERENT FRONT PANEL FINISHING
- ✓ ISOLATED POWER SUPPLY UNIT
- ✓ OPTIONAL UPS

HMI700
HT700+Premium HMI
See p.14

HMI SOLUTIONS

System characteristics												
Display	Size	6.5"	7"	8.4"	10.4"	12.1"	12.1"	15.0"	15.6"	18.5"		
	Type	Color LCD TFT	Color LCD TFT	Color LCD TFT	Color LCD TFT	Color LCD TFT	Color LCD TFT	Color LCD TFT	Color LCD TFT	Color LCD TFT		
	Resolution	640x480 (VGA)	800x480 (WVGA)	800x600 (SVGA)	800x600 (SVGA)	800x600 (SVGA)	1024x768 (SXGA)	1024x768 (XGA)	1366x768 (WXGA)	1366x768 (WXGA)		
	Colors	16.2M	16.2M	16.2M	16.2M	16.2M	16.2M	16.2M	16.7M	16.7M		
	Pixel pitch	0,207x0,207mm	0,1905x0,1905mm	0,213x0,213mm	0,264x0,264mm	0,3075x0,3075mm	0,3075 x 0,3075mm	0,297x0,297mm	0,252x0,252mm	0,300x0,300mm		
	Backlight	LED	LED	LED	LED	LED	LED	LED	LED	LED		
	Luminance	800cd/m ²	400cd/m ²	450cd/m ²	400cd/m ²	500cd/m ²	600cd/m ²	450cd/m ²	300cd/m ²	300cd/m ²		
	Contrast	600:1	1000:1	600:1	700:1	800:1	700:1	700:1	500:1	1000:1		
	Viewing angle L:R/U:L	80°:80°/ 70°:70°	80°:80°/ 80°:80°	80°: 80°/80°: 60°	80°: 80°/60°: 80°	80°: 80°/80°: 60°	80°: 80°/70°: 70°	80°: 80°/70°: 70°	85°: 85°/80°: 80°	170° H, 160° V		
	Lifetime (min.)	50.000h	50.000h	50.000h	50.000h	100.000h	50.000h	100.000h	50.000h	50.000h		
Touchscreen	Technology	5 wires – analog - resistive										
Optional	Light transmission	80% ±2%										
	Lifetime	35mln activations										
	Linearity deviation	< 1 %										
	Interface	Serial										
	Glass Film Glass	Optional										
Motherboard	Model	All-in-one, ASEM MB931										
CPU	HW monitor	Temperature monitor										
	Watch-dog	Time programmable										
CPU	Processor	Intel® Atom™ E640 1.00GHz				Intel® Atom™ E680 1.6GHz						
	Cache	512KB L2				512KB L2						
	Platform controller	Intel® EG20T				Intel® EG20T						
	HUB											
Graphic	Controller	Integrated in microprocessor, 320MHz				Integrated in microprocessor, 400MHz						
	Memory	DVMT max 512MB				DVMT max 512MB						
System memory	Type	DDR2 800										
	Size	1 GB, 2 GB										
	Socket	memory down										
Serial interfaces	Type	1 x RS232 (DB9M)										
	UART	16550 compatible (FIFO 16 byte)										
	Transfer rate	115kbps max										
	Optoisolation	No										
Optional (note 2)	Type	1 x RS-232/422/485 (DB15M)										
	UART	16550 compatible (FIFO 16 byte)										
	Transfer rate	187.5kbps max										
	Optoisolation	optional										
Ethernet interfaces	Type	2 x 10/100/1000Mbps (RJ45)										
	Controller 1	PHY: Realtek RTL8211E + MAC: Integrated into Intel EG20T										
	Controller 2	Intel 82574L										
	Jumbo frames/WOL	Yes/Yes										
USB interfaces	Type	1 x USB 2.0 (rear, TYPE-A, host port, protected), 1 x USB 2.0 (front, TYPE-A, host port, protected) 1 x USB 2.0 optional (rear, TYPE-A, host port, protected)										
	Transfer rate	Up to 480Mbit/s (high speed)										
Compact Flash slots	Type	1 x Type I (external access)										
Mass storage interfaces	Type	1 x SATA II, 3Gb/s										
Expansion slots	Type	2 x MiniPCI										
Battery	Type	Lithium ½AA size (3.6V)										
	Removable	Yes										
	Lifetime	2.5 years										
Buttons, leds and keys	Reset buttons	System / Watch-dog										
	LEDs	Power / Storage / Watch-dog / System error										
Electrical characteristics												
Power supply	Type	AT, Integrated on board										
	Input voltage	18÷32 VDC										
	Power consumption	TBD										
	UPS	Optional with batteries kit for rear system or detached mouting (wall), 227 x 41.8 x 73.5 mm (W x H x D)										
Mechanical characteristics												
Case	Type	Panel mount										
	Material	Steel, zinc galvanization										
Front panel (note 1)	Protection	IP65				IP65			IP66K			
	Construction	Full aluminum alloy				Alluminium True Flat with polyester foil			Stainless Steel True Flat with polyester foil			
	Color	-				PANTONE Cool Gray 4C			RAL 7035			
Measurements mm	Aluminium (W x H x D)		Aluminium TF (W x H x D)			Stainless Steel (W x H x D)			Cutout (W x H)		Weight (Kg)	
	6,5"	200 x 175 x 69,4	200 x 175 x 69,4			-			192 x 167		TBD	
	7"	215 x 167 x 69,4	215 x 167 x 69,4			-			207 x 159			
	8,4"	250 x 210 x 66,6	250 x 210 x 66,6			-			230 x 190			
	10,4"	300 x 245 x 66,6	300 x 245 x 66,6			-			280 x 225			
	12,1"	335 x 270 x 66,6	335 x 270 x 66,6			-			315 x 250			
	15"	390 x 315 x 66,6	390 x 315 x 66,6			-			370 x 295			
	15,6"	430 x 275 x 66,6	430 x 275 x 66,6			-			410 x 255			
	18,5"	500 x 320 x 68,6	500 x 320 x 68,6			-			480 x 300			
Environmental characteristics												
Temperature	Operation	0° ÷ +50°C without HDD, 5° ÷ +45°C with HDD										
	Storage	-10° ÷ +60°C										
Humidity	Operation/Storage	80% (non-condensing)										
Warranty & Approvals												
UL	Marks											
	Safety	Conforms to UL-508 (1 UL - Standard for Industrial Control Equipment)										
	Certificate N°	Pending										
CE	Emission	Conforms to EN 55022 Information technology equipment – Radio disturbance characteristics Conforms to EN 61000-3-2 – Limits for harmonic current emissions Conforms to EN 61000-3-3 – Limits of voltage fluctuation and flicker										
	Immunity	Conforms to EN 55024 Information technology equipment – Immunity characteristics										
	Safety	Conforms to EN 60950-1 – Information technology equipment – Safety										
Warranty	Management	By ASEM headquarters										
	Standard	12 months										
	Extended	18 / 24 / 36 months (optional)										
Notes												
1	With True Flat front panel, touchscreen is mandatory. Stainless Steel front panel have no USB port on the front											
2	RS-232/422/485 standard and optoisolated can be installed one alternative to the other											

OT1100

OT1100 is ASEM's embedded fanless panel PC that uses Intel® Atom™ Z5XXP.

