

# PB3200 Family

Fanless Box IPCs with Intel® Core i 5<sup>th</sup> gen. platform



DIGITAL AUTOMATION TECHNOLOGIES

# PB3200 - Highlights

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- **Fanless BOX IPC** (Operating temperature 0÷50°C)
- **ASEM UBIQUITY Basic Win32/64** runtime included
- Intel® **Broadwell U** (15W) platform
  - Intel® **Celeron 3765U** 1,9Ghz, 2 cores – 2 threads – 2MB smart cache
  - Intel® **Core™ i3-5010U** 2,1Ghz, 2 cores – 4 threads – 3MB smart cache
  - Intel® **Core™ i5-5350U** 1,8Ghz (2,9Ghz Turbo), 2 cores – 4 threads – 3MB smart cache
  - Intel® **Core™ i7-5650U** 2,2Ghz (3,3Ghz Turbo), 2 cores – 4 threads – 4MB smart cache
- **RAM** System memory expandable up to **8GB**
- **Slim** version (SL) for installation with limited depth in the back panel
- Optional **PCI or PCIe x4** slot (S1)
- **Mass storage:** Cfast, SSD mSATA and HDD/SSD 2,5" with SATA III interface
- **24V DC power supply** with galvanic isolation with options:
  - UPS with external battery kit
  - Kit for ATX mode power supply functionality



# PB3200 – Features 1/2



		PB3200
PROCESSORS (soldered)		Intel® Celeron 3765U 1,9Ghz, 2 cores – 2 threads – 2MB smart cache
		Intel® Core™ i3-5010U 2,1Ghz, 2 cores – 4 threads – 3MB smart cache
		Intel® Core™ i5-5350U 1,8Ghz (2,9GHz Turbo), 2 cores – 4 threads – 3MB smart cache
		Intel® Core™ i7-5650U 2,2Ghz (3,3GHz Turbo), 2 cores – 4 threads – 4MB smart cache
CHIPSET		Intel® Broadwell PCH-LP (Platform controller Hub – Low Power) included into processor
VIDEO CONTROLLER		Intel® HD Graphics integrated in Celeron™ 3765U microprocessor, 850MHz clock Intel® HD Graphics 5500, integrated in Core™ i3 microprocessor, 900MHz clock Intel® HD Graphics 6000, integrated in Core™ i5, i7 microprocessors, 1GHz clock with LVDS 8bit/color digital interface
SYSTEM MEMORY – RAM		2GB or 4GB or 8GB (1 x SODIMM DDR3 module)
MASS STORAGE	SL	1 x bootable CFast SATA III slot on board with external rear access 1 x onboard connector for direct insertion of mSATA SSD SATA III
	S0/S1	1 x bootable CFast SATA III slot on board with external access 1 x onboard connector for direct insertion of mSATA SSD SATA III 1 x onboard connector for 2,5" SSD/HDD 24x7 SATA III with internal installation kit

