HT5000-TFM

Industrial Automation - Products & Configurations

HT5000-TFM/S0 BASIC SYSTEM	
Basic Configuration	LCD TFT 15,6" ▪ Touch-Screen Multitouch ▪ Intel® Celeron™ dual core 1020E 2,20 GHz ▪ 2GB RAM ▪ Aluminum and glass TrueFlat front panel ▪ VGA video output for additional external monitor ▪ isolated 24V DC power supply ▪ 12 months warranty

HT5000-TFM/S1 BASIC SYSTEM	
Basic Configuration	LCD TFT 15,6" ▪ Touch-Screen Multitouch ▪ Intel® Celeron™ dual core 1020E 2,20 GHz ▪ 2GB RAM ▪ Aluminum and glass TrueFlat front panel ▪ VGA video output for additional external monitor ▪ isolated 24V DC power supply ▪ 1 PCI slot ▪12 months warranty

HT5000-TFM/S3 BASIC SYSTEM	
Basic Configuration	LCD TFT 15,6" ▪ Touch-Screen Multitouch ▪ Intel® Celeron™ dual core 1020E 2,20 GHz ▪ 2GB RAM ▪ Aluminum and glass TrueFlat front panel ▪ VGA video output for additional external monitor ▪ isolated 24V DC power supply ▪ 3 PCI slot ▪12 months warranty

	S0	S1	S3	
PROCESSOR	•	•	•	Intel® Celeron™ dual core 1020E ▪ 2,20 GHz ▪ 2MB smart cache ▪ 2 cores, 2 threads ▪ TDP 35W ▪ socket PGA988
	•	•	•	Intel® Core™ i3-3120ME ▪ 2,40 GHz ▪ 3MB smart cache ▪ 2 cores, 4 threads ▪ TDP 35W ▪ socket PGA 988
	•	•	•	Intel® Core™ i5-3610ME ▪ 2,70 GHz ▪ 3MB smart cache ▪ 2 cores, 4 threads ▪ TDP 35W ▪ socket PGA988
	•	•	•	Intel® Core™ i7-3610QE ▪ 2,30 GHz ▪ 6MB smart cache ▪ 4 cores, 8 threads ▪ TDP 45W ▪ socket PGA988
DISPLAY & TOUCH-SCREEN	•	•	•	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 ▪ Projective capacitive multitouch, 4 fingers ▪ Controller on module
	•	•	•	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 ▪ Projective capacitive multitouch, 4 fingers ▪ Controller on module
	•	•	•	21,5" LCD TFT 16:9 ▪ 1920x1080 (FHD), 16M colors ▪ backlight LED, 300 cd/m2 ▪ Viewing angle L:R/U:L (typ): 89°:89°/89°:89° MVA
				21,5" Touch-Screen ▪ Projective capacitive multitouch, 4 fingers ▪ Controller on module
RAM MEMORY	•	•	•	2 GB ▪ 1 module SODIMM DDR3-1600
	•	•	•	4 GB ▪ 1 module SODIMM DDR3-1600
	•	•	•	8 GB ▪ 1 module SODIMM DDR3-1600
	•	•	•	16 GB ▪ 2 x 8 GB modules SODIMM DDR3-1600
INTERNAL PSU	•	•	•	24V DC isolated without UPS (uninterruptible power supply)
	•	•		24V DC isolated with UPS (uninterruptible power supply) ▪ integrated in power supply section ▪ batteries kit not included **> note 1**
	•	•		115V÷230V AC ▪ 180W ▪ autoranging
			•	115V÷230V AC ▪ 220W ▪ autoranging
RAID	•	•	•	RAID 0, 1
EXTERNAL MONITOR OUTPUT	•	•	•	VGA (DB15F) video interface for additional external monitor ▪ Max resolution 2048x1536 SXGA
	•	•	•	DVI-I (Dual Link) video interface for additional external monitor ▪ Max resolution 2048x1536 SXGA
EXPANSION SLOTS	•			No expansion slots
		•		1 x PCI half size ▪ on riser card ▪ expansion board with max consumption 5W
		•		1 x PCIe x4 format (Generation 2) half size ▪ on riser card ▪ expansion board with max consumption 5W
			•	3 x PCI half size ▪ on riser card ▪ expansion board with max consumption 5W
			•	2 x PCI + 1 x PCIe x4 format (Generation 2) half size ▪ on riser card ▪ expansion board with max consumption 5W