Series low power processors up to 1.6GHz, providing the 'Hyper Threading Technology' feature. Available with 12.1", 15", 17" and 19" LCD display, also touchscreen, aluminium or stainless steel front panels, is maximum 70 mm thick. Through ASEM NETcore® X communication cards and integration of Premium HMI 4 and SoftPLC CODESYS software platforms, allows to build applications for visualization and control.

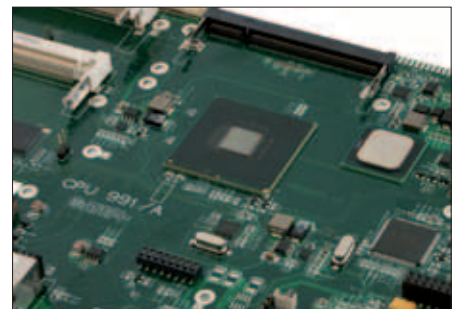
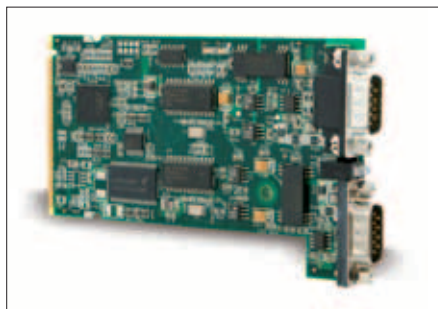


Photo 1: Extremely thin

Photo 2: Industrial fieldbus on MiniAPCI slot

Photo 3: Intel® Atom™ Technology

FEATURES PLUS

- INTEL® ATOM™ LOW POWER TECHNOLOGY
- EMBEDDED OPERATING SYSTEM INSTALLED ON SSD OR CF
- OPTIONAL INDUSTRIAL FIELDBUS
- 2 MINIPCI SLOTS FOR EXPANSION CARDS
- OPTIONAL TRUEFLAT FRONT PANEL IN STAINLESS STEEL

HMI1100
OT1100+Premium HMI
See p.14

System characteristics					
Display	Size	12,1"	15,0"	17,0"	19"
	Type	Color LCD TFT	Color LCD TFT	Color LCD TFT	Color LCD TFT
	Resolution	800 x 600 (SVGA)	1024 x 768 (XGA)	1280 x 1024 (SXGA)	1280 x 1024 (SXGA)
	Colors	256K	16M	16M	16M
	Pixel pitch	0,307 x 0,307mm	0,297 x 0,297mm	0,264 x 0,264mm	0,294 x 0,294mm
	Backlight	CCFL 2 lamps	CCFL 2 lamps	CCFL 2 lamps	CCFL 2 lamps
	Luminance	400cd/m ²	400cd/m ²	300cd/m ²	300cd/m ²
	Contrast	500:1	500:1	1000:1	1000:1
	Viewing angle L:R/U:L (typ.)	120° H, 100° V	160° H, 140° V	160° H, 160° V	160° H, 160° V
	Lifetime (min.)	60000h	50000h	50000h	-
Touchscreen Optional	Technology	5 wires – analog - resistive			
	Light transmission	80% ±2%			
	Lifetime	35mIn activations			
	Linearity deviation	< 1 %			
	Interface	Serial			
	Glass film Glass	Optional			
Motherboard	Model	All-in-one, ASEM MB991/A			
	HW monitor	Voltages and temperature monitor			
	Watch-dog	Time programmable			
CPU	Processor	Intel® ATOM Z510P 1.1GHz		Intel® ATOM Z530P 1.6GHz	
	FSB	400MHz		533MHz	
	Cache	512KB L2		512KB L2	
	Chipset	Intel® US15WP		Intel® US15WP	
Graphic	Controller	GMA500 integrated in Intel® US15WP			
	Memory	Shared – 1MB, 4MB, 8MB system selectable			
System memory	Type	DDR2 PC5300			
	Size	512 MB, 1 GB, 2 GB			
	Socket	1 x SODIMM module			
Serial interfaces	Type	1 x RS232 (DB9M)			
	UART	16550 compatible (FIFO 16 byte)			
	Transfer rate	115Kbps max			
	Optoisolation	No			
	Optional (note 2)	1 x RS-232/422/485 (DB15M)			
	UART	16550 compatible (FIFO 16 byte)			
	Transfer rate	115Kbps max			
	Optoisolation	No / Yes			
Ethernet interfaces	Type	1 x 10/100Mbps (RJ45), 1 x 10/100/1000Mbps (RJ45)			
	Controller	Intel 8255QM - Intel 82574L			
USB interfaces	Type	2 x USB 2.0 (rear, TYPE-A, host port), 1 x USB 2.0 (front, TYPE-A, host port, protected), optional 3 x USB 2.0 (rear, TYPE-A, host port)			
	Transfer rate	Up to 480Mbit/s (high speed)			
Compact Flash slots	Type	1 x Type II (external access), 1 x Type I (internal access optional)			
Mass storage interfaces	Parallel	1 x ATA/66 Master/Slave			
Expansion slots	Type	2 x MiniPCI			
Battery	Type	Coin (CR2032 3V)			
	Removable	Yes			
	Lifetime	5 years			
Buttons, leds and keys	Reset buttons	System / Watch-dog			
	LEDs	Power			
Electrical characteristics					
Power supply	Type	AT, Integrated on board, auto ranging			
	Input voltage	18÷36 VDC			
	Power consumption	23W@12,1"; 25W@15,0"; 27W@17,0" (ATOM 1.6GHz T/S 1GB RAM)			
Mechanical characteristics					
Case	Type	Panel mount			
	Material	Steel, zinc galvanization			
Front panel (note 1)	Protection	IP65		IP66K	
	Construction	Aluminium alloy frame with polycarbonate foil		Stainless Steel True Flat with polyester foil	
	Color	PANTONE 429C		RAL 7035	
Measurements mm	12,1"	Aluminium (W x H x D)	Stainless Steel (W x H x D)	Cutout (W x H)	Weight (Kg)
	15"	335 x 270 x 54	335 x 270 x 54	315 x 250	4,2
	17"	390 x 315 x 54	398 x 315 x 54	370 x 295	5,0
	17"	455 x 355 x 58	455 x 355 x 58	435 x 335	6,3
	19"	490 x 388 x 68	490 x 388 x 68	470 x 368	7,0
Environmental characteristics					
Temperature	Operation	0° ÷ +50°C without HDD, 0° ÷ +45°C with 17", 0° ÷ +45°C with HDD			
	Storage	-20° ÷ +60°C			
Humidity	Operation/Storage	80% (non-condensing)			
Warranty & Approvals					
CE	Emission	Conforms to EN 55022 Information technology equipment – Radio disturbance characteristics			
		Conforms to EN 61000-3-2 – Limits for harmonic current emissions			
		Conforms to EN 61000-3-3 – Limits of voltage fluctuation and flicker			
	Immunity	Conforms to EN 55024 Information technology equipment – Immunity characteristics			
	Safety	Conforms to EN 60950-1 – Information technology equipment – Safety			
Warranty	Management	By ASEM headquarters			
	Standard	12 months			
	Extended	18 / 24 / 36 months (optional)			
Notes					
1	With stainless steel front panel, touchscreen is mandatory and have no USB port on the front				
2	RS-232/422/485 standard and optoisolated can be installed one alternative to the other				

OT1200

OT1200 is the embedded fanless panel PC based on Intel® with 915 GME chipset, 900 GMA video controller and Celeron M ULV processor up to 1GHz. Available in a wide range of LCD displays from 8.4" to 19", also touchscreen, with aluminium or stainless steel front panels.

