HT2000-TF
fanless

Industrial Automation - Products & Configurations

HT2000-TF/S0 BASIC SYSTEM

Basic Configuration	LCD TFT 10,4" 4:3 ▪ Touch-Screen 10,4" ▪ Intel® Atom™ dual core D2550 1,86 GHz ▪ 1GB RAM ▪ Aluminum TrueFlat front panel ▪ fanless ▪ without additional monitor output ▪ isolated 24V DC power supply ▪ 12 months warranty

HT2000-TF/S1 BASIC SYSTEM

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	S0	S1	
PROCESSOR	●	●	Intel® Atom™ dual core D2550 ▪ 1,86 GHz, 1MB L2 cache ▪ Intel® Hyper-Threading ▪ Soldered on-board

DISPLAY & TOUCH-SCREEN	S0	S1	
	●	●	10,4" LCD TFT 4:3 ▪ SVGA, 800x600, 16M colors ▪ backlight LED , 400 cd/m2 ▪ Viewing angle L:R/U:L (tup): 80°:80°/60°:80°
			10,4" Touch-Screen ▪ 5 wires resistive technology ▪ Controller integrated on board
	●	●	12,1" LCD TFT 4:3 ▪ SVGA, 800x600, 16M colors ▪ backlight LED, 500 cd/m2 ▪ Viewing angle L:R/U:L (typ): 65°:65°/45°:65°
			12,1" Touch-Screen ▪ 5 wires resistive technology ▪ Controller integrated on board
	●	●	12,1" LCD TFT 4:3 ▪ XGA, 1024x768, 16M colors ▪ backlight LED, 600 cd/m2 ▪ Viewing angle L:R/U:L (typ): 80°:80°/70°:70°
			12,1" Touch-Screen ▪ 5 wires resistive technology ▪ Controller integrated on board
	●	●	15" LCD TFT 4:3 ▪ XGA, 1024x768, 16M colors ▪ backlight LED, 450 cd/m2 ▪ Viewing angle: L:R/U:L (typ): 80°:80°/70°:70°
			15" Touch-Screen ▪ 5 wires resistive technology ▪ Controller integrated on board
	●	●	15,6" LCD TFT 16:9 ▪ 1366x768 (HD), 16M colors ▪ backlight LED, 300 cd/m2 ▪ Viewing angle L:R/U:L (typ): 85°:85°/80°:80°
			15,6" Touch-Screen ▪ 5 wires resistive technology ▪ Controller integrated on board
	●	●	17" LCD TFT 5:4 ▪ SXGA, 1280x1024, 16M colors ▪ backlight LED, 350 cd/m2 ▪ Viewing angle L:R/U:L (typ): 85°:85°/80°:80°
			17" Touch-Screen ▪ 5 wires resistive technology ▪ Controller integrated on board
	●	●	18,5" LCD TFT 16:9 ▪ 1366x768 (HD), 16M colors ▪ backlight LED, 300 cd/m2 ▪ Viewing angle L+R/U+L (typ): 170°/160°
			18,5" Touch-Screen ▪ 5 wires resistive technology ▪ Controller integrated on board
	●	●	19" LCD TFT 5:4 ▪ SXGA 1280x1024, 16M colors ▪ backlight LED, 350 cd/m2 ▪ Viewing angle L:R/U:L (typ): 85°:85°/80°:80°
			19" Touch-Screen ▪ 5 wires resistive technology ▪ Controller integrated on board
	●	●	21,5" LCD TFT 16:9 ▪ 1920x1080 (FHD), 16M colors ▪ backlight LED, 300 cd/m2 ▪ Viewing angle L+R/U+L (typ): 178°/178°
			21,5" Touch-Screen ▪ 5 wires resistive technology ▪ Controller integrated on board

RAM MEMORY			
	●	●	1 GB ▪ 1 module SODIMM DDR3
	●	●	2 GB ▪ 1 module SODIMM DDR3
	●	●	4 GB ▪ 1 module SODIMM DDR3

INTERNAL PSU			
	●	●	Without UPS (uninterruptible power supply)
	●	●	With UPS (uninterruptible power supply) ▪ integrated in power supply section ▪ batteries kit not included **> note 1**

