



The Future
of
INDUSTRIAL COMPUTING

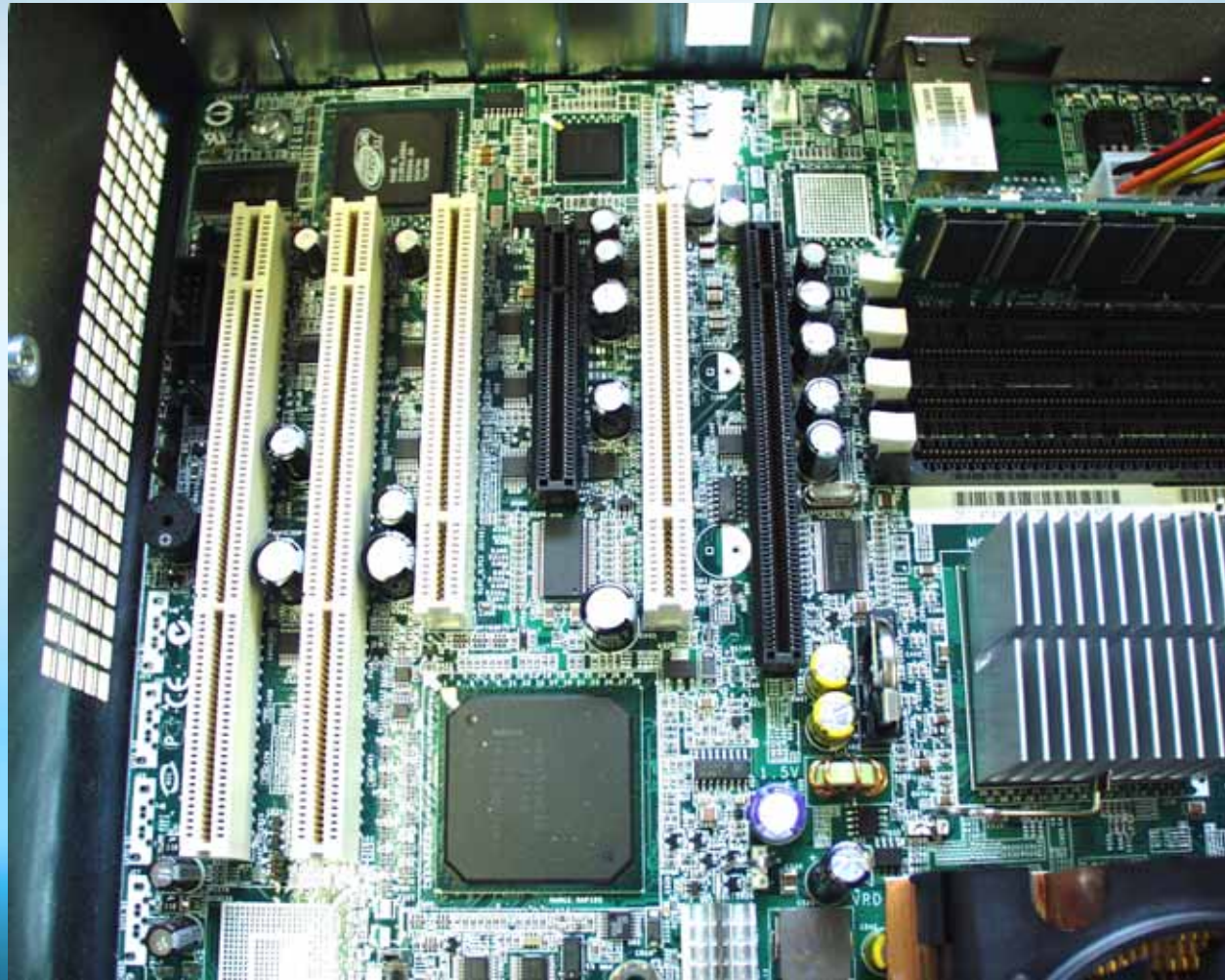
The PCI Express Opportunity

Steve Cooper
President and CEO
One Stop Systems

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What is PCI Express?