The expandability is provided by a PCI slot, where ASEM NETCore® X communication cards can be installed. The integration with Premium HMI 4 software platform and CODESYS SoftPLC allows the creation of visualization and control applications.



FANLESS



DISKLESS



8,4" 10,4" 12,1" 15" 17" 19"



Alu Inox



Res 5 GFG



CelM



512MB 1GB 2GB



PC/104Plus PCI



24VDC UPS



CE5 CE6 WES XP Pro

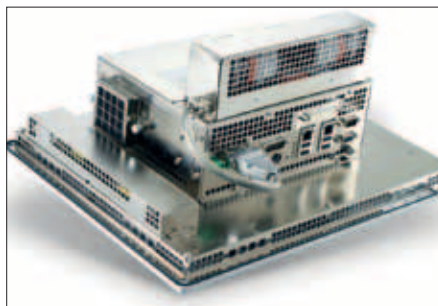


Photo 1: Stainless Steel True Flat Front Panel


Photo 2: Communication ports and UPS

Photo 3: Slot PCI

FEATURES PLUS

- ✓ 1 PCI/PC104PLUS SLOT FOR ADDITIONAL CARDS
- ✓ OPTIONAL TRUEFLAT FRONT PANEL IN STAINLESS STEEL
- ✓ OPTIONAL REDUCED DEPTH REAR MECHANIC (OT1200-SL)
- ✓ OPTIONAL UPS
- ✓ 4 OPTIONAL PROGRAMMABLE KEYS
- ✓ DATA STORAGE ON SSD/CF/HDD

HMI1200
OT1200+Premium HMI
See p.14

System characteristics					
Display	Size	8,4" 10,4" 12,1" 12,1" 15" 17" 19"			
	Type	Color LCD TFT Color LCD TFT Color LCD TFT Color LCD TFT Color LCD TFT Color LCD TFT Color LCD TFT			
	Resolution	800x600 (SVGA) 800 x 600 (SVGA) 800x600 (SVGA) 1024x768 (XGA) 1024x768 (XGA) 1280 x 1024 (SXGA) 1280 x 1024 (SXGA)			
	Colors	16M 256K 16M 16M 16M 16M 16M			
	Pixel pitch	0,213x0,213mm 0,264 x 0,264mm 0,307 x 0,307mm 0,240x0,240mm 0,297 x 0,297mm 0,264 x 0,264mm 0,294 x 0,294mm			
	Backlight	LED 2 CCFL LED LED LED LED 2 CCFL 2 CCFL			
	Luminance	450cd/m ² 400cd/m ² 500cd/m ² 600cd/m ² 450cd/m ² 250cd/m ² 300cd/m ²			
	Contrast	600:1 450:1 800:1 800:1 700:1 1000:1 1000:1			
	Viewing angle L:R/U:L	80°: 80°/80°: 60° 120° H, 100° V 80°: 80°/80°: 60° 80°: 80°/70°: 70° 80°: 80°/70°: 70° 80°: 80°/80°: 80° 80°: 80°/80°: 80°			
Lifetime (min.)	50.000h 50.000h 100.000h 50.000h 35.000h 50.000h 50.000h				
Touchscreen	Technology	5 wires – analog - resistive			
Optional	Light transmission	80% ±2%			
	Lifetime	35min activations			
	Linearity deviation	< 1 %			
	Interface	Serial			
	Glass Film Glass	Optional for 12", 15" and 17"			
Motherboard	Model	All-in-one, ASEM MB951/B			
	HW monitor	Voltages and temperatures monitor			
	Watch-dog	Time programmable			
CPU	Processor	Intel® Celeron M 600MHz			
	FSB	400MHz			
	Cache	512KB L2			
	Socket	Socket 478 uFC-BGA			
	Chipset	Intel® 915GME + ICH6M			
Graphic	Controller	GMA900 integrated in Intel® 915GME			
	Memory	Shared - 64MB±128MB system selectable			
System memory	Type	DDR2 PC5300			
	Size	512 MB, 1 GB, 2 GB			
	Socket	1 x SODIMM module			
Video interfaces	Type	1 x VGA (DB15F)			
Serial interfaces	Type	1 x RS232 (DB9M)			
	UART	16550 compatible (FIFO 16 byte)			
	Transfer rate	115kbps max			
	Optoisolation	No			
Optional (note 1)	Type	1 x RS-232/422/485 (DB15M)			
	UART	16550 compatible (FIFO 16 byte)			
	Transfer rate	115Kbps max			
	Optoisolation	No / Yes			
Parallel interfaces	Type	1 x SPP, EPP, ECP bidirectional			
	Optional (note 3)	DB25M			
PS/2 interfaces	Type	1 x PS/2 Keyboard / Mouse			
Ethernet interfaces	Type	2 x 10/100/1000Mbps (RJ45)			
	Controller	Intel 82574L			
USB interfaces	Type	4 x USB 2.0 (rear, TYPE-A, host port, protected), 1 x USB 2.0 (front, TYPE-A, host port, protected), 1 x USB 2.0 (internal, pin strip, host port, protected)			
	Transfer rate	Up to 480Mbit/s (high speed)			
Compact Flash slots	Type	1 x Type I (internal access), 1 x Type II (external access)			
Mass storage interfaces	Serial	1 x SATA 1 1,5Gb/s			
	Parallel	1 x ATA/100 Master/Slave (dedicated for CF Slots)			
Expansion slots	Type	1 x PC/104 Plus or 1 x PCI half size			
Battery	Type	½AA Lithium (3.6V)			
	Removable	Yes			
	Lifetime	20 years			
Buttons, leds and keys	Reset buttons	Yes			
	LEDs	Front: Power / Rear: power, HDD, system fail, watch-dog			
	Function keys	4 programmable on front panel (optional), only for aluminum version excluded 19"			
Electrical characteristics					
Power supply	Type	AT, Integrated on board, auto ranging			
	Input voltage	18±36 VDC			
	Power consumption	39W @ OT1200 15" Celeron M 600MHz, T/S, 512MB RAM, CF 512MB, No add-on			
	UPS	Optional			
Mechanical characteristics					
Case	Type	Panel mount			
	Material	Steel, nickel treatment			
Front panel (note 2)	Protection	IP65 IP66K			
	Construction	Aluminum alloy with polycarbonate foil Stainless Steel True Flat with polyester foil			
	Color	PANTONE 429C RAL 7035			
Measurements mm (note 3)		Aluminium (W x H x D)	Stainless Steel (W x H x D)	Cutout (W x H)	Weight (Kg)
	8,4"	250 x 210 x 103	-	230 x 190	3,1
	10,4"	300 x 245 x 103	-	280 x 225	4,0
	12,1"	335 x 270 x 103	335 x 270 x 103	315 x 250	4,6
	15"	390 x 315 x 103	398 x 315 x 103	370 x 295	5,3
	17"	455 x 355 x 103	455 x 355 x 103	435 x 335	6,7
	19"	490 x 388 x 113	490 x 388 x 113	470 x 368	7,3
	Environmental characteristics				
Temperature	Operation	0° ÷ +50°C without HDD, 0° ÷ +45°C with 17", 0° ÷ +45°C with HDD			
	Storage				
Humidity	Operation/Storage	80% (non-condensing)			
Warranty & Approvals					
CE	Emission	Conforms to EN 55022 Information technology equipment – Radio disturbance characteristics Conforms to EN 61000-3-2 – Limits for harmonic current emissions Conforms to EN 61000-3-3 – Limits of voltage fluctuation and flicker			
	Immunity	Conforms to EN 55024 Information technology equipment – Immunity characteristics Conforms to EN 60950-1 – Information technology equipment – Safety			
UL	Marks	 Conforms to UL-60950-1 – Information technology Equipment - Safety			
	Safety Certificate N°	2090306-E315863			
Warranty	Management	By ASEM headquarters			
	Standard	12 months			
	Extended	18 / 24 / 36 months (optional)			
Notes					
1	RS-232/422/485 standard and optoisolated can be installed one alternative to the other				
2	With stainless steel front panel, touchscreen is mandatory and have no USB port on the front				
3	SL (SLIM) version is 86.5mm depth – parallel interface not available				

