



## Industrial Automation - Products & Configurations

PB5000/S0 BASIC SYSTEM		
Basic Configuration	Intel® Celeron™ dual core 1020E 2,20 GHz • 2GB RAM • isolated 24V DC power supply • 12 months warranty	

PB5000/S1 BASIC SYSTEM		
Basic configuration	Intel® Celeron™ dual core 1020E 2,20 GHz • 2GB RAM • isolated 24V DC power supply • 1 PCI slot • 12 months warranty	

PB5000/S3 BASIC SYSTEM		
Basic configuration	Intel® Celeron™ dual core 1020E 2,20 GHz • 2GB RAM • 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	
RAM MEMORY	•	•	•	2 GB • 1 module SODIMM DDR3	
	•	•	•	4 GB • 1 module SODIMM DDR3	
	•	•	•	8 GB • 1 module SODIMM DDR3	
	•	•	•	16 GB • 2 modules SODIMM DDR3	↓
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 > <b>note 1</b>	
	•	•	•	115V÷230V AC • 180W • 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 > <b>note 2</b>	
	•	•	•	1 x RS232/422/485 optoisolated serial port (DB15M) • 1 x USB 2.0 port > <b>note 2</b>	
	•	•	•	2 x RS232 serial ports (DB9M) > <b>note 2</b>	
	•	•	•	2 x USB 2.0 ports > <b>note 2</b>	
	•	•	•	1 x Ethernet 10/100/1000Mbps, Intel® 82574L > <b>note 2</b>	
UPS BATTERIES KIT	•	•	•	Batteries kit for rear systems mounting • cable included	
	•	•	•	Batteries kit for detached mounting (wall mount) • 100cm cable included	
FIELD BUS	•	•	•	NETCore® X MiniAPCI fieldbus module • For technical details and supported drivers see pg.169 > <b>note 3</b>	↓
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	



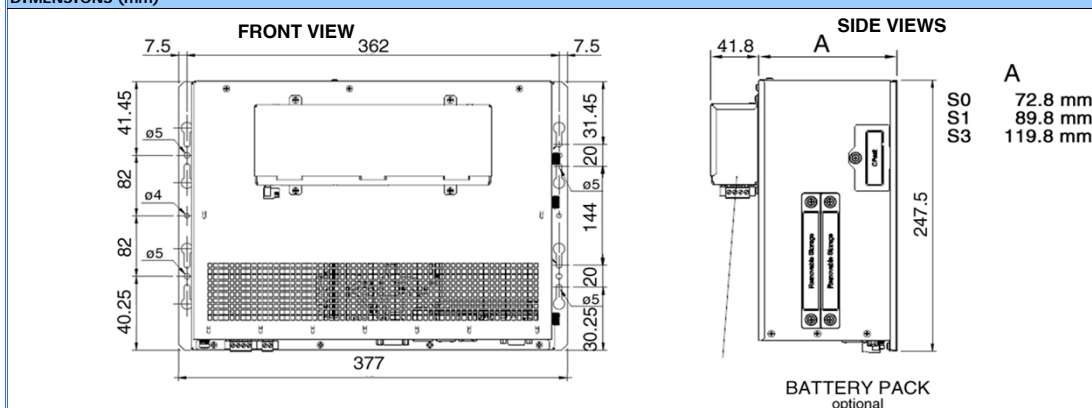
## NOTES

- 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.
- Communication ports cannot be installed together
- Boards with MiniPCI / MiniAPCI bus cannot be installed together

## TECHNICAL SPECIFICATIONS

Case	For wall or DIN rail mounting
Overall dimensions & weight	See details on the related section
Power supply	24V DC Input voltage: 18÷32V DC • Isolated 115V/230V AC Input voltage: 85÷264V AC • autoringing • 180W
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	O.S. certified by ASEM Microsoft Windows 8 Pro 32/64bit • Windows 7 Pro/Ultimate 32/64bit • Windows XP Pro 32bit • 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)



## CONNECTORS VIEW PB5000/S3

