

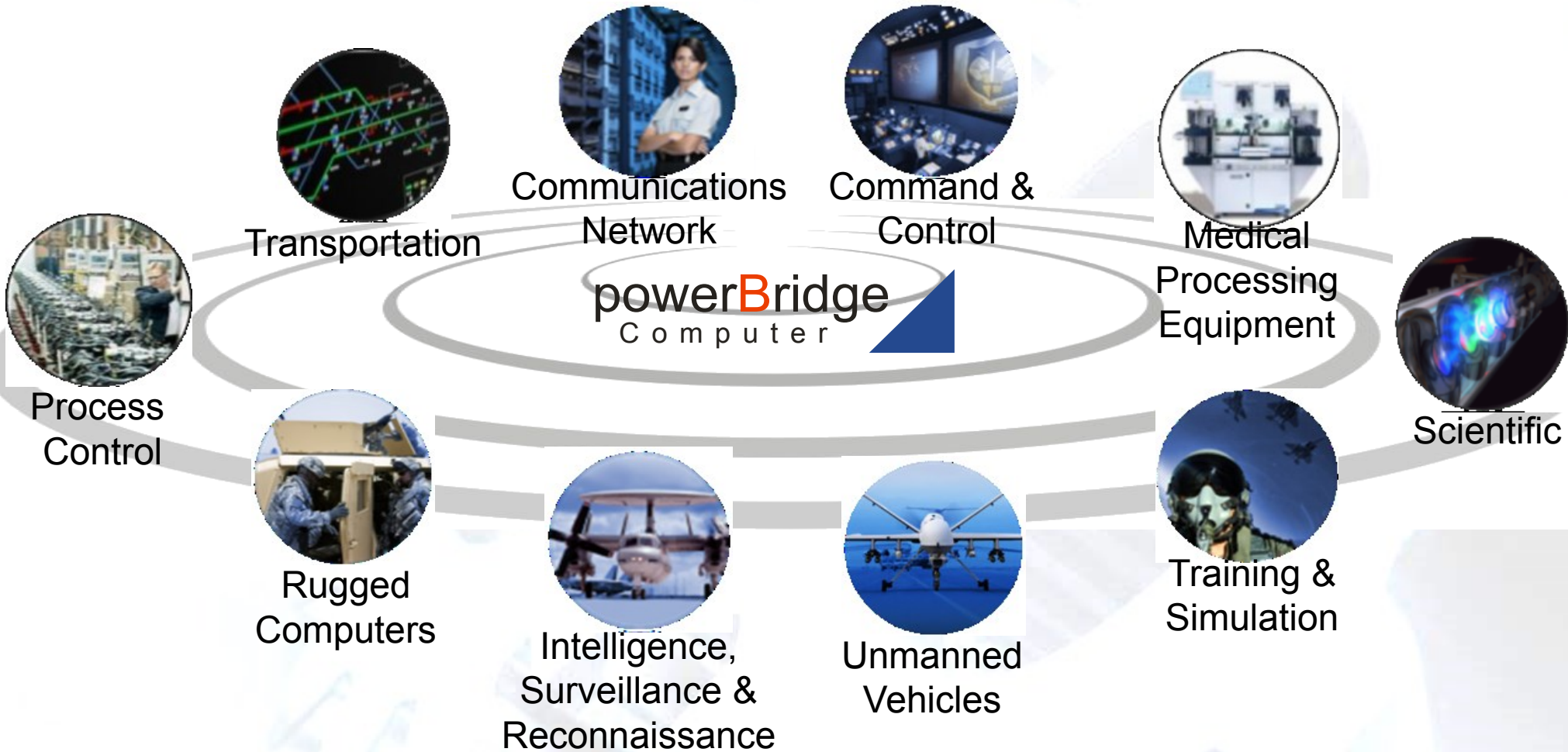


MTCA Image Processing System in quality assurance

- Over 20 years in the market
- Privately owned
- Over 25 years VME experience
- Own Lab and integration facilities
- powerBridge has delivered over 27.000 VME boards and 5.500 systems
- PICMG member, actively working on MTCA.4 specification
- ISO 9001:2008 and 14001:2009 approved



powerBridge and their partners are the backbone of VITA & PICMG Technology. We are experts of technologies.