FT500 FT500-TE

The FT500 fanless systems, provided with elegant aluminium front panels, use the Intel® Celeron M ULV processors and are available with 12.1", 15" and 17" LCD display, also touchscreen. The expandability is provided by different PCI/PCle slot configurations, where ASEM NETcore® X communication cards can be installed. The integration with the Premium HMI 4 software platform and CODESYS SoftPLC allows the creation of visualization and control applications.



FANLESS **DISKLESS**

12,1" 15" 17"

Alu

Res 5 GFG

CelM

512MB 1GB 2GB

PCI PCle

24VDC 220VAC

WES XP Pro

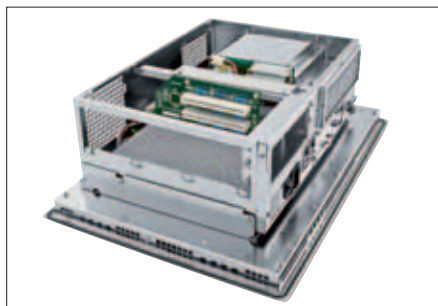


Photo 1: Version without the keyboard

Photo 2: 2 PCI/PCle slots in the H3 version

Photo 3: Rear optical drives

FEATURES PLUS

- ✓ INTEL® CELERON M 373 ULV 1GHZ
- ✓ VERSION WITH EXPANDED KEYBOARD (FT500-TE)
- ✓ H3 VERSION FOR PCI/PCIE EXPANSIONS
- ✓ OPTIONAL FRONT OR REAR DVD/FDD

System characteristics					
Display	Size	12,1"	15"	17"	
	Type	Color LCD TFT	Color LCD TFT	Color LCD TFT	
Touchscreen	Resolution	800 x 600 (SVGA)	1024 x 768 (XGA)	1280 x 1024 (SXGA)	
	Colors	256K	16M	16M	
	Pixel pitch	0,307 x 0,307mm	0,297 x 0,297mm	0,264 x 0,264mm	
	Backlight	CCFL 2 lamps	CCFL 4 lamps	CCFL 2 lamps	
	Luminance	400cd/m ²	450cd/m ²	300cd/m ²	
	Contrast	500:1	400:1	1000:1	
	Viewing angle (typ.)	120° H, 100° V	160° H, 140° V	160° H, 160° V	
	Lifetime (min.)	60000h	50000h	50000h	
	Motherboard	Technology	5 wires – analog - resistive		
		Light transmission	80% ±2%		
Lifetime		35mln activations			
Linearity deviation		< 1 %			
Interface		Serial			
CPU	Glass Film Glass	Optional			
	Model	All-in-one, ASEM MB921			
Graphic	HW monitor	Voltages and temperature monitor			
	Watch-dog	Time programmable			
System memory	Processor	Intel® Celeron M 373 ULV 1GHz			
	FSB	400MHz			
Video interfaces	Cache	512KB L2			
	Socket	Socket 478 uFC-BGA			
Serial interfaces	Chipset	Intel® 915GME + ICH6M			
	Controller	GMA900 integrated in Intel® 915GME			
Optional (note 1)	Memory	Shared - 64MB±128MB system selectable			
	Type	DDR2 PC5300			
Parallel interfaces	Size	512 MB, 1 GB, 2 GB			
	Socket	2 x SODIMM module			
PS/2 interfaces	Type	1 x VGA (DB15F)			
	Type	2 x RS232 (DB9M)			
Ethernet interfaces	UART	16550 compatible (FIFO 16 byte)			
	Transfer rate	115Kbps max			
Alternative	Optoisolation	No			
	Type	1 x RS-232/422/485 (DB15M)			
USB interfaces	UART	16550 compatible (FIFO 16 byte)			
	Transfer rate	115Kbps max			
Compact Flash slots	Optoisolation	No / Yes			
	Type	1 x SPP, EPP, ECP bidirectional			
Mass storage interfaces	Connection	DB25M			
	Type	1 x PS/2 Keyboard, 1 x PS/2 Mouse			
Optical device interfaces	Type	2 x 10/100Mbps (RJ45)			
	Controller	Intel 82551QM, Intel 82562EZ			
Expansion slots	Alternative	1 x 10/100Mbps (RJ45), 1 x 10/100/1000Mbps (RJ45)			
	Type	Intel 82551QM, Intel 82573L			
Battery	Type	4 x USB 2.0 (rear, TYPE-A, host port, protected), 2 x USB 2.0 (front, TYPE-A, host port, protected), 2 x USB 2.0 (internal, pin strip, host port, protected)			
	Transfer rate	Up to 480Mbit/s (high speed)			
Buttons, leds and keys	Type	1 x Type II (external access)			
	Serial	2 x SATA 1 1,5Gb/s			
Electrical characteristics	Parallel	1 x ATA/100 Master/Slave (dedicated for CF Slots)			
	Type		H3 / H1-TE / H3-TE 1 x FDD, 1 x DVD-RW		
Mechanical characteristics	Type			H3 / H3-TE 2 x PCI half size 1 x PCI, 1 x PCI-e x1 half size on riser card	
	alternative				
Power supply	Type	½AA Lithium (3.6V)			
	Removable	Yes			
Environmental characteristics	Lifetime	20 years			
	Reset button	System / Watch-dog			
Warranty & Approvals	LEDs	Power, HDD activity, LAN, Alarm fans/temperature			
	Type	Auto ranging			
Mechanical characteristics	Input voltage	110±230VAC 140W			
	Power consumption	18-36 VDC 140W (optional) 40W @ FT500 H1, 15", T/S, Celeron M 1GHz, 1GB RAM, CF			
Case	Type	Panel mount			
	Material	Steel, nickel treatment			
Front panel	Protection	IP65			
	Construction	Aluminum with polycarbonate foil			
Keyboard module	Color	Polycarbonate: Pantone 429C			
	Type	Membrane, alphanumeric			
Measurements	TE version	US-International			
	Function keys	F1-F12, directions and control keys			
Dimensions (W x H x D)	mm				
Cutout (W x H)	Weight (Kg)				
Weight (Kg)	FT500-TE				
Enviromental characteristics	H1	12,1"	360 x 400 x 84	335 x 380	9,0
		15"	425 x 440 x 84	405 x 420	11,0
Temperature		17"	455 x 485 x 86	435 x 465	13,0
	H3	12,1"	360 x 400 x 115	335 x 380	10,5
Humidity		15"	425 x 440 x 115	405 x 420	12,0
		17"	455 x 485 x 115	435 x 465	14,0
Warranty & Approvals	Operation	0° ÷ +50°C without HDD, 0° ÷ +45°C with HDD			
	Storage	-20° ÷ +60°C			
Warranty & Approvals	Operation/Storage	80% (non-condensing)			
	Emission	Conforms to EN 55022 Information technology equipment – Radio disturbance characteristics Conforms to EN 61000-3-2 – Limits for harmonic current emissions Conforms to EN 61000-3-3 – Limits of voltage fluctuation and flicker Conforms to EN 55024 Information technology equipment – Immunity characteristics Conforms to EN 60950-1 – Information technology equipment – Safety			
Warranty & Approvals	Immunity				
	Safety				
Notes	Management	By ASEM headquarters			
	Standard	12 months			
Notes	Extended	18 / 24 / 36 months (optional)			
	1	RS-232/422/485 standard and optoisolated and parallel port can be installed one alternative to the others			