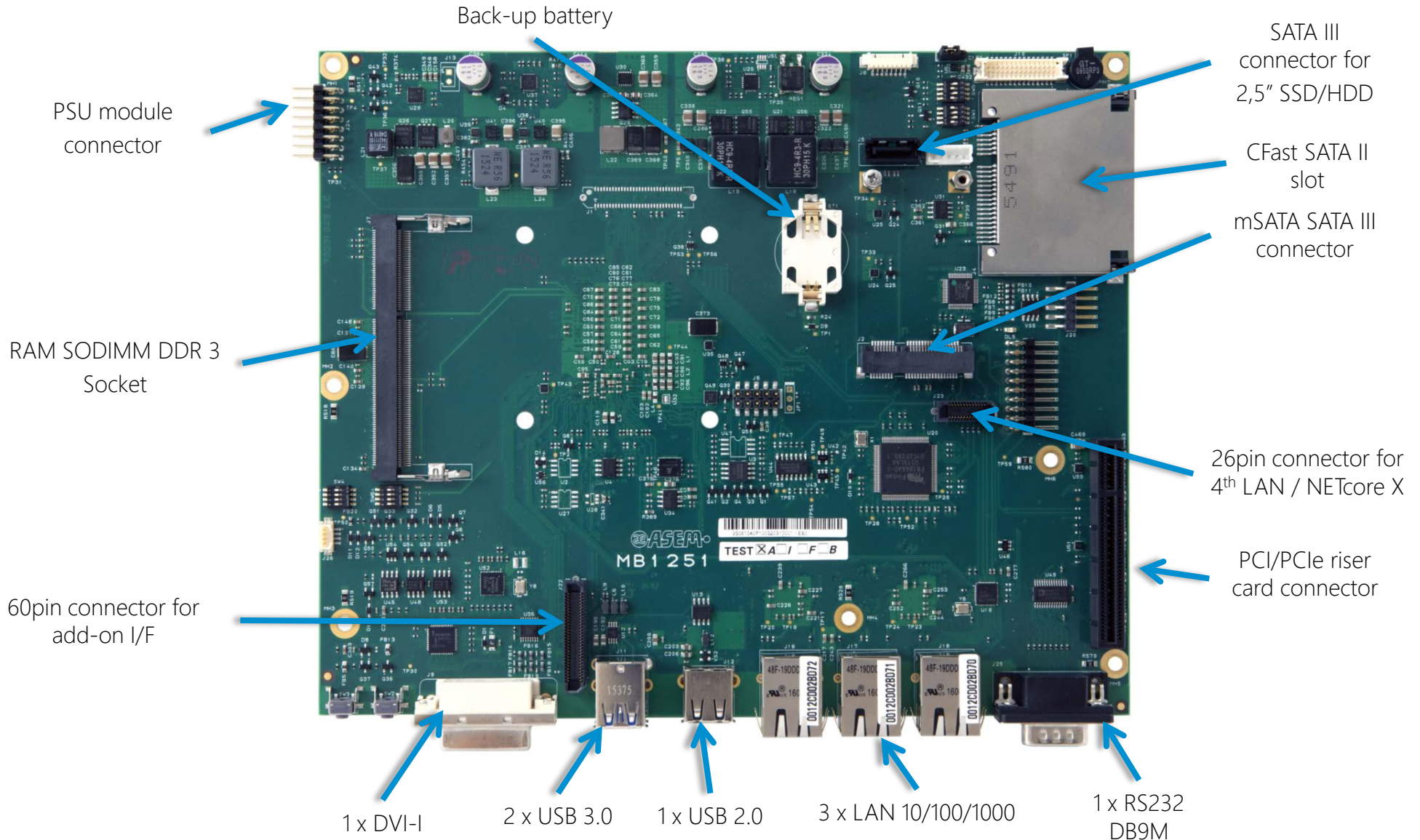
# PB3200 – Features 2/2



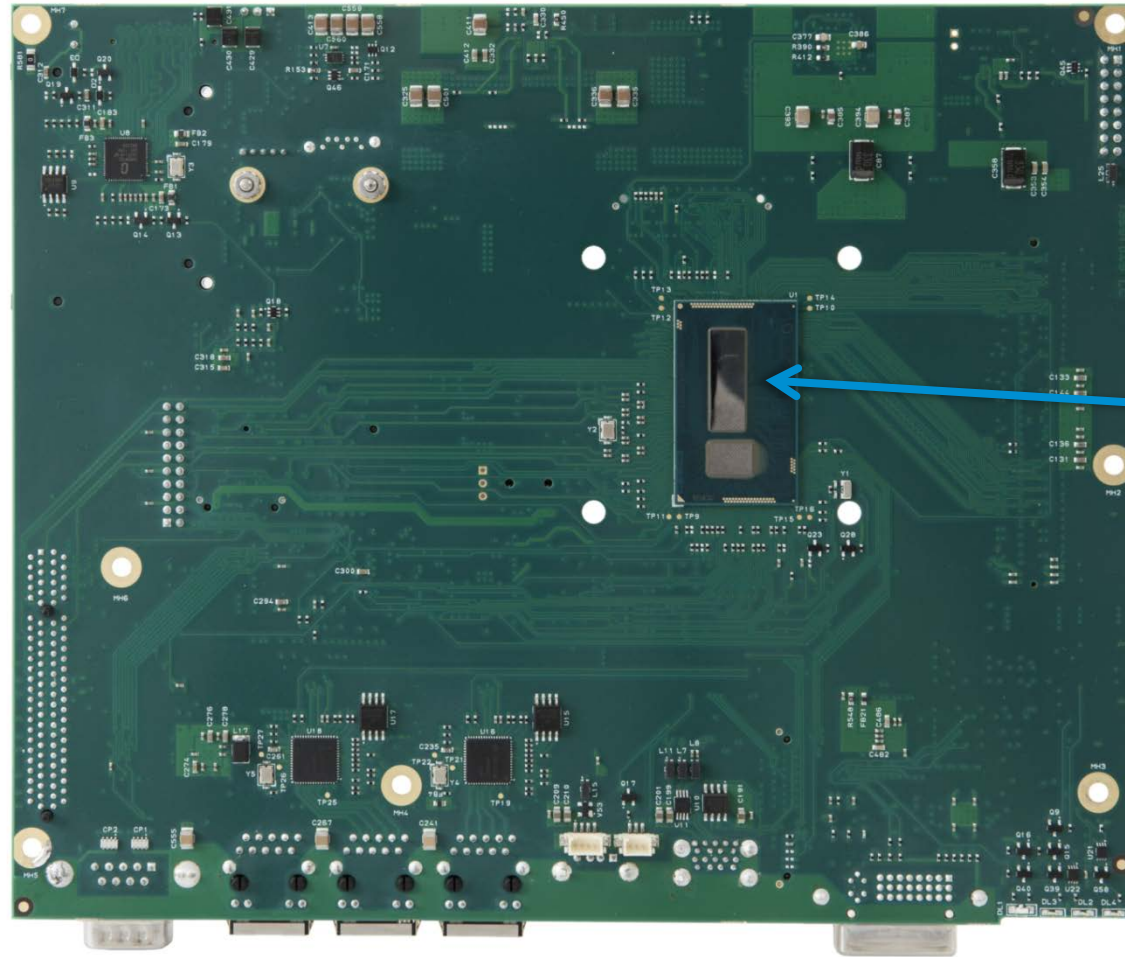
		PB3200
LAN		3 x LAN 10/100/1000Mbps (2 x Intel® I210-AT, 1 x Intel® I218-LM) 1 x LAN 10/100/1000Mbps (1 x Intel® I210, optional*)
USB		2 x USB 3.0 (Type-A) 1 x USB 2.0 (Type-A)
SERIAL		1 x RS232 (DB9M)
VIDEO OUTPUT		1 x DVI-I (DVI-D + VGA with adapter)
ADD-ON INTERFACES (optional for S0/S1 – max 1)		1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 (Type-A) 1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 (Type-A) 2 x RS232 (DB9M) 2 x USB 2.0 (Type-A)
FIELDBUS		1 x NETcore X fieldbus *
EXPANSION SLOT	S1	1 x PCI or PCIe x4 (5 Gb/s)
POWER SUPPLY UNIT		24VDC isolated 24VDC isolated with UPS with external battery kit (optional) ATX Mode push button (optional)
CERTIFIED O.S.		Windows 7 Pro/Ultimate 32/64bit; Microsoft Windows Embedded Standard 7E/7P 32/64 bit; Microsoft Windows 8.1 Industry Pro; Microsoft Windows 10 2016; Microsoft Windows 10 IoT Enterprise 2016;
OPERATING TEMPERATURE		0°- 50°C 0°- 45°C with 24x7 HDD
APPROVALS		CE, cULus LISTED (61010) pending