- The new backplane bus architecture

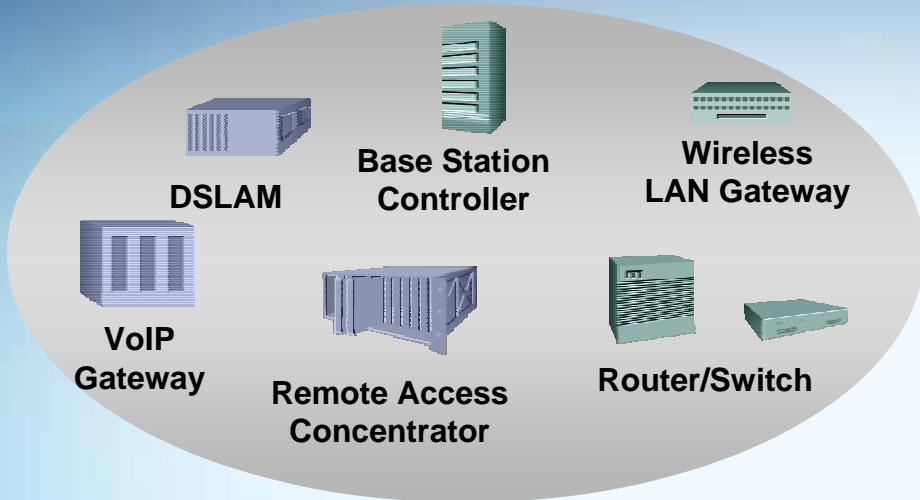


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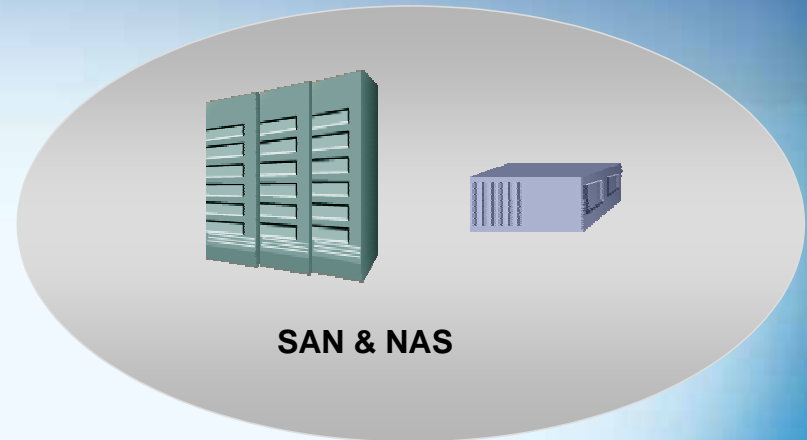
The PC Market Driver

- 200 million PCs per year

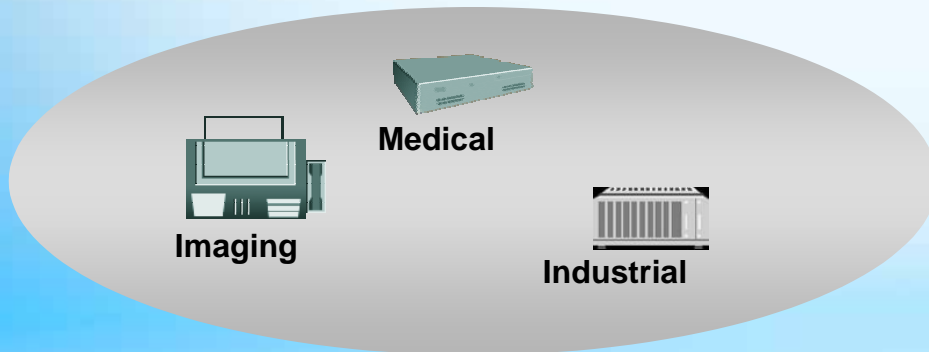
PCI Express Applications



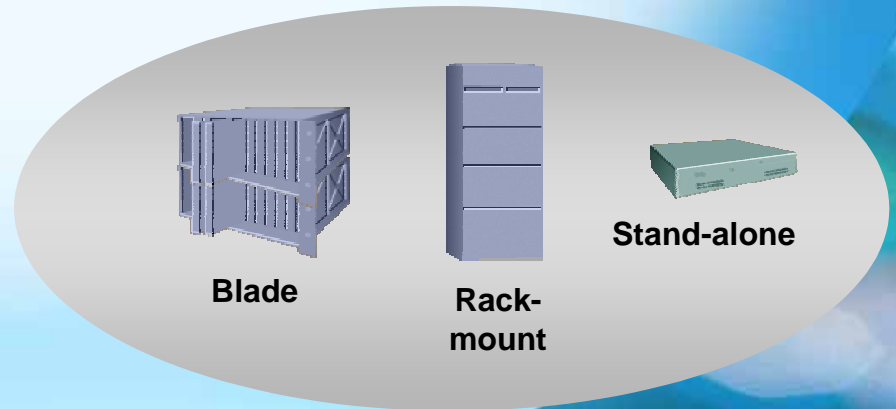
Communications



Enterprise Storage



Embedded Control



PCs and Servers

Every System will Change

- PCI will go away

Impact

- Obsolescence and re-invention
- The RoHS effect

New Capabilities

1. Performance
2. Form factors
3. PCIe over cable
4. Network architectures

The Performance Opportunity

- Performance increases 2 – 20X
 - LVDS @ 2.5Ghz
 - Multiple lanes
 - Direct point-to-point interface
- Gen 2 timing