PANEL PC

Fanless

FT550 FT550-TE

FT550 is a fanless panel PC, provided with an elegant front frame in aluminium, based on the ASEM 1021 motherboard that supports Intel® Core® 2 Duo Ultra Low Voltage processors with 65 nanometer technology. Available with 12.1", 15", 17" and 19" LCD display, also touchscreen, the FT550 systems ensure high performance, low power and high heat dissipation. The expandability is provided by different PCI/PCIe slot configurations, where ASEM NETcore® X communication cards can be installed. The integration with the Premium HMI 4 software platform and CODESYS SoftPLC allows the creation of visualization and control applications.



FANLESS



DISKLESS

12,1" 15" 17" 19"

Alu Inox

Res 5 GFG

C2D

1GB 2GB 4GB

PCI PCIe

24VDC 220VAC

WES XP Pro W7

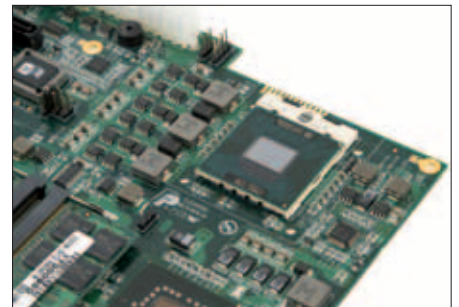
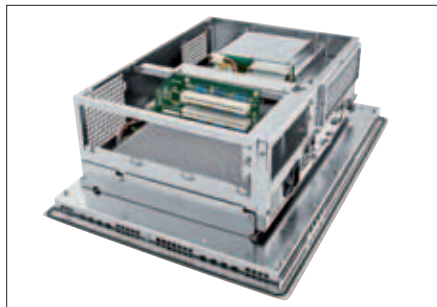


Photo 1: Version without the keyboard

Photo 2: 2 PCI/PCIe slots in the H3 version

Photo 3: Intel® Core 2 Duo ULV microprocessor and 965GME chipset

FEATURES PLUS

- ✓ INTEL® CORE 2 DUO ULV U7500 1.06GHZ
- ✓ INTEL® 965GME CHIPSET AND INTEL® GMA X3100 GRAPHIC ACCELERATOR
- ✓ VERSION WITH EXPANDED KEYBOARD (FT550-TE)
- ✓ H3 VERSION FOR PCI/PCIe EXPANSIONS
- ✓ OPTIONAL FRONT OR REAR DVD/FDD
- ✓ OPTIONAL TRUEFLAT FRONT PANEL IN STAINLESS STEEL
- ✓ FT550 ALSO WITH 19" FRONT PANEL