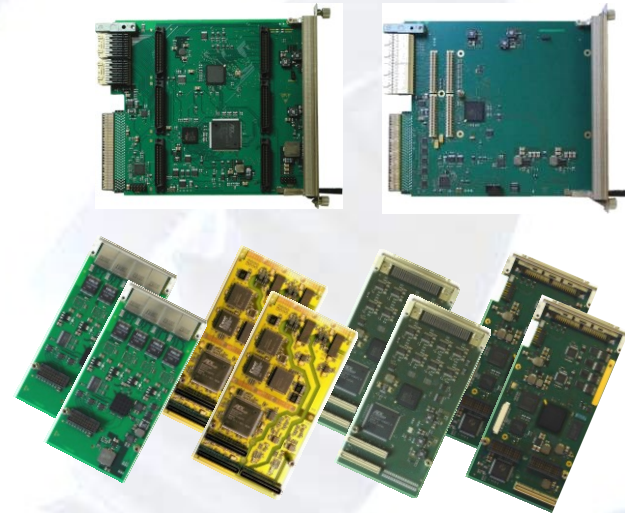
powerBridge has the right solution ... From building blocks to systems



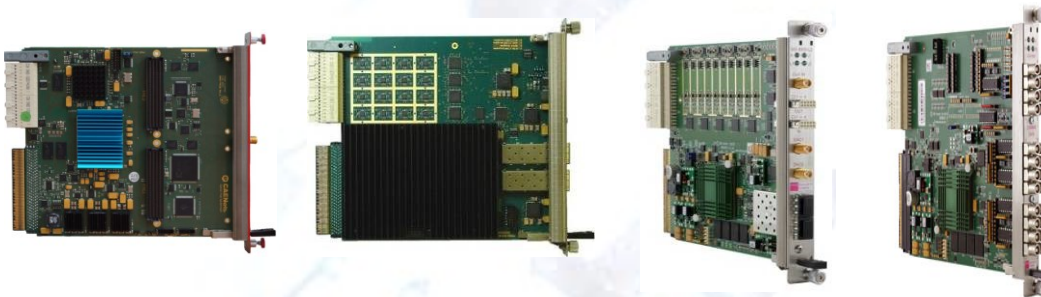
- MTCA.4 Starter Kits, including MCH, CPU & PM



- Carrier + Mezzanines (IP, PMC, XMC, FMC)



- AMC Modules



- Spare parts, like filler modules, adapter cables, program and debug tools, test adapter

- SW & FW Support including BSP, source code drivers, sample applications, FPGA framework



- Development together with N.A.T.



Starter Kit Basic configuration:

- CPU >> AM902
- PSU >> NAT-PM-AC1000
- MCH >> NAT- MCH

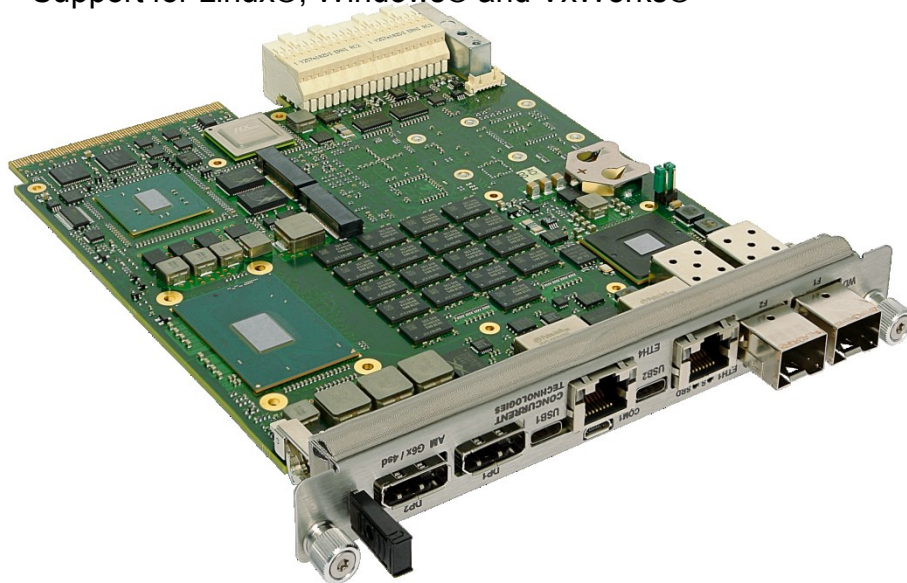
Other and additional modules are available on request