\* Options cannot be installed together

# PB3200 - Motherboard «all-in-one» 1251, top



# PB3200 - Motherboard «all-in-one» 1251, bottom

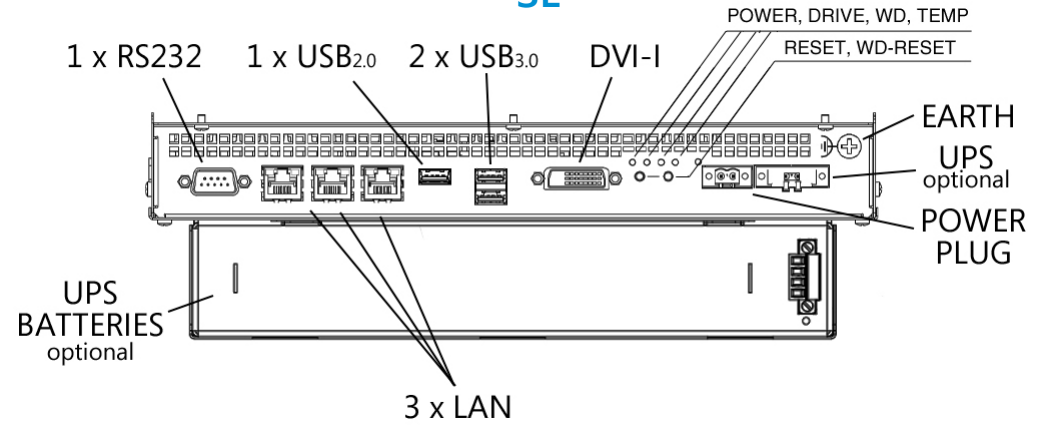


PSU module  
connector

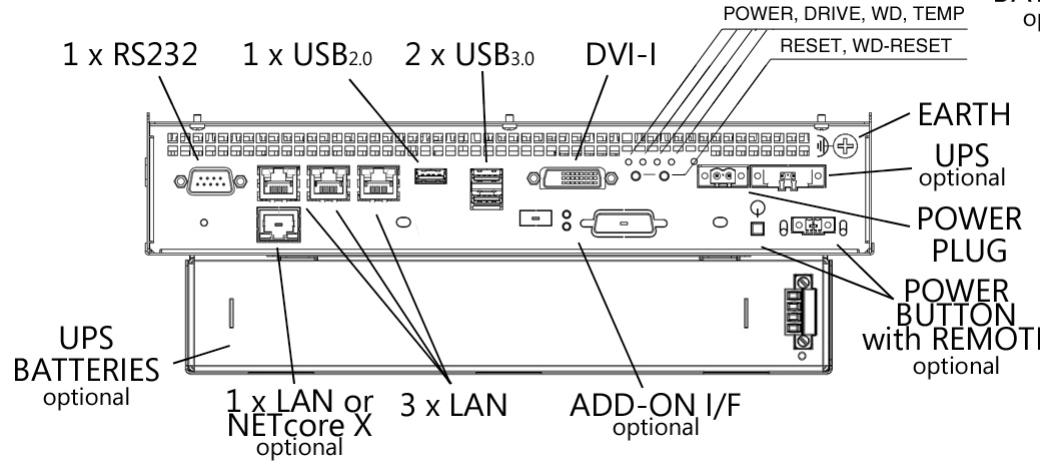
Intel® Broadwell ULT  
processor

# PB3200 - Rear Interfaces & Connectors

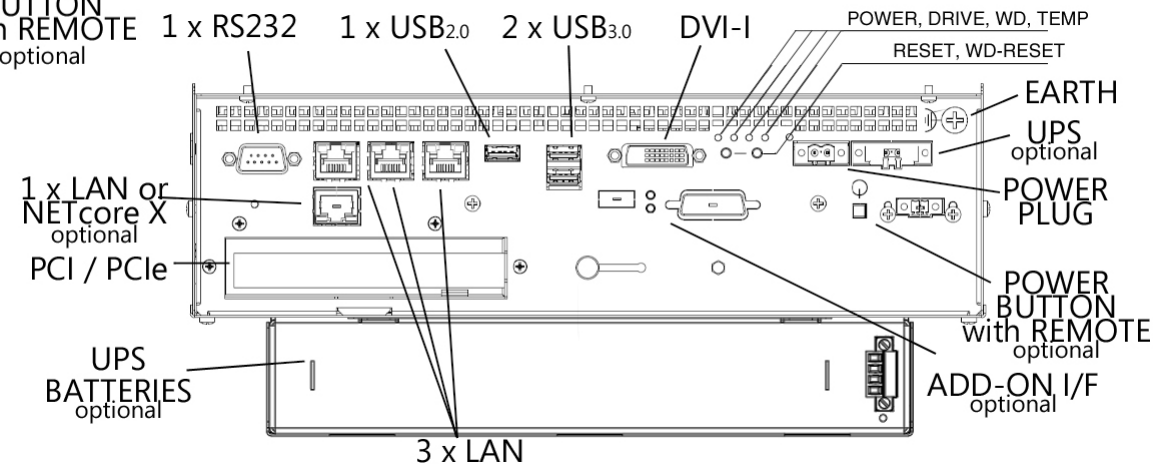
SL



S0



S1



# PB3200 - O.S. compatibility

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- Operating systems **certified by ASEM**
  - Win 10 IoT Enterprise 2016 64bit
  - Win 8.1 Industry Pro 32/64bit
  - Win 7 Pro/Ultimate 32/64bit
  - Win Embedded Standard 7E/7P 32/64Bit
  - Linux
- Intel<sup>®</sup> **Broadwell U platform** does not support:
  - Win XP Pro 32bit
  - Windows Embedded Standard 2009 (XPe SP3) 32bit
  - Win 2000/ 98/ NT
- Operating systems supported by the Intel platform but not certified by ASEM
  - VxWorks
  - QNX