System characteristics										
Display	Size	12.1"	12.1" XGA	15"	17"	19"				
	Type	Color LCD TFT	Color LCD TFT	Color LCD TFT	Color LCD TFT	Color LCD TFT				
Touchscreen	Resolution	800 x 600 (SVGA)	1024x768 (XGA)	1024 x 768 (XGA)	1280 x 1024 (SXGA)	1280 x 1024 (SXGA)				
	Colors	16M	16.2M	16M	16M	16M				
	Pixel pitch	0,307 x 0,307mm	0,240x0,240mm	0,297 x 0,297mm	0,264 x 0,264mm	0,294 x 0,294mm				
	Backlight	LED	LED	LED	CCFL 2 lamps	CCFL 2 lamps				
	Luminance	500cd/m ²	600cd/m ²	450cd/m ²	300cd/m ²	300cd/m ²				
	Contrast	800:1	700:1	700:1	1000:1	1000:1				
	Viewing angle L:R/U:L	80°: 80°/80°: 60°	80°: 80°/70°: 70°	80°: 80°/70°: 70°	160° H, 160° V	160° H, 160° V				
	Lifetime (min.)	100.000h	50.000h	35.000h	50000h	-				
	Motherboard	Technology	5 wires – analog - resistive							
		Light transmission	80% ±2%							
Lifetime		35mln activations								
Linearity deviation		< 1 %								
Interface		Serial								
CPU	Glass Film Glass	Optional								
	Model	All-in-one, ASEM MB1021/GA								
	HW monitor	Voltages and temperature monitor								
Graphic	Watch-dog	Time programmable								
	Processor	Intel® Core 2 Duo ULV U7500 1,06GHz								
System memory	FSB	533MHz								
	Cache	2MB L2								
Video interfaces	Socket	Soldered on board								
	Chipset	Intel® 965GME + ICH8EM								
Serial interfaces	Controller	GMA X3100 integrated in Intel® 965GME								
	Memory	Shared – up to 256MB system selectable								
Optional (note 1)	Type	1 x RS-232/422/485 (DB15M)								
	UART	16550 compatible (FIFO 16 byte)								
Parallel interfaces	Transfer rate	115Kbps max								
	Optoisolation	No / Yes								
PS/2 interfaces	Type	1 x SPP, EPP, ECP bidirectional								
	Connection	DB25M								
Ethernet interfaces	Type	1 x PS/2 Keyboard, 1 x PS/2 Mouse								
	Controller	2 x 10/100/1000Mbps (RJ45)								
USB interfaces	Type	Intel 82566MM, Intel 82574L								
	Transfer rate	4 x USB 2.0 (rear, TYPE-A, host port, protected), 2 x USB 2.0 (front, TYPE-A, host port, protected), 2 x USB 2.0 (internal pin strip, host port, protected)								
Compact Flash slots	Type	Up to 480Mbit/s (high speed)								
	Parallel	1 x Type II (external access)								
Mass storage interfaces	Serial	3 x SATA 2 3Gb/s								
	Parallel	1 x ATA/100 Master/Slave (dedicated for CF Slot)								
Optical device interfaces	Type	H1		H3 / H1-TE / H3-TE						
		-		1 x FDD, 1 x DVD-RW						
Expansion slots	Type	H1 / H1-TE		H3 / H3-TE						
	<i>alternative</i>	-		2 x PCI half size		1 x PCI, 1 x PCI-e x4 half size on riser card				
Battery	Type	½AA Lithium (3.6V)								
	Removable	Yes								
Buttons, leds and keys	Lifetime	20 years								
	Reset button	Yes								
	LEDs	Power, HDD activity, LAN, Alarm fans/temperature								
Electrical characteristics										
Power supply	Type	Auto ranging								
	Input voltage	110÷230VAC 140W								
Mechanical characteristics	Power consumption	18÷36 VDC 140W (optional)								
		45W @ FT550 H1, 15", T/S, Core 2 Duo ULV 1.06GHz, 1GB RAM, CF								
Case	Type	Panel mount								
	Material	Steel, nickel treatment								
Front panel (note 2)	Protection	IP65			IP66K					
	Construction	Aluminum with polycarbonate foil			Stainless Steel True Flat with polyester foil					
Keyboard module TE version	Color	PANTONE 429C			RAL 7035					
	Type	Membrane, alphanumeric								
Measurements mm	Layout	US-International								
	Function keys	F1-F12, directions and control keys								
Dimensions (W x H x D)	H1	FT550			FT550-TE			Stainless Steel		
		355 x 270 x 81	360 x 400 x 84	-	335 x 250	380 x 335	FT550	FT550-TE		
	15"	425 x 305 x 81	425 x 440 x 84	-	405 x 285	420 x 405	6,0	9,0		
	17"	455 x 355 x 81	455 x 485 x 86	455 x 355 x 81	435 x 335	465 x 435	7,9	11,0		
	19"	490 x 388 x 91	-	490 x 388 x 91	470 x 368	-	8,9	13,0		
	H3	12.1"	355 x 270 x 137	360 x 400 x 115	-	335 x 250	380 x 335	7,6	10,5	
		15"	425 x 305 x 137	425 x 440 x 115	-	405 x 285	420 x 405	9,5	12,0	
		17"	455 x 355 x 137	455 x 485 x 115	455 x 355 x 137	435 x 335	465 x 435	10,5	14,0	
		19"	490 x 388 x 147	-	490 x 388 x 147	470 x 368	-	11,5	-	
	Enviromental characteristics	Temperature	0° ÷ +50°C without HDD, 0° ÷ +45°C with HDD							
Humidity		80% (non-condensing)								
Warranty & Approvals	Operation/Storage	-20° ÷ +60°C								
CE	Emission	Conforms to EN 55022 Information technology equipment – Radio disturbance characteristics								
	Immunity	Conforms to EN 61000-3-2 – Limits for harmonic current emissions								
UL	Safety	Conforms to EN 61000-3-3 – Limits of voltage fluctuation and flicker								
	Marks	Conforms to EN 55024 Information technology equipment – Immunity characteristics								
Warranty	Safety Certificate N°	Conforms to EN 60950-1 – Information technology equipment – Safety								
	Management Standard	By ASEM headquarters								
Notes	Extended	12 months								
		18 / 24 / 36 months (optional)								

1 RS-232/422/485 standard and optoisolated and parallel port can be installed one alternative to the others
 2 With stainless steel front panel, touchscreen is mandatory and have no USB port on the front

WS500 WS500-TE

The WS500 systems use Intel® Celeron M ULV processors and are provided with different mechanical solutions: plastic front panel with or without expanded keyboard, side modules for buttons, lights or aiming systems. Available with 12.1", 15" and 17" LCD display, also touchscreen. The expandability is provided by different PCI/PCle slot configurations, where ASEM NETcore® X communication cards can be installed. The integration with Premium HMI 4 software platform and CODESYS SoftPLC allows the creation of visualization and control applications.



FANLESS **DISKLESS**

12,1" 15" 17" Plastic Res 5 GFG CeIM
512MB 1GB 2GB PCI PCle 24VDC 220VAC WES XP Pro

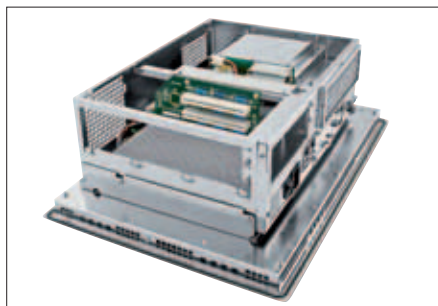


Photo 1: Version without the keyboard

Photo 2: 2 PCI/PCle slots in the H3 version

Photo 3: Side modules with trackball/touchpad

FEATURES PLUS

- ✓ VERSION WITH EXPANDED KEYBOARD (WS500-TE)
- ✓ SIDE MODULES WITH BUTTONS PREDISPOSITION, TRACKBALL, TOUCHPAD OR NEUTRAL
- ✓ H3 VERSION FOR PCI/PCIE EXPANSIONS
- ✓ OPTIONAL FRONT OR REAR DVD/FDD
- ✓ FRAMELESS VERSION AVAILABLE (WS500-FL)