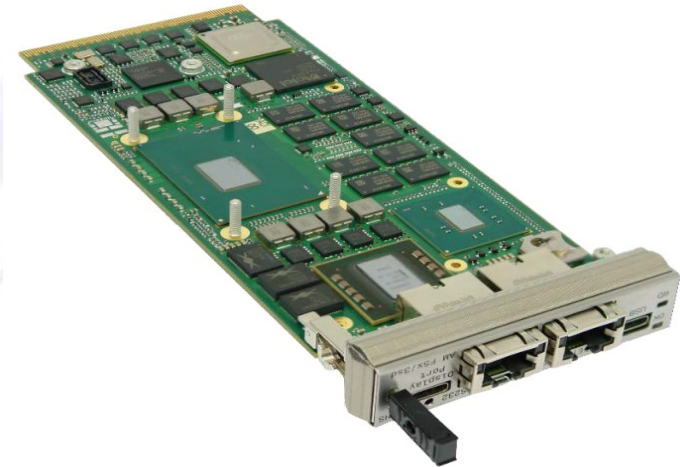
- 2U 19" MTCA.4 crate, PICMG MTCA.4 R1.0
- 5 double mid-size AMC slots
- 1 double full-size AMC slot
- 5 double mid-size μ RTM slots
- Double full-size MCH slot with μ RTM Slot
- Double full-size Power module slot
- Exchangeable cooling unit with front to left or right to left air flow
- Dust filter exchangeable

AM G6x/msd

- 4-core Intel® Xeon® Processor E3-1505M v6:
- 8 Mbytes Cache, 3.0 GHz
- Intel® HD Graphics P630
- 2-core Intel® Core™ i3-7102E Processor:
- 3 Mbytes Cache, 2.1 GHz
- Intel® HD Graphics 6302-core
- Front panel connections including option for 2 x 10 Gigabit SFP+ modules for remote connectivity
- Built in SATA microSSD™ for local boot and data storage
- Two M.2 sites for M-key SSD high speed RAID storage
- Optional µRTM
- Optional I/O in extended options region
- Support for Linux®, Windows® and VxWorks®



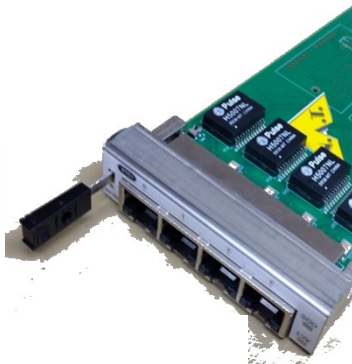
AM F5x/msd



- Intel® 4-core processor variants for CPU or GPU intensive processing loads
- 4-core Intel® Xeon® Processor E3-1515M v5:
 - 8 Mbytes Cache, 2.80 GHz
 - Intel Iris™ Pro Graphics P580
- Gen 3 PCI Express® fabric interface options for flexible connection to other payloads
- Front panel connections including:
 - 2 x 10GBASE-T Ethernet for networking
- 1 x DisplayPort®, USB and Serial for configuration
- Optional Flash Drive Module for local boot and data storage
- Optional I/O in extended options region

- GIG E Vision Board
 - Formfactor: MTCA.0

- 4 x Gig E Vision via PCIe signals
- Routed via MCH, via Processorboard to the end point with PCIe protocol
- Optional: Transmitting from Gig E Vision Board via MCH direct to an external device, like PC, Server or Hostcomputer.