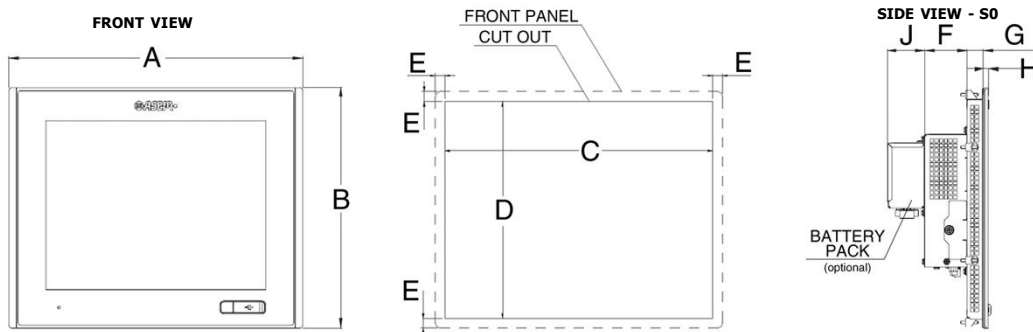| **EXPANSION SLOTS**			
	●		No expansion slots
		●	1 x PCI half size ▪ on riser card ▪ expansion board with max consumption 3W
		●	1 x PCIe x1 format (Generation 1 2.5Gbit/s) half size ▪ on riser card ▪ expansion board with max consumption 3W

OPTIONS

	S0	S1	
ADDITIONAL MONITOR OUTPUT	●	●	VGA (DB15F) video interface for additional external monitor ▪ Max resolution 2048x1536 SXGA **> note 2**
	●	●	DVI-I (Dual Link) video interface for additional external monitor ▪ Max resolution 2048x1536 SXGA **> note 2**
SSD	●		SSD 2,5" SATA installation kit (SSD not included)
		●	SSD 2,5" SATA installation kit (SSD not included)
	●	●	SSD 2,5" SATA 2, 3Gb/s (Solid State Disk), SLC/MLC
HDD	●		HDD 2,5" SATA installation kit (HDD not included) ▪ with shock absorber
		●	HDD 2,5" SATA installation kit (HDD not included) ▪ with shock absorber
	●	●	HDD 250GB 2,5" ▪ SATA 2, 3Gb/s ▪ 5400rpm, 8 MB buffer ▪ 24x7
	●	●	HDD 320GB 2,5" ▪ SATA 2, 3Gb/s ▪ 5400rpm, 8 MB buffer
	●	●	HDD 500GB 2,5" ▪ SATA 2, 3Gb/s ▪ 5400rpm, 8 MB buffer
CFAST	●	●	CFast SATA 2
	●	●	Second slot for CFast SATA 2 (not bootable)
COMMUNICATION PORTS	●	●	1 x RS232/422/485 (DB15M) ▪ 1 x USB 2.0 **> note 3**
	●	●	1 x RS232/422/485 (DB15M) optoisolated ▪ 1 x USB 2.0 **> note 3**
USP BATTERIES KIT	●	●	Batteries kit for rear systems mounting ▪ cables included
	●	●	Batteries kit for detached mounting (wall mount) ▪ 100cm cable included
POWER SUPPLY	●	●	External DIN-guide power supply ▪ Input Voltage 230V AC ▪ Output Voltage 24V DC ▪ Nominal power 60W
I/O BOARDS	●	●	8+8 channels DIN/DOUT optoisolated MiniPCI board ▪ For technical details and supported drivers see pg.169 **> note 4**
FIELDBUS	●	●	NETcore® X MiniAPCI fieldbus module ▪ For technical details and supported drivers see pg.171 **> note 4**
WARRANTY EXTENSION	●	●	Warranty extension to 18 months on basic system and its variants
	●	●	Warranty extension to 24 months on basic system and its variants
	●	●	Warranty extension to 36 months on basic system and its variants

NOTES

1: UPS module is supported by Microsoft Win32 operating systems and not by Microsoft WinCE operating systems
2: Factory option: 'additional monitor output' must to be requested during order phase, can not be installed afterwards.
3: Options can not be installed together
4: Boards with MiniPCI / MiniAPCI bus can not be installed togheter

