

# Trends in High-speed PXI Digitizer Instrumentation

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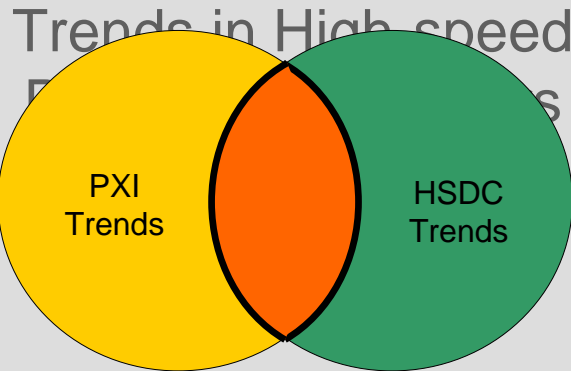
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## Abstract

Trends in PXI Market Demand  
PXI Expansion Challenges  
PXI Positioning  
Addressing PXI Market Demand  
Trends in High-speed Data Converter Demand  
Trends in High-speed Data Converter Technology  
Conclusion





## Trends in PXI Market Demand

- Growing need for integrated solutions with complex signal measurement
- Increasing frequency requirements for high-speed, RF component testing
- Reducing overall system costs by integration of instrumentation into a common format
- Lowering the cost of system development and integration



## PXI Expansion Challenges

- Position clearly the PXI platform
- Increase density and functionality
- Overlook installed based of T&M equipment
- Expand PXI instrumentation product range
- Convince end-users that PXI is here to stay
- Provide open software and synthetic instruments



## PXI Positio

- PCI:** OEM 1-2 channels and Universities studies
- PXI 3U:** Production testing (manufacturing) and small ATE
- CPCI 6U:** Industrial ATE and advanced research
- VME:** Embedded military
- GPIB:** R&D, Q&A and FA



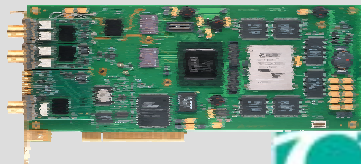
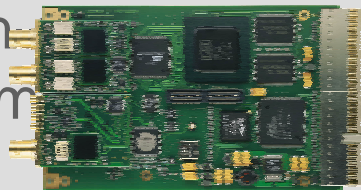
## Addressing PXI Market Demand

- Develop the vendor community and the open PXI standard
- Increase PXI product capabilities and move into new markets
- Develop higher speed PCI buses while maintaining backward compatibility.
- Replace conventional instrumentation by Synthetic Instrumentation (SI)
- Design new technologies, such as real-time systems



## Trends in High Digitizer Dem

- Cost pressures in manufacturing
- Open architecture
- PXI leverages Industry Standard PCI
- Smaller Form Factor
- Customizability is a key selling point for PXI-based test equipment
- Product enhancements and additions



## Trends in High- Digitizer Techn

Advances in analog-to-digital converters (ADCs), digital-to-analog converters (DACs), memory, and clocking architectures will ultimately deliver more powerful measurement capabilities to users



– Price/performance

## Conclusion

- Reducing overall system costs by integration of instrumentation into a common format
- Reducing replacement cycles with synthetic instrumentation
- Reducing size and consumption
- Helping characterize devices earlier in the product lifecycle
- Reducing overall cost-of-test (throughput and

