



Power

Axxia® Communication Processor

Wei Wang, LSI Corporation

CELEBRATING 21 YEARS OF POWER ARCHITECTURE ANNIVERSARY

ASIA
POWER
ARCHITECTURE
CONFERENCE

SHANGHAI, CHINA OCTOBER 25, 2012



Power

THINKPOWERCHOOSEPOWER

INNOVATION

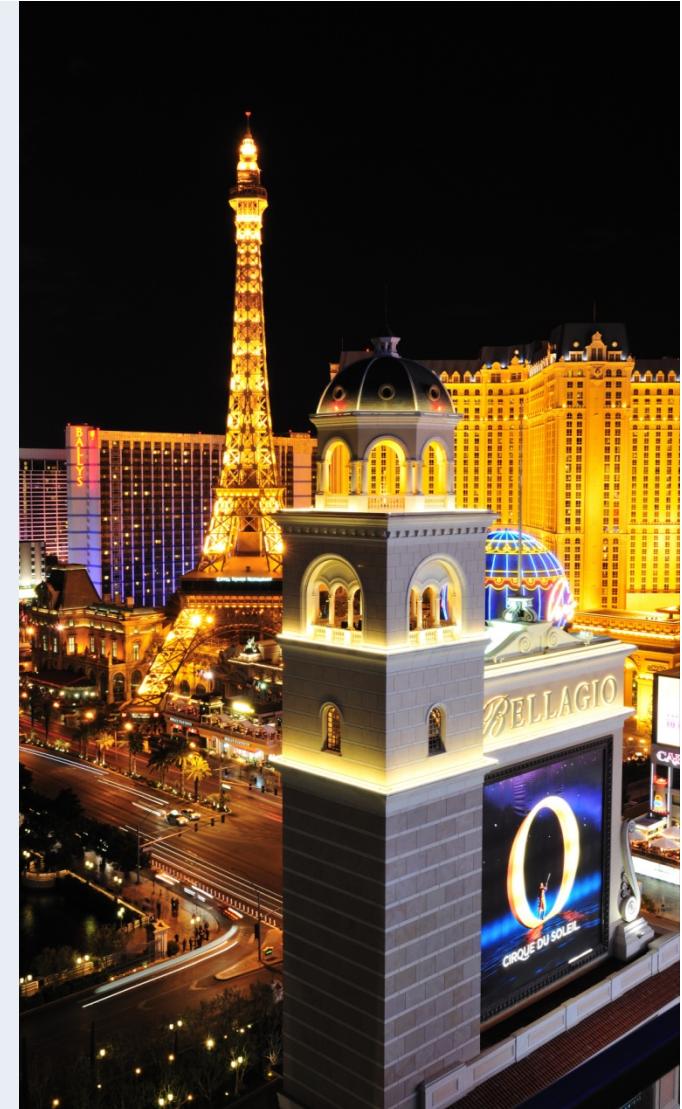
COLLABORATION

GROWTH

CELEBRATING 21 YEARS OF POWER ARCHITECTURE ANNIVERSARY

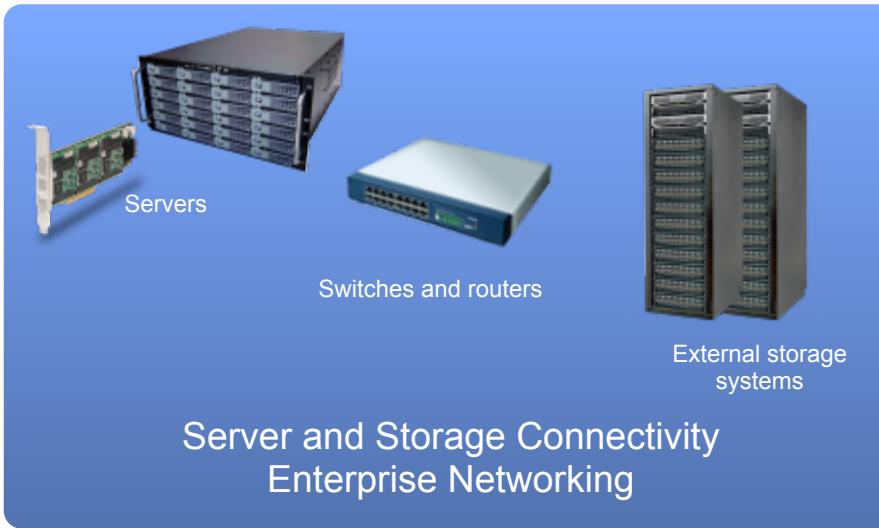
LSI Overview

- **Focused on Networking and Storage**
Pure play semiconductor company
Acquired Sandforce, the leader in flash storage processors
- **Solid Financial Position**
\$2.08B Revenue in 2011
9.3% YoY Revenue Growth
>\$900M Cash on Hand, No Debt
- **Global Presence**
4,500 Employees
42 Site Locations/ 25 R&D Centers
- **Culture of Innovation**
Over 13,000 Patents
2011 R&D Investment: 27% of Revenue*



