

## Industrial Automation - Products &amp; Configurations

## HMI2000 BASIC Win32

## Basic configuration &gt; note 1

Basic Configuration	LCD TFT 10,4" 4:3 • Touch-Screen 10,4" • Intel® Atom™ dual core D2550 1,86 GHz • 2GB RAM • 16GB SSD 2,5" MLC • Aluminum front panel • fanless • Windows Embedded Standard 7E "International" • Premium HMI 4 Win32 BASIC runtime • UBIQUITY PRO Win32 • with additional monitor • VGA output • isolated 24V DC power supply • 12 months warranty
HMI SOFTWARE	Premium HMI 4 <b>BASIC</b> Win32 runtime Premium HMI 4 <b>PRO</b> Win32 runtime Premium HMI 4 <b>ADVANCED</b> Win32 runtime
REMOTE ASSISTANCE	ASEM UBIQUITY PRO Win32 runtime
OPERATING SYSTEM	Microsoft Windows Embedded Standard 7E English (license with Microsoft olographic sticker) > <b>note 2</b> Microsoft Windows Embedded Standard 7P "A2" (license with Microsoft olographic sticker) > <b>note 2</b> Microsoft Windows Embedded Standard 2009 "International" (license with Microsoft olographic sticker) > <b>note 2</b> Microsoft Windows Embedded Standard 2009 "MUI-A" (license with Microsoft olographic sticker) > <b>note 2</b>
PROCESSOR	Intel® Atom™ dual core D2550 • 1,86 GHz, 1MB L2 cache • Intel® Hyper-Threading • Soldered on-board
DISPLAY & TOUCH-SCREEN	10,4" LCD TFT 4:3 • SVGA, 800x600, 16M colors • backlight LED , 400 cd/m <sup>2</sup> • Viewing angle L:R/U:L (typ): 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/m <sup>2</sup> • Viewing angle L:R/U:L (typ.): 80°:80°/80°:60° 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/m <sup>2</sup> • 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/m <sup>2</sup> • 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/m <sup>2</sup> • 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/m <sup>2</sup> • 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/m <sup>2</sup> • 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, 300 cd/m <sup>2</sup> • Viewing angle L:R/U:L (typ.): 89°:89°/89°:89° 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/m <sup>2</sup> • Viewing angle L+R/U+L (typ.): 89°:89°/89°:89° 21,5" Touch-Screen • 5 wires resistive technology • Controller integrated on board
RAM MEMORY	2 GB • 1 module SODIMM DDR3
INTERNAL PSU	16GB SSD 2,5" SATA 3 MLC (Multi Level Cell - SANDISK U110) with installation kit 32GB SSD 2,5" SATA 3 MLC (Multi Level Cell - SANDISK U110) with installation kit
INTERNAL PSU	Without UPS (uninterruptible power supply) With UPS (uninterruptible power supply) • integrated in power supply section • batteries kit not included
ADDITIONAL 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
OPTIONS	
FIELDBUS	NETcore® X MiniAPCI for MPI up to 12Mbit/s > <b>note 3</b> NETcore® X MiniAPCI for PROFIBUS SLAVE > <b>note 3</b> NETcore® X MiniAPCI for CANopen MASTER > <b>note 3</b> NETcore® X MiniAPCI for CANopen SLAVE > <b>note 3</b>
COMMUNICATION PORTS	1 x RS232/422/485 (DB15M) • 1 x USB 2.0 > <b>note 4</b> 1 x RS232/422/485 (DB15M) optoisolated • 1 x USB 2.0 > <b>note 4</b>
UPS BATTERIES KIT	Batteries kit for rear systems mounting • cable included Batteries kit for detached mounting (wall mount) • 100cm cable included
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: Price does not include Premium HMI Studio 2014 development tool licence that must be purchased one-off at the first order of a license or system that includes the Premium HMI software. See pg.163
- 2: Price does not include ASEM UBIQUITY DOMAIN that must be purchased one-off at the first order of a license or system that includes the UBIQUITY runtime. See pg.162
- 3: **WES 7E English / 2009 "International"**: Operating System only in English ; languages supported for customer applications: English, Arabic, Portuguese (Brazil), Chinese simplified (China), Chinese traditional (Taiwan), Czech, Danish, Dutch, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Portugal), Russian, Spanish, Swedish, Thai, Turkish. Are not present IME components (Input Method) for Japanese, Korean, Chinese simplified and traditional languages.
- 4: **WES 7P "A2"**: Operating System with MUI components and language support (for customer defined applications) for following languages: English, Italian, German, French, Spanish, Brazilian, Chinese Simplified.
- 5: **WES 2009 "MUI-A"**: Operating System with MUI components and language support (for customer defined applications) for following languages: English, Italian, German, French, Spanish.
- 6: MiniAPCI fieldbus boards cannot be installed together
- 7: Communication ports cannot be installed together