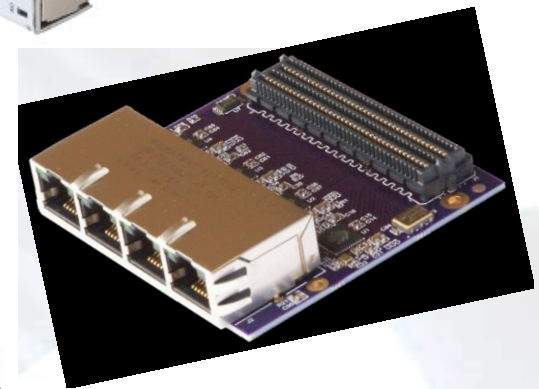
■ ZYNQ FPGA Board

- Xilinx ZYNQ-7000 XC7Z045 or XC7Z100 FPGA
- High pin-count FMC slot complies with VITA 57.1
- Dual banks of DDR3 memory (1 GB 64-bit, 512MB 32-bit)
- 256 MB NOR quad SPI flash memory
- MicroSD card slot
- AMC.1, AMC.2, AMC.3, AMC.4 and IPMI 2.0 compliant
- JTAG access over backplane
- FMC adapter GbE Vision



■ SanBlaze Storage Board

- One Integrated 2.5" disk drive /SSD
- SAS or SATA protocol and signaling
- Select active Port
- AMC port 3 only
- AMC port 2 only
- Both Ports (SAS only)
- Serial burst data rate 6.0Gb/s
- Capacity options up to 1TB
- Front panel disk activity LED



Pictures: similar to the original boards

Go Series

- 5-megapixel 2/3" CMOS imager (global shutter)
- Up to 22.7 fps at full resolution
- 3.45 μm square pixels
- Small size (29 x 29 x 41.5 mm, excluding lens mount)
- 8/10-bit output in choice of monochrome or raw Bayer color models (12-bit output available in video process bypass mode)
- Exposure control from 14 μs to 8 seconds in 1 μs steps
- 2X binning for increased speed and sensitivity (monochrome only)
- Single and multi-ROI modes for flexible windowing and use of smaller optics
- Automatic Level Control (ALC) for dynamic lighting conditions
- Accepts power over GigE Vision interface or separate 6-pin connector
- High reliability: MTBF > 200,000 hours
- C-mount lens mount