# PB3200 - Integrated UPS (optional)

## UPS integrated in the internal power supply unit

- With external battery pack - rear of the system mounting (only S0, S1)
- With external battery pack - standalone wall mounting

## UPS features

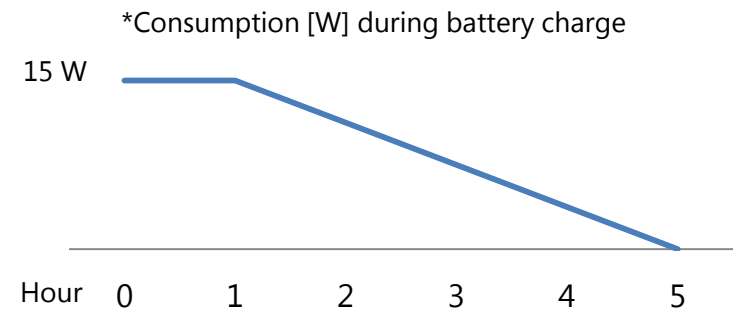
- 12V DC UPS battery backup system
- Input voltage intervention threshold 18V DC
- 10' nominal duration at 25°C, full charge, 5A load (estimated value)
- 15W max consumption during battery charge\*

## External battery pack

- 2500mAh 12V/6A max lead battery (Pb)
- Full charge in 5 hours
- Lifetime 10y at 25°C, full charge

## Software Management Tools

- Smart battery management to extend lifetime
- Battery estimated duration for individual system configuration



# PB3200 - Mass Storage

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## CFast (all versions)

- 1 x bootable CFast SATA III embedded on board with external access



## SSD mSATA (all versions)

- 1 x onboard connector for direct insertion of mSATA SSD SATA III



## 2,5" SSD/HDD (version S0 or S1)

- 1 x onboard connector for 2,5" SSD/HDD SATA III with internal installation kit



# PB3200 - Optional add-on boards for versions S0/S1

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## Position A

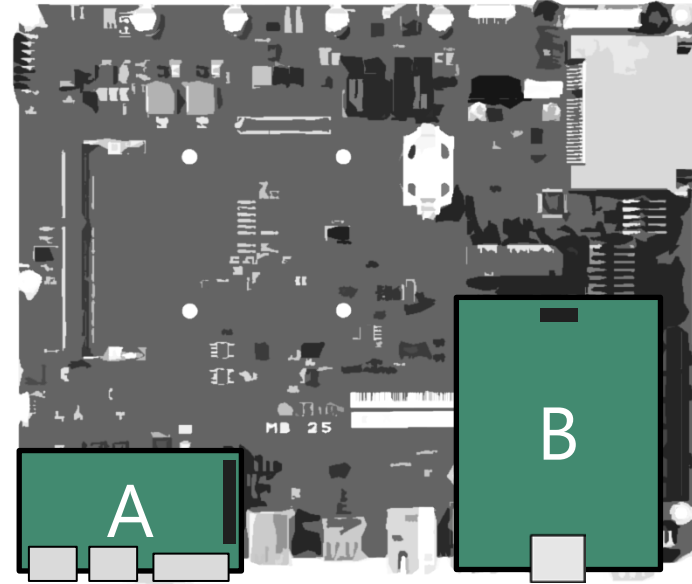
One board among:

- 1 x RS232/422/485 + 1 x USB 2.0
- 1 x RS232/422/485 isol.+ 1 x USB 2.0
- 2 x RS232
- 2 x USB 2.0

## Position B

One board between:

- 1 x LAN Gigabit
- 1 x NETcore X fieldbus board



Fieldbus available for NETcore X:  
EtherCAT *Master/Slave*  
PROFINET *Controller/Device*  
EtherNet/IP *Scanner/Adapter*  
PROFIBUS *Master/Slave*  
CANopen *Master/Slave*