Industrial Automation - Products & Configurations

**HMI2000-TF BASIC Win32**

Basic configuration > note 1

Basic Configuration	LCD TFT 10,4" 4:3 • Touch-Screen 10,4" • Intel® Atom™ dual core D2550 1,86 GHz • 2GB RAM • 16GB SSD 2,5" MLC • Aluminum TrueFlat front panel • fanless • Windows Embedded Standard 7E "International" • Premium HMI 4 Win32 BASIC runtime • UBIQUITY PRO Win32 • with additional monitor VGA output • isolated 24V DC power supply • 12 months warranty
<b>HMI SOFTWARE</b>	Premium HMI 4 <b>BASIC</b> Win32 runtime
	Premium HMI 4 <b>PRO</b> Win32 runtime
	Premium HMI 4 <b>ADVANCED</b> Win32 runtime
<b>REMOTE ASSISTANCE</b>	ASEM UBIQUITY PRO Win32 runtime
<b>OPERATING SYSTEM</b>	Microsoft Windows Embedded Standard 7E English (license with Microsoft olographic sticker) > <b>note 2</b> Microsoft Windows Embedded Standard 7P "A2" (license with Microsoft olographic sticker) > <b>note 2</b> Microsoft Windows Embedded Standard 2009 "International" (license with Microsoft olographic sticker) > <b>note 2</b> Microsoft Windows Embedded Standard 2009 "MUI-A" (license with Microsoft olographic sticker) > <b>note 2</b>
<b>PROCESSOR</b>	Intel® Atom™ dual core D2550 • 1,86 GHz, 1MB L2 cache • Intel® Hyper-Threading • Soldered on-board
<b>DISPLAY &amp; TOUCH-SCREEN</b>	10,4" LCD TFT 4:3 • SVGA, 800x600, 16M colors • backlight LED , 400 cd/m2 • Viewing angle L:R/U:L (typ): 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.): 80°:80°/80°:60° 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, 300 cd/m2 • Viewing angle L:R/U:L (typ.): 89°:89°/89°:89° 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.): 89°:89°/89°:89° 21,5" Touch-Screen • 5 wires resistive technology • Controller integrated on board
<b>RAM MEMORY</b>	2 GB • 1 module SODIMM DDR3
<b>INTERNAL PSU</b>	16GB SSD 2,5" SATA 3 MLC (Multi Level Cell - SANDISK U110) with installation kit 32GB SSD 2,5" SATA 3 MLC (Multi Level Cell - SANDISK U110) with installation kit
<b>INTERNAL PSU</b>	Without UPS (uninterruptible power supply) With UPS (uninterruptible power supply) • integrated in power supply section • batteries kit not included
<b>ADDITIONAL MONITOR OUTPUT</b>	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
<b>OPTIONS</b>	
<b>FIELDBUS</b>	NETcore® X MiniAPCI for MPI up to 12Mbit/s > <b>note 3</b> NETcore® X MiniAPCI for PROFIBUS SLAVE > <b>note 3</b> NETcore® X MiniAPCI for CANopen MASTER > <b>note 3</b> NETcore® X MiniAPCI for CANopen SLAVE > <b>note 3</b>
<b>COMMUNICATION PORTS</b>	1 x RS232/422/485 (DB15M) • 1 x USB 2.0 > <b>note 4</b> 1 x RS232/422/485 (DB15M) optoisolated • 1 x USB 2.0 > <b>note 4</b>
<b>USB BATTERIES KIT</b>	Batteries kit for rear systems mounting • cable included Batteries kit for detached mounting (wall mount) • 100cm cable included
<b>WARRANTY EXTENSION</b>	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