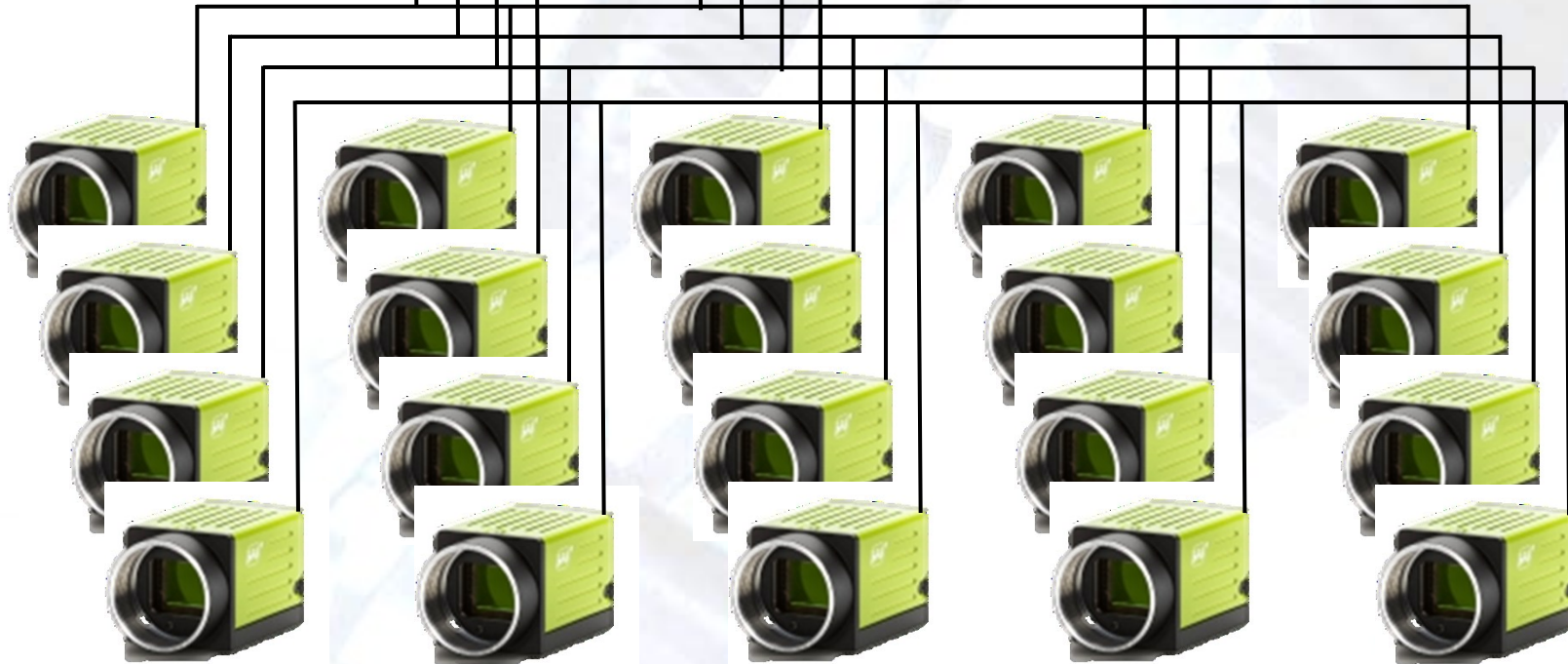
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