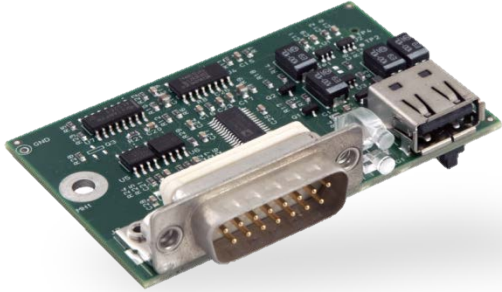
# PB3200 - Expansion slot & ASEM add-on

Add-on/Slot \ Version	SL	S0	S1
Add-on	No add-on	Position A (60pin-H), one board among: <ul style="list-style-type: none"> <li>• 1 x RS232/422/485 + 1 x USB</li> <li>• 1 x RS232/422/485 isolated+ 1 x USB</li> <li>• 2 x RS232</li> <li>• 2 x USB 2.0</li> </ul> Position B, one board between: <ul style="list-style-type: none"> <li>• 1 x LAN Gigabit</li> <li>• 1 x NETcore X fieldbus</li> </ul>	
PCI or PCIe x4	No slot	No slot	1 board among: <ul style="list-style-type: none"> <li>• NETcore X APCI</li> <li>• CAN RAW PCI</li> <li>• Customer PCI/PCIe*</li> </ul>

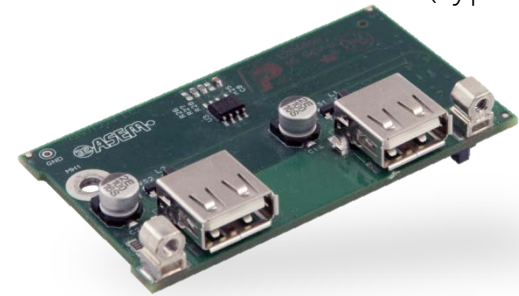
\* max 3W

# PB3200 - Add-on interfaces Position A (optional)

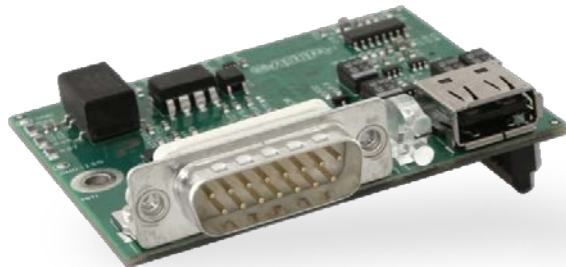
1 x RS232/422/485 (DB15M) + 1 x USB 2.0



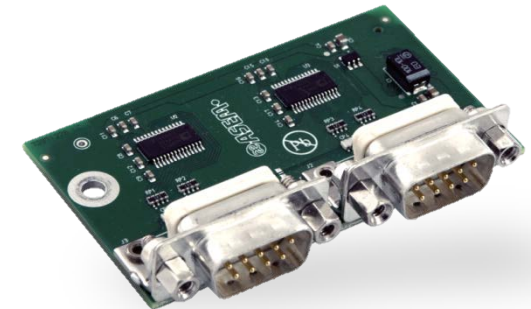
2 x USB 2.0 (Type A)



1 x RS232/422/485 optoisolated (DB15M) + 1 x USB 2.0



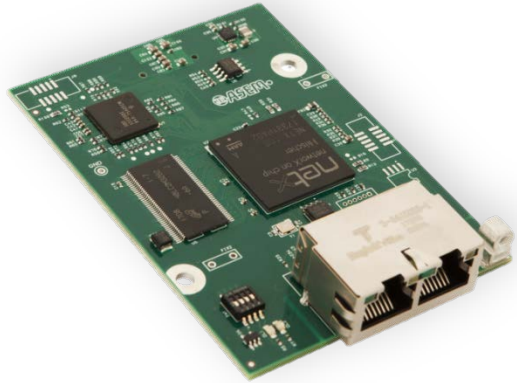
2 x RS232 (DB9M)



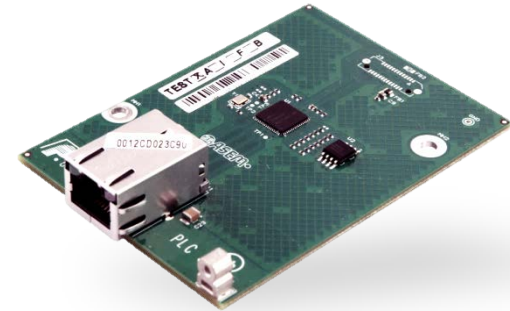
# PB3200 - Add-on interfaces Position B (optional)

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1 x NETcore X fieldbus



1 x 10/100/1000 Mbps Ethernet (RJ45)



# PB3200 - Long term availability



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