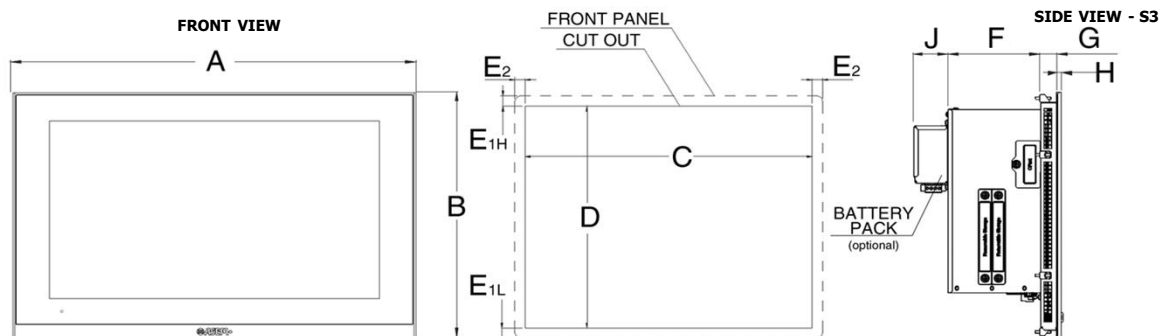| OPTIONS				
	S0	S1	S3	
TPM	•	•	•	TPM (Trusted Platform Module)
SSD mSATA	•	•	•	SSD mSATA (U110/X110), SATA 3, 6Gb/s (Solid State Disk), MLC
SSD 2,5"	•	•	•	1 x SSD 2,5" SATA installation kit (SSD not included)
	•	•	•	2 x SSD 2,5" SATA installation kit (SSD not included)
	•	•	•	SSD 2,5" U/X110 SATA 3, 6Gb/s (Solid State Disk), MLC
HDD 2,5"	•	•	•	1 x HDD 2,5" SATA installation kit (HDD not included) ▪ with shock absorber
	•	•	•	2 x HDD 2,5" SATA installation kit (HDD not included) ▪ with shock absorber
	•	•	•	HDD 2,5" SATA
2,5" EXTRACTABLE DRAWER KIT	•	•	•	1 x HDD/SSD 2,5" SATA extractable drawer kit (HDD/SSD not included) ▪ with shock absorber ▪ with drawer
		•	•	2 x HDD/SSD 2,5" SATA extractable drawers kit (HDD/SSD not included) ▪ with shock absorber ▪ with drawers
CFAST	•	•	•	CFast SATA
COMMUNICATION PORTS	•	•	•	1 x RS232/422/485 serial port (DB15M) ▪ 1 x USB 2.0 port **> note 2**
	•	•	•	1 x RS232/422/485 optoisolated serial port (DB15M) ▪ 1 x USB 2.0 port **> note 2**
	•	•	•	2 x RS232 serial ports (DB9M) **> note 2**
	•	•	•	2 x USB 2.0 ports **> note 2**
	•	•	•	1 x Ethernet 10/100/1000Mpbs, Intel® 82574L **> nota 2**
UPS BATTERIES KIT	•	•		Batteries kit for rear systems mounting ▪ cable included
	•	•		Batteries kit for detached mounting (wall mount) ▪ 100cm cable included
FIELDBUS	•	•	•	NETcore® X MiniAPCI fieldbus module ▪ For technical details and supported drivers see pg.169 **> note 3**
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 functionalities are ensured with Microsoft Win32/64bits operating systems only
The UPS can be used with Intel® Core™ i7-3610QE processor only in S0 version.
2: Communication ports cannot be installed together
3: Boards with MiniPCI / MiniAPCI bus cannot be installed togheter