System characteristics									
Display	Size	12.1"	15"	17"					
	Type	Color LCD TFT	Color LCD TFT	Color LCD TFT					
Touchscreen	Resolution	800 x 600 (SVGA)	1024 x 768 (XGA)	1280 x 1024 (SXGA)					
	Colors	256K	16M	16M					
	Pixel pitch	0,307 x 0,307mm	0,297 x 0,297mm	0,264 x 0,264mm					
	Backlight	CCFL 2 lamps	CCFL 4 lamps	CCFL 2 lamps					
	Luminance	400cd/m ²	450cd/m ²	300cd/m ²					
	Contrast	500:1	400:1	1000:1					
	Viewing angle (typ.)	120° H, 100° V	160° H, 145° V	160° H, 160° V					
	Lifetime (min.)	60000h	50000h	50000h					
	Technology	Light transmission	80%	2%					
		Lifetime	35mln activations						
Motherboard	Interface	< 1 %							
	Glass Film Glass	Serial	Optional						
CPU	Model	All-in-one, ASEM MB921							
	HW monitor	Voltages and temperatures monitor							
Graphic	Watch-dog	Time programmable							
	Processor	Intel® Celeron M 373 ULV 1GHz							
System memory	FSB	400MHz							
	Cache	512KB L2							
Video interfaces	Socket	Socket 478 uFC-BGA							
	Chipset	Intel® 915GME + ICH6M							
Serial interfaces	Controller	GMA900 integrated in Intel® 915GME							
	Memory	Shared - 64MB±128MB system selectable							
Optional (note 1)	Type	DDR2 PC5300							
	Size	512 MB, 1 GB, 2 GB							
Parallel interfaces	Socket	2 x SODIMM module							
	Type	1 x VGA (DB15F)							
PS/2 interfaces	Type	2 x RS232 (DB9M)							
	Connection	16550 compatible (FIFO 16 byte)							
Ethernet interfaces	Transfer rate	115Kbps max							
	Controller	No							
Alternative	Type	1 x RS-232/422/485 (DB15M)							
	Connection	16550 compatible (FIFO 16 byte)							
USB interfaces	Transfer rate	115Kbps max							
	Controller	No / Yes							
Compact Flash slots	Type	1 x SPP, EPP, ECP bidirectional							
	Connection	DB25M							
Mass storage interfaces	Type	1 x PS/2 Keyboard, 1 x PS/2 Mouse							
	Controller	2 x 10/100Mbps (RJ45)							
Expansion slots	Type	Intel 82559ER							
	Controller	1 x 10/100Mbps (RJ45), 1 x 10/100/1000Mbps (RJ45)							
Battery	Type	Intel 82551QM, Intel 82573L							
	Transfer rate	4 x USB 2.0 (rear, TYPE-A, host port, protected), 2 x USB 2.0 (front, TYPE-A, host port, protected), 2 x USB 2.0 (internal, pin strip, host port, protected)							
Buttons, leds and keys	Type	Up to 480Mbit/s (high speed)							
	LEDs	1 x Type II (external access)							
Electrical characteristics	Serial	2 x SATA 1.5Gb/s							
	Parallel	1 x ATA/100 Master/Slave (dedicated for CF Slots)							
Power supply	Type	H1	H3 / H1-TE / H3-TE						
	Input voltage	-	1 x FDD, 1 x DVD-RW						
Mechanical characteristics	Power consumption	H1 / H1-TE	H3 / H3-TE						
	Power consumption	-	2 x PCI half size						
Case	Type	alternative	1 x PCI, 1 x PCI-e x1 half size on riser card						
	Material	½AA Lithium (3.6V)							
Front panel	Removable	Yes							
	Lifetime	20 years							
Keyboard module	Reset button	Yes							
	LEDs	Power, HDD activity, LAN, Alarm fans/temperature							
TE version	Type	Membrane, alphanumeric							
	Layout	US-International							
Side modules	Function keys	F1-F12, directions and control keys							
	Optional	4 rows x 2 columns	H1 / H3	H1-TE / H3-TE					
Measurements	Emergency	Yes	Yes	Yes					
	Touch pad	No	No	Yes					
mm	Track ball	No	No	Yes					
	empty	Yes	Yes	Yes					
Dimensions (W x H x D)	H1	12.1"	WS500	WS500-TE	WS500	WS500-TE	WS500	WS500-TE	
			360 x 275 x 59	360 x 450 x 59	335 x 250	335 x 425	6,0	10,1	
		15"	430 x 315 x 59	430 x 490 x 59	405 x 286	405 x 465	7,9	12,0	
		17"	430 x 380 x 59	430 x 555 x 59	405 x 351	405 x 530	8,9	14,1	
		H3	12.1"	360 x 275 x 115	360 x 450 x 115	335 x 250	335 x 425	7,6	10,7
				430 x 315 x 115	430 x 490 x 115	405 x 286	405 x 465	9,5	12,6
	15"		430 x 380 x 115	430 x 555 x 115	405 x 351	405 x 530	10,5	14,6	
	Cutout (W x H)		Weight (Kg)	WS500	WS500-TE	WS500	WS500-TE		
				360 x 275 x 59	360 x 450 x 59	335 x 250	335 x 425		
	Cutout (W x H)		Weight (Kg)	430 x 315 x 59	430 x 490 x 59	405 x 286	405 x 465		
		430 x 380 x 59		430 x 555 x 59	405 x 351	405 x 530			
	Enviromental characteristics	Operation	0° ± +50°C without HDD, 0° ÷ +45°C with HDD						
Storage			-20° ÷ +60°C						
Humidity	Operation/Storage	80% (non-condensing)							
Warranty & Approvals	Emission	Conforms to EN 55022 Information technology equipment – Radio disturbance characteristics							
		Conforms to EN 61000-3-2 – Limits for harmonic current emissions							
Warranty	Immunity	Conforms to EN 61000-3-3 – Limits of voltage fluctuation and flicker							
		Conforms to EN 55024 Information technology equipment – Immunity characteristics							
Notes	Safety	Conforms to EN 60950-1 – Information technology equipment – Safety							
Management	Standard	By ASEM headquarters							
		12 months							
Extended	Extended	18 / 24 / 36 months (optional)							

1 RS-232/422/485 standard and optoisolated and parallel port can be installed one alternative to the others

WS550 WS550-TE

WS550 is a fanless panel PC, with front plastic frame, provided with different mechanical solutions, and based on ASEM 1021 motherboard, that also supports Intel® Core® 2 Duo Ultra Low Voltage processors with 65 nanometer technology. Available with 12.1", 15" and 17" LCD display, also touchscreen, the WS550 systems ensure high performance, low power and high heat dissipation. The expandability is provided by different PCI/PCIe slot configurations, where ASEM NETcore® X communication cards can be installed. The integration with the Premium HMI 4 software platform and CODESYS SoftPLC allows the creation of visualization and control applications.

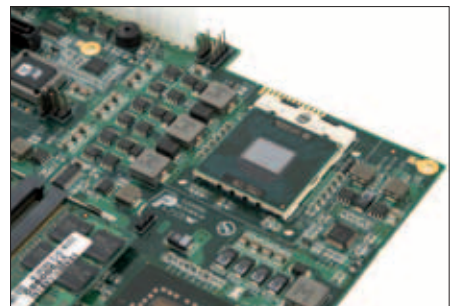
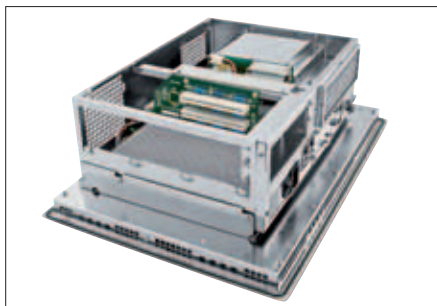