Performance



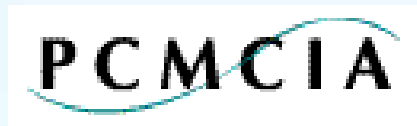
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Higher I/O Performance

- More data . . . Faster

The Form Factor Opportunity

- 58+ Form factors being standardized



Assimilating PCI Express

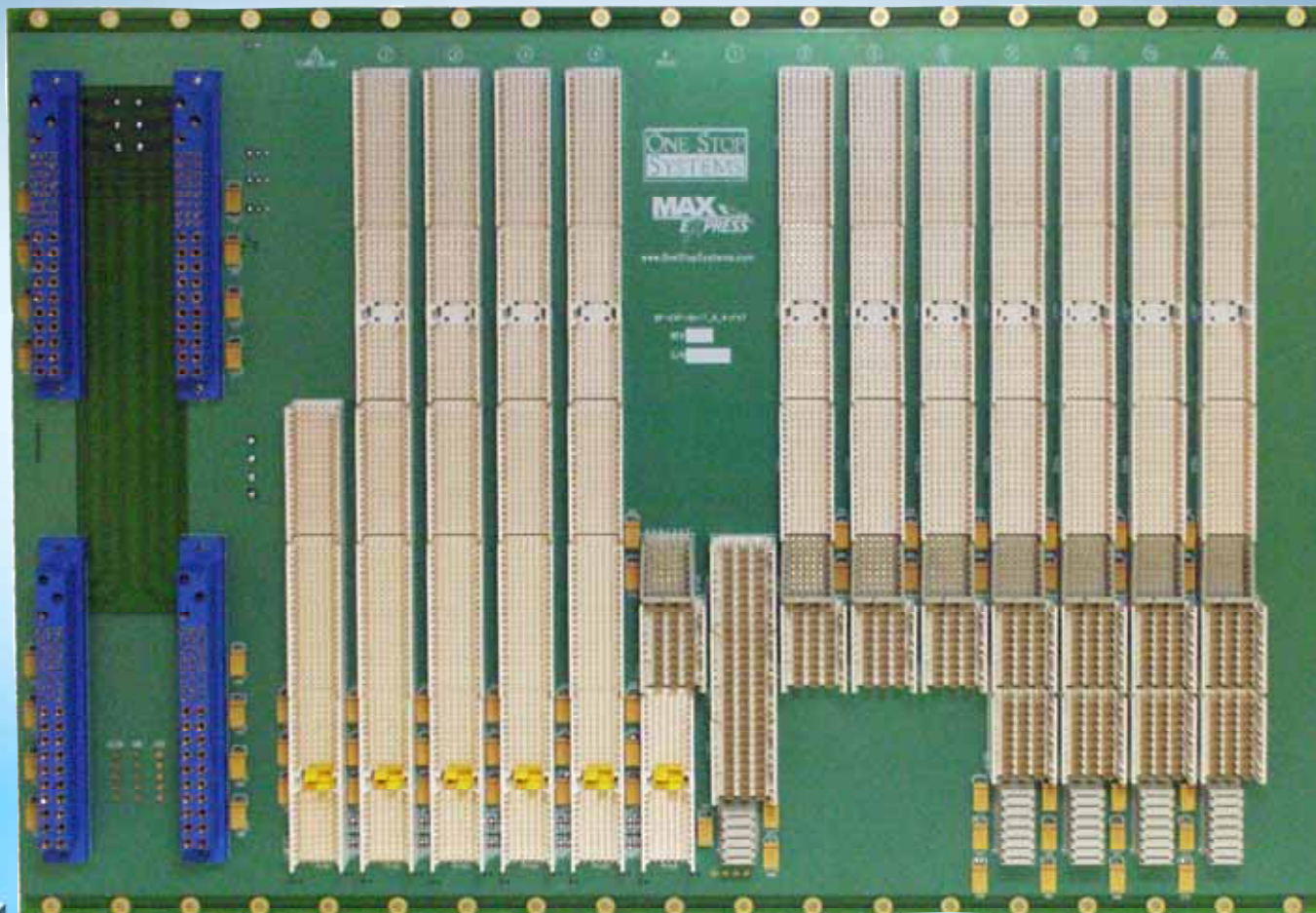
- Existing form factors – CPCIe
- New form factors – COM Express
- Hybrid PCI and PCIe systems