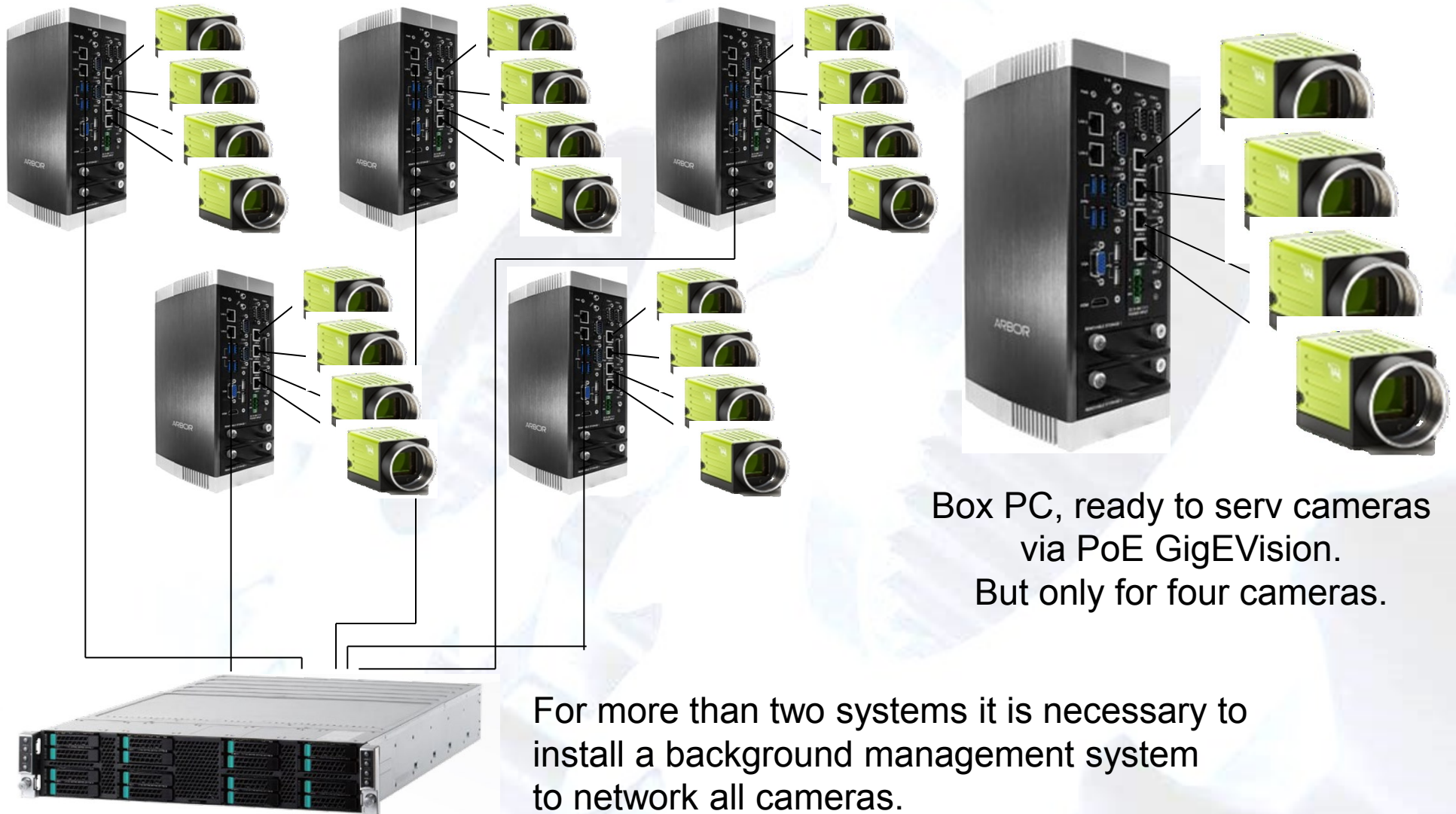