Photo 1: Version without the keyboard


Photo 2: 2 PCI/PCIe slots in the H3 version

Photo 3: Intel® Core 2 Duo ULV

Microprocessor and 965GME chipset

FEATURES PLUS

- ✓ INTEL® CORE 2 DUO ULV U7500 1.06GHZ
- ✓ INTEL® 965GME CHIPSET AND INTEL® GMA X3100 GRAPHIC ACCELERATOR
- ✓ VERSION WITH EXPANDED KEYBOARD (WS550-TE)
- ✓ SIDE MODULES WITH BUTTONS PREDISPOSITION, TRACKBALL, TOUCHPAD OR NEUTRAL
- ✓ H3 VERSION FOR PCI/PCIE EXPANSIONS
- ✓ OPTIONAL FRONT OR REAR DVD/FDD
- ✓ FRAMELESS VERSION AVAILABLE (WS550-FL)

System characteristics								
Display	Size	12.1"	15"					
	Type	Color LCD TFT	Color LCD TFT					
Touchscreen	Resolution	800x600 (SVGA)	1024x768 (XGA)					
	Colors	16M	16M					
	Pixel pitch	0,307 x 0,307mm	0,297 x 0,297mm					
	Backlight	LED	LED					
	Luminance	500cd/m ²	450cd/m ²					
	Contrast	800:1	700:1					
	Viewing angle L:R/U:L	80°: 80°/80°: 60°	80°: 80°/70°: 70°					
	Lifetime (min.)	100.000h	35.000h					
	Technology	5 wires - analog - resistive						
	Light transmission	80% ±2%						
Lifetime	35min activations							
Linearity deviation	< 1 %							
Interface	Serial							
Glass Film Glass	Optional							
Motherboard	Model	All-in-one, ASEM MB1021/GA						
	HW monitor	Voltages and temperatures monitor						
	Watch-dog	Time programmable						
CPU	Processor	Intel® Core 2 Duo ULV U7500 1,06GHz						
	FSB	533MHz						
	Cache	2MB L2						
	Socket	Soldered on board						
	Chipset	Intel® 965GME + ICH8EM						
Graphic	Controller	GMA X3100 integrated in Intel® 965GME						
	Memory	Shared – up to 256MB system selectable						
System memory	Type	DDR2 PC5300						
	Size	1 GB, 2 GB, 4GB						
	Socket	1 x SODIMM module						
Video interfaces	Type	1 x VGA (DB15F - max resolution 2048x1536QXGA 60Hz) , 1 x DVI-D (single link – max resolution 1600x1200 UXGA)						
Serial interfaces	Type	2 x RS232 (DB9M)						
	UART	16550 compatible (FIFO 16 byte)						
	Transfer rate	115Kbps max						
	Optoisolation	No						
Optional (note 1)	Type	1 x RS-232/422/485 (DB15M)						
	UART	16550 compatible (FIFO 16 byte)						
	Transfer rate	115Kbps max						
	Optoisolation	No / Yes						
Parallel interfaces	Type	1 x SPP, EPP, ECP bidirectional						
Optional	Connection	DB25M						
PS/2 interfaces	Type	1 x PS/2 Keyboard, 1 x PS/2 Mouse						
Ethernet interfaces	Type	2 x 10/100/1000Mbps (RJ45)						
	Controller	Intel 82566MM, Intel 82574L						
USB interfaces	Type	4 x USB 2.0 (rear, TYPE-A, host port, protected), 2 x USB 2.0 (front, TYPE-A, host port, protected), 2 x USB 2.0 (internal pin strip, host port, protected)						
	Transfer rate	Up to 480Mbit/s (high speed)						
Compact Flash slots	Type	1 x Type II (external access)						
Mass storage interfaces	Serial	3 x SATA 2 3Gb/s						
	Parallel	1 x ATA/100 Master/Slave (dedicated for CF Slot)						
Optical device interfaces	Type	H1	H3 / H1-TE / H3-TE					
		-	1 x FDD, 1 x DVD-RW					
Expansion slots	Type	H1 / H1-TE	H3 / H3-TE					
	<i>alternative</i>	-	2 x PCI half size					
		-	1 x PCI, 1 x PCI-e x4 half size on riser card					
Battery	Type	½AA Lithium (3.6V)						
	Removable	Yes						
	Lifetime	20 years						
Buttons, leds and keys	Reset buttons	System / Watch-dog						
	LEDs	Power, HDD activity, LAN, Alarm fans/temperature						
Electrical characteristics								
Power supply	Type	Auto ranging						
	Input voltage	110-230VAC 140W						
		18±36 VDC 140W (optional)						
	Power consumption	45W @ WS550 H1, 15", T/S, Core 2 Duo ULV 1.06GHz, 1GB RAM, CF						
Mechanical characteristics								
Case	Type	Panel mount						
	Material	Steel, nickel treatment						
Front panel	Protection	IP65						
	Construction	Plastic with polycarbonate foil						
	Color	Plastic: RAL 7040 (light grey) / Polycarbonate: Pantone 428C						
	Frameless	Optional only for H1, H3						
Keyboard module	Type	Membrane, alphanumeric						
TE version	Layout	US-International						
	Function keys	F1-F12, directions and control keys						
Side modules		H1 / H3	H1-TE / H3-TE					
Optional	4 rows x 2 columns	Yes	Yes					
	Emergency	Yes	Yes					
	Touch pad	No	Yes					
	Track ball	No	Yes					
	empty	No	Yes					
Measurements		Dimensions (W x H x D)		Cutout (W x H)		Weight (Kg)		
	mm		WS550	WS550-TE	WS550	WS550-TE	WS550	WS550-TE
	H1	12,1"	360 x 275 x 59	360 x 450 x 59	335 x 250	335 x 425	6,0	10,1
		15"	430 x 315 x 59	430 x 490 x 59	405 x 286	405 x 465	7,9	12,0
		17"	430 x 380 x 59	430 x 555 x 59	405 x 351	405 x 530	8,9	14,1
	H3	12,1"	360 x 275 x 115	360 x 450 x 115	335 x 250	335 x 425	7,6	10,7
		15"	430 x 315 x 115	430 x 490 x 115	405 x 286	405 x 465	9,5	12,6
		17"	430 x 380 x 115	430 x 555 x 115	405 x 351	405 x 530	10,5	14,6
Environmental characteristics								
Temperature	Operation	0° ÷ +50°C without HDD, 0° ÷ +45°C with HDD						
	Storage	-20° ÷ +60°C						
Humidity	Operation/Storage	80% (non-condensing)						
Warranty & Approvals								
CE	Emission	Conforms to EN 55022 Information technology equipment – Radio disturbance characteristics						
		Conforms to EN 61000-3-2 – Limits for harmonic current emissions						
		Conforms to EN 61000-3-3 – Limits of voltage fluctuation and flicker						
	Immunity	Conforms to EN 55024 Information technology equipment – Immunity characteristics						
	Safety	Conforms to EN 60950-1 – Information technology equipment – Safety						
UL	Marks							
	Safety	Conforms to UL-60950-1 – Information technology Equipment - Safety						
	Certificate N°	2012 0524-E315863						
Warranty	Management	By ASEM headquarters						
	Standard	12 months						
	Extended	18 / 24 / 36 months (optional)						
Notes								
1	RS-232/422/485 standard and optoisolated and parallel port can be installed one alternative to the others							