*Excluding special items

Enabling Datacenters and Mobile Networks



2012 Highlights

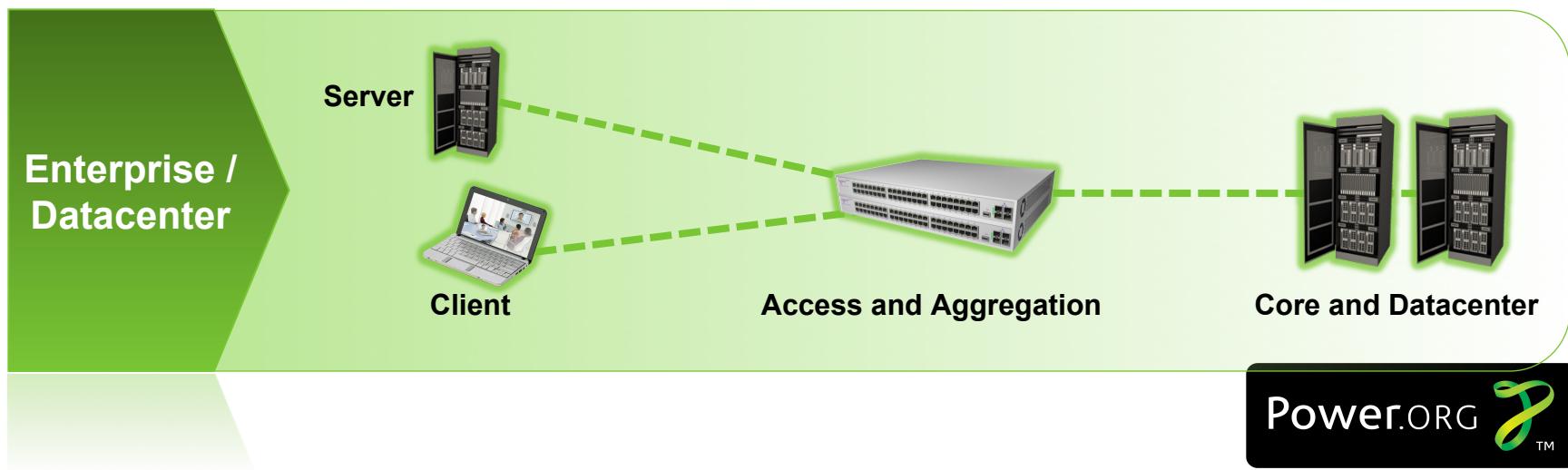
enterprise
& mobile
networking

Axxia solution
shipping in 2
tier-1 cellular
basestations

Axxia®
solution
designed into
tier-1
datacenter
switch

custom silicon
designed into
tier-1 routers &
switches

Networking Market Focus



Networking Product Categories

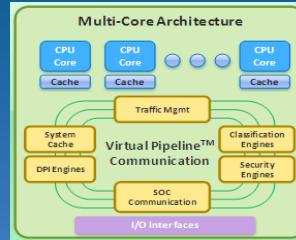
Network Access

Aggregation & Control

Service Gateways

Mobile Networks

Axxia® Processor Family



Enterprise / Datacenter



Axxia®
Communication
Processors



Axxia®
Media & Baseband
Processors



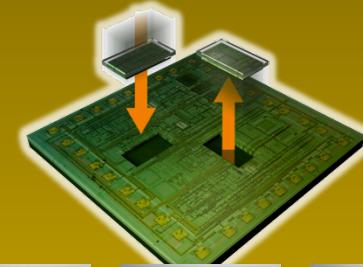
Axxia®
Content and Security
Processors

Control and Data Plane

Media Processing

Security and Content

Custom Silicon Solutions