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- 1: Price does not include Premium HMI Studio 2014 development tool licence that must be purchased one-off at the first order of a license or system that includes the Premium HMI software. See pg.163
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Premium HMI 4 - runtime differences	BASIC	PRO	ADVANCED
I/O Bytes (Tags)	2.048	2.048	4.096
Alarms	2.048	2.048	2.048
Data Loggers	Only 2 and not on Database	Unlimited also on Database	Unlimited also on Database
Multi-Drivers	Max 2	Max 2	Max 4
SMS/E-mails			✓
Web Server			Max 2 clients connected
VBA Multithreading	Max 2 script	Script unlimited	Script unlimited
ActiveX- OCX		✓	✓
CFR21 part 11		✓	✓
Power Templates - Complex graphic objects with scripts and integrated variables		✓	✓
Networking RAS		✓	✓

For Premium HMI 4 main characteristics, see pg.164

ASEM UBIQUITY PRO main features
<b>Control Center software for access and management of services with user friendly interface and complete devices management</b>
<b>User profile with fine control of permissions</b>
<b>Remote desktop, file&amp;task management, chat, screenshot</b>
<b>VPN with access to the Ethernet subnetwork of the remote device and serial passthrough support</b>
<b>Multiple connection from different Control Center by separated VPN for each client</b>
<b>Audit and usage statistics</b>
<b>Internet connection with PROXY</b>
<b>High security standards with usage of unique certificates and encrypted connections</b>
<b>Integrated firewall</b>
<b>Quality measurement of Internet connection with automatic selection of the best connectivity condition</b>
<b>Runtime update procedure with automatic shutdown and restart of the services</b>
<b>Ethernet-MPI gateway for remote assistance on devices with MPI interface</b>

For ASEM UBIQUITY details, see pg.162



TECHNICAL SPECIFICATIONS	
Case	Panel mount
Overall dimensions & weight	See details on the related section
Front panel	HMI2000 Aluminum • ASEM logo sticker HMI2000-TF Aluminum TrueFlat • Polycarbonate Pantone Cool Grey 4C color • ASEM logo serigraph printed
Touchscreen	HMI2000 5 wires resistive technology • on board controller HMI2000-TF 5 wires resistive technology • overlaminated with OCA (Optical Clear Adhesive) • on board controller
Frontal protection	IP66
Operating System	Microsoft Windows Embedded Standard 7E English • license with Microsoft holographic sticker Microsoft Windows Embedded Standard 7P "A2" • license with Microsoft holographic sticker Microsoft Windows Embedded Standard 2009 "International" • license with Microsoft holographic sticker Microsoft Windows Embedded Standard 2009 "MUI-A" • license with Microsoft holographic sticker
Software	HMI Premium HMI 4 Win32 BASIC / PRO / ADVANCED runtime license with ASEM sticker Remote assistance ASEM UBIQUITY Win32 PRO runtime license with ASEM sticker
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 5h@25°C • Discharge time 15'@5A and 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
Video controller	GMA 3650 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 • 2GB
Mass storage interfaces	1 x SATA 2 • 3Gb/s integrato on board
CFast slot	1 x slot CFast (bootable) external access
Bus expansions slots	2 x MiniPCI for MPI / PROFIBUS / CANOPEN fieldbus boards (optional)
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 • 1 x VGA/DVI-I video output (2048x1536 SXGA max resolution)
Rear access serial interfaces	1 x RS-232 (DB9M)
Environmental specifications	Operating temperature: 0° ± +50°C 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)
Standard warranty	12 months • Warranty management by ASEM headquarters