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NEW ASEM STANDARDS

TECHNICAL SPECIFICATIONS

Case	Panel mount
Overall dimensions & weight	See details on the related section below
Front panel	Aluminum TrueFlat • Polycarbonate Pantone Cool Grey 4C color • ASEM logo serigraph printed
Touchscreen	5 wires resistive technology • on board controller
Frontal protection	IP65
Power supply	Isolated • Input voltage: 18÷32V DC
UPS (optional)	12V DC UPS (Uninterruptible Power Supply) battery backup system
	Batteries module (optional): Pb, 12V/6A max, 2500mA/h • Charge time 3h@25°C • Discharge time 15'@25°C • Lifetime 10years@25°C
Motherboard	"All-In-One" type • ASEM 953
Watch dog	Time programmable
Intel platform — Processor	Intel® Atom™ dual core D2550 (1,86GHz)
Chipset	Intel® NM10
Operating System — O.S. certified by ASEM	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 • Windows XPe SP2
	Other operating systems, such as Linux, VxWorks, QNX, etc., have not been certified by ASEM but they are reasonably supported by the Intel platform after verification of compatibility
O.S. not supported by Intel platform	Microsoft Win64 • Microsoft Windows 8 / 2000 / 98 / NT • Microsoft Windows CE 5 / 6
Video controller	Integrated in Intel® Atom™ microprocessor • 640MHz • LVDS 8bit/color digital interface
Video RAM (shared)	Dynamic Video Memory Technology • Memory quantity is automatically selected by operating system
System memory	DDR3-1066 type • 1 SODIMM module • min 1GB • max 4GB
Mass storage interfaces	1 x SATA II • 3Gb/s integrato on board
CFast slot	1 x slot CFast (bootable) external access • 1 x slot CFast (not bootable) external access, optional
Bus expansions slots — on board (S0, S1)	2 x MiniPCI
on riser card (S1)	1 x PCI or 1 x PCIe x1 • half size boards with 3W max consumption • can not be installed together
Frontal access interfaces	1 x USB 2.0
Rear access interfaces	2 x Ethernet 10/100/1000 Mbps (RJ45), Intel® 82574L • 4 x USB 2.0 (Type A) • 1 x PS/2 K/M • optional VGA/DVI-I video output (2048x1536 SXGA max)
Rear access serial interfaces	1 x RS-232 (DB9M)
Environmental specifications	Operating temperature: 0° ÷ +50°C also with 24x7 HDD, +5°C ÷ +45°C with standard HDD • Storage temperature: -20° ÷ +60°C • Humidity: 80% (non-condensing)
Approvals	CE (EN 55022, EN 61000-3-2/3, EN 55024, EN 60950-1) • cULus (508) pending
Standard warranty	12 months • Warranty management by ASEM headquarters

DIMENSIONS (mm)

FRONT VIEW

FRONT PANEL CUT OUT

SIDE VIEW - S0

BATTERY PACK (optional)

LCD TFT	A	B	C	D	E	F (S0/S1)	G	H	J	Weight (kg)
10,4"	300	245	280	225	10	57 / 83	19	5	41,8	tbd
12,1"	335	270	315	250	10	57 / 83	19	5	41,8	tbd
15"	390	315	370	295	10	57 / 83	19	6	41,8	tbd
15,6"	430	275	410	255	10	57 / 83	19	6	41,8	tbd
17"	455	355	435	335	10	57 / 83	21	6	41,8	tbd
18,5"	500	320	480	300	10	57 / 83	21	6	41,8	tbd
19"	490	388	470	368	10	57 / 83	21	6	41,8	tbd
21,5"	579	367	559	347	10	57 / 83	23	6	41,8	tbd

CONNECTORS VIEW

1 x RS232 • PS/2 K/M • 4 x USB • DVI/VGA optional • POWER, DRIVE, WD, TEMP • RESET, WD-RESET

POWER PLUG
EARTH
UPS optional

FIELDBUS or I/Os optional

UPS BATTERIES optional

2 x LAN

ADD-ON I/F optional