3U CPCI Express Board



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6U CompactPCI Express



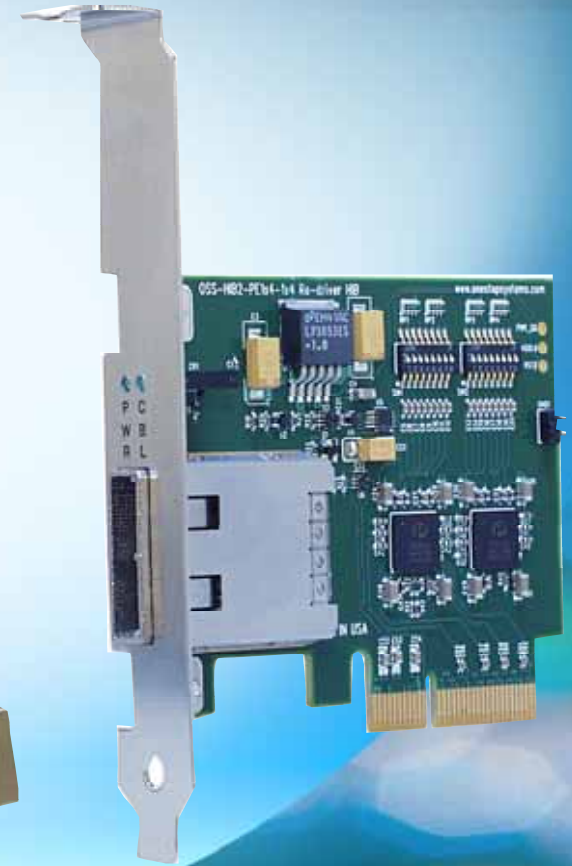
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CompactPCI Express Status

- Specification approved
- First products available
- PXI Consortium approved
- ASI products mid-2006

The Cable Opportunity

- PCIe over cable
 - Full bandwidth
 - Cable up to 7 meters
 - Software transparent



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PCIe over a Cable – Interfacing



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MAX EXPRESS™



PCIe SHB Expansion Chassis



PCIe Host Motherboard System



RAID Array



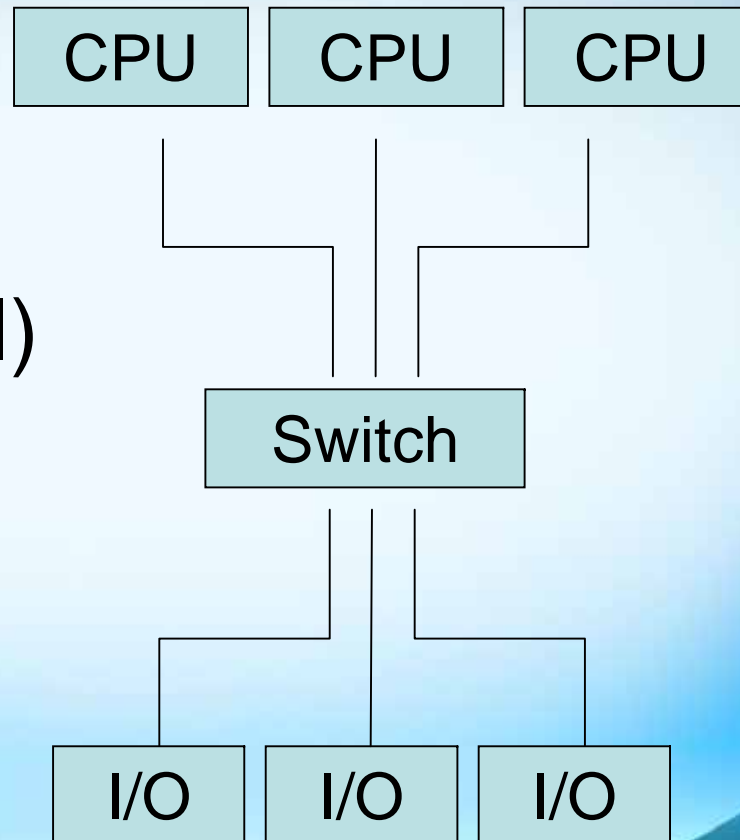
8-port PCIe Switch



cPCI/cPCIe Expansion Chassis

The Network Opportunity

- Advanced Switching Interconnect (ASI)
- Full networking
- Dynamically mapped I/O



CompactPCI Express with ASI

- Multiple CPUs
- Dynamically mapped I/O
- Replacement for PICMG 2.16
 - Higher performance
 - Better failover features

6U CPCle System



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Timing

- 2005 and before: Specs and components
- 2006: Boards and sub-systems
- 2007: Production volume ramp

Challenge

- Taking advantage of the PCI Express Opportunity