Custom Silicon
Solutions



Custom Silicon
Solutions



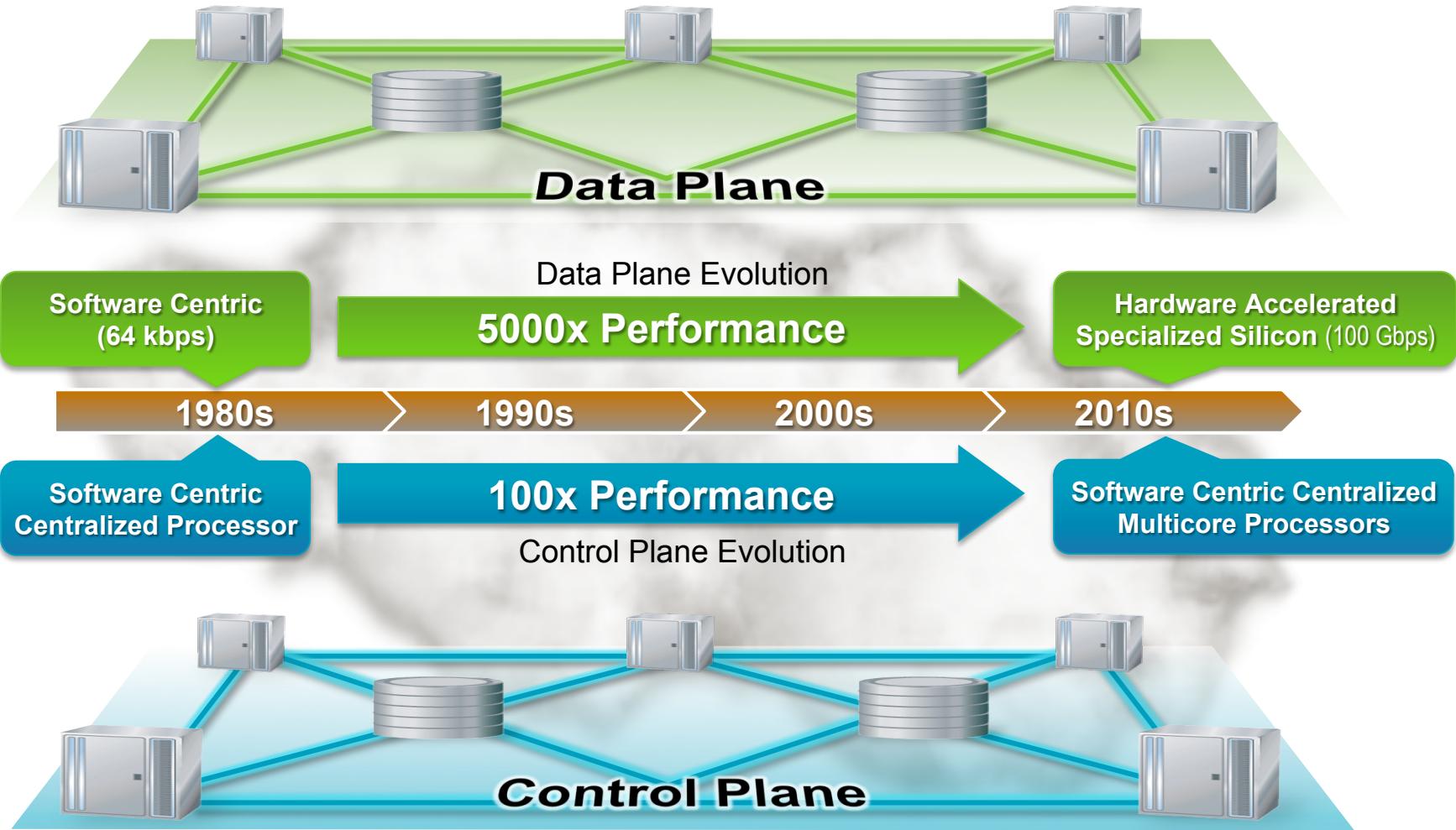
Custom Silicon
Solutions

Baseband

Switching and Routing

Ethernet Connectivity

Networking Data and Control Plane Evolution



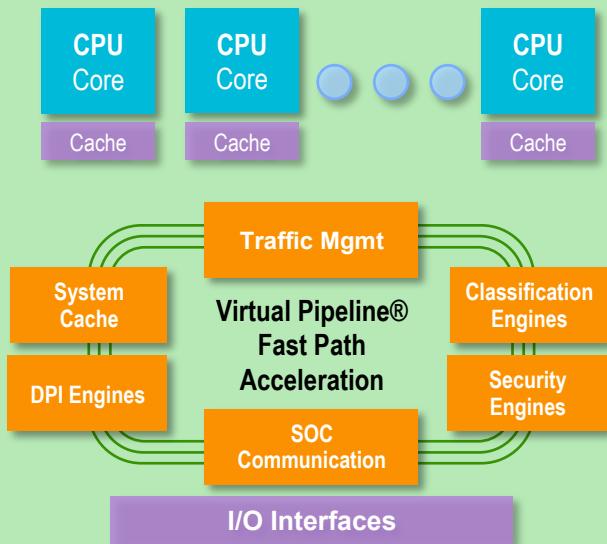
Cloud Is Breaking the Traditional Control Plane Architecture



Axxia Platform for Networking

Multicore + Fast Path

Multicore Architecture



Axxia processors combine state of the art multicore processors with flexible fast path acceleration. This unique blend of general purpose and special purpose processing accelerates network applications.

Total Platform Solution

Customer Applications

Third Party Stacks & Applications

Application Development Kit

OS/Run Time Environment

Axxia SoC Cust. IP

Silicon Technology Foundation