Size relation

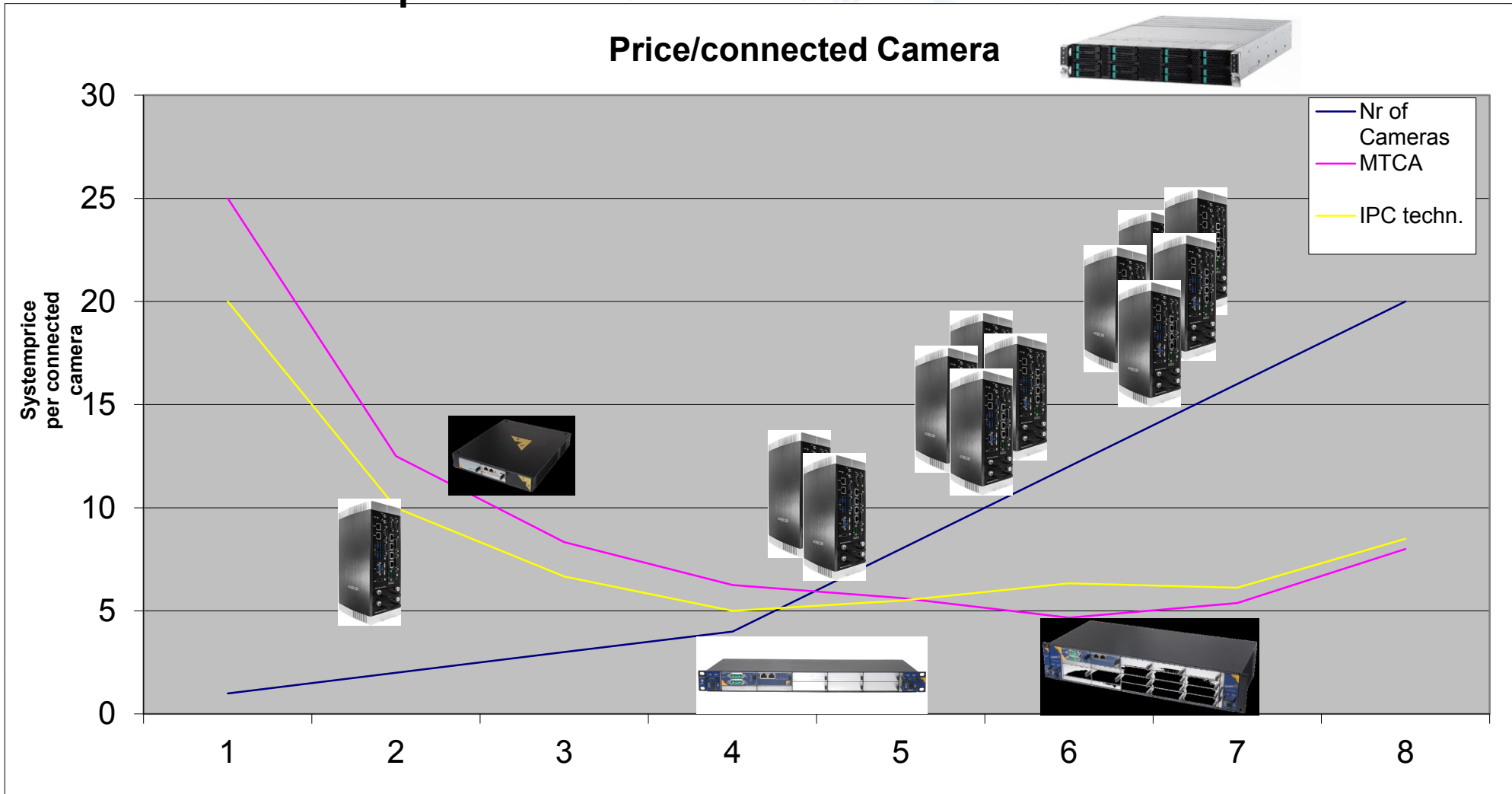


In case of such a number of Cameras it's useful to connect over PoEGigEVision.





Price comparison MTCA vs. IPC for connected cameras*



*[the price is per connected camera in the system]

Conclusion:

- In general the prices are quite similar.
- But with a larger number of cameras is MTCA, with higher quality, cheaper in the price per connected camera

- 5 GigE Vision?
 - 10 GigE Vision?
 - What is the best solution for Camera applications?
- PoE GigE Vision!

About speed, temp range, resolutions, aso.

pBC is ready to serv both directions in future.

Scalable Systems



Scaleable Chassis from
2 Slots up to 14 Slots in
Single or double width
Form factors for MTCA.0
and MTCA.4 Standards.

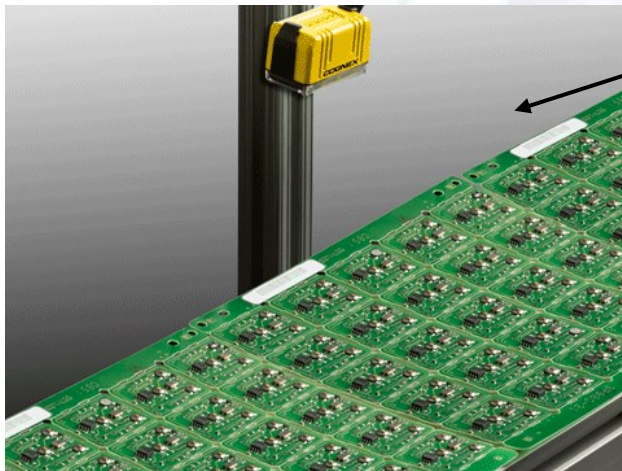
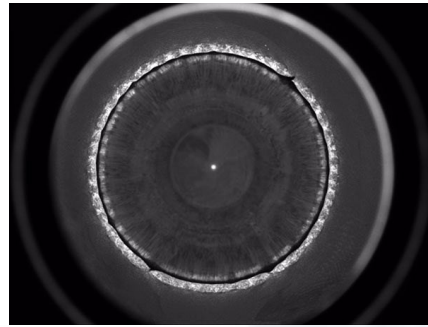
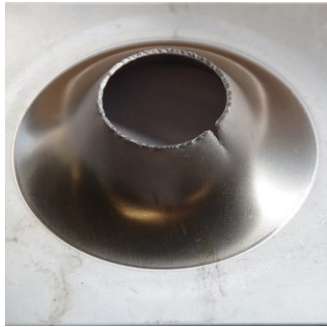


Smallest Version
with 8 slots
double and single width boards



- Parts of a fully equipped Image Processing System:
 - Chassis
 - 2; 6; 8; 14 Slots
 - Processorboard or
 - FPGA Board(with or without FMC)
 - 1-n Gig E Vision Boards, with 4 ports each
 - MCH, according to the system size, managing up to 14 Slots w/wo RTM's
 - Power Supplies
 - One or two, 600 Watts each or 1000 Watts each.





Vision inspection in:
Metal processing
Pcb assembling
Railway inspection
Printing and packaging industry





Any Questions

Thank you for your attention

Let's discuss your requirements and test our performance!

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Get yours



here!