TECHNICAL SPECIFICATIONS

Case		Panel mount
Overall dimensions & weight		See details on the related section
Front panel		Aluminum and tempered glass TrueFlat ▪ ASEM logo serigraph printed
Touchscreen		Projective capacitive multitouch, 4 fingers ▪ overlaminated with OCA (Optical Clear Adhesive) ▪ Controller on module
Frontal protection		IP66K
Power supply	24V DC	Input voltage: 18÷32V DC ▪ Isolated
	115V/230V AC	Input voltage: 85÷264V AC ▪ autoranging ▪ S0, S1: 180W; S3: 220W
UPS (optional only for S0 and S1)		12V DC UPS (Uninterruptible Power Supply) battery backup system
		Batteries module (optional): Pb, 12V/13A max, 2500mA/h ▪ Charge time 3h@25°C ▪ Discharge time 5'@ 10A and 25°C ▪ Lifetime 10years@25°C
Motherboard	Type	"All-In-One" ASEM 1121
	Watch dog	Time programmable
Intel platform	Processor	Intel® Celeron™ dual core 35W ▪ Intel® Ivy Bridge™ third generation 35/45W
	Chipset	Intel® HM76 Express Chipset Intel® ▪ QM77 Express Chipset for RAID
Operating System		Microsoft Windows 8 Pro 32/64bit ▪ Windows 7 Pro/Ultimate 32/64bit ▪ Windows XP Pro 32bit ▪
	O.S. certified by ASEM	Microsoft Windows Embedded 8 32/64bit ▪ Windows Embedded Standard 7E/7P 32/64 bit ▪ Windows Embedded Standard 2009 (XPe SP3) 32bit
		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 Windows 2000 / 98 / NT ▪ Microsoft Windows CE 5 / 6
Video controller		Intel® HD Graphics integrated in Intel® Celeron™ microprocessor ▪ 650MHz ▪ LVDS 8bit/color digital interface
		Intel® HD Graphics 4000 integrated in Intel® Core™ microprocessor ▪ 650MHz ▪ LVDS 8bit/color digital interface
Video RAM (shared)		Dynamic Video Memory Technology ▪ Memory quantity is automatically selected by operating system
System memory		DDR3-1600 type ▪ 2 SODIMM modules ▪ min 2GB ▪ max 16GB
Mass storage interfaces		2 x SATA 3, 6Gb/s ▪ 1 x mSATA 3, 6Gb/s ▪ integrated on board
TPM		2x10 (2,54) pin-strip connector for optional TPM module
CFast slot		1 x slot CFast (bootable) external access
Bus expansions slots	on board	2 x MiniPCI
	on riser card (S1)	1 x PCI or 1 x PCIe x4 ▪ half size boards with 5W max consumption ▪ alternative to each other
	on riser card (S3)	3 x PCI or 2 x PCI + 1 x PCIe x4 ▪ half size boards with 5W max consumption ▪ alternative to each other
Rear access interfaces		3 x Ethernet 10/100/1000 Mbps (RJ45 - 2 x Intel® 82574L, 1 x Intel® 82579LM) ▪ 2 x USB 3.0 (Type A) ▪ 2 x USB 2.0 (Type A) ▪ 1 x PS/2 K/M ▪ VGA or DVI-I output video (2048x1536 SXGA max resolution)
Rear access serial interfaces		1 x RS-232 (DB9M)
Environmental specifications		Operating temperature: 0° ÷ +50°C, 0°C ÷ +45°C 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 (UL-61010-2-201) pending
Standard warranty		12 months ▪ Warranty management by ASEM headquarters

DIMENSIONS (mm)

LCD TFT	A	B	C	D	E$_{1L}$:E$_{1H}$/E$_2$	F (S0/S1/S3)	G	H	J	Weight (kg)
15,6"	433	280,5	410	255	15:10,5/11,5	67/84/114	36	6	41,8	tbd
18,5"	503	320,5	480	300	10:10,5/11,5	67/84/114	35	6	41,8	tbd
21,5"	581,5	367,5	559	347	10:10,5/11,5	67/84/114	35	8	41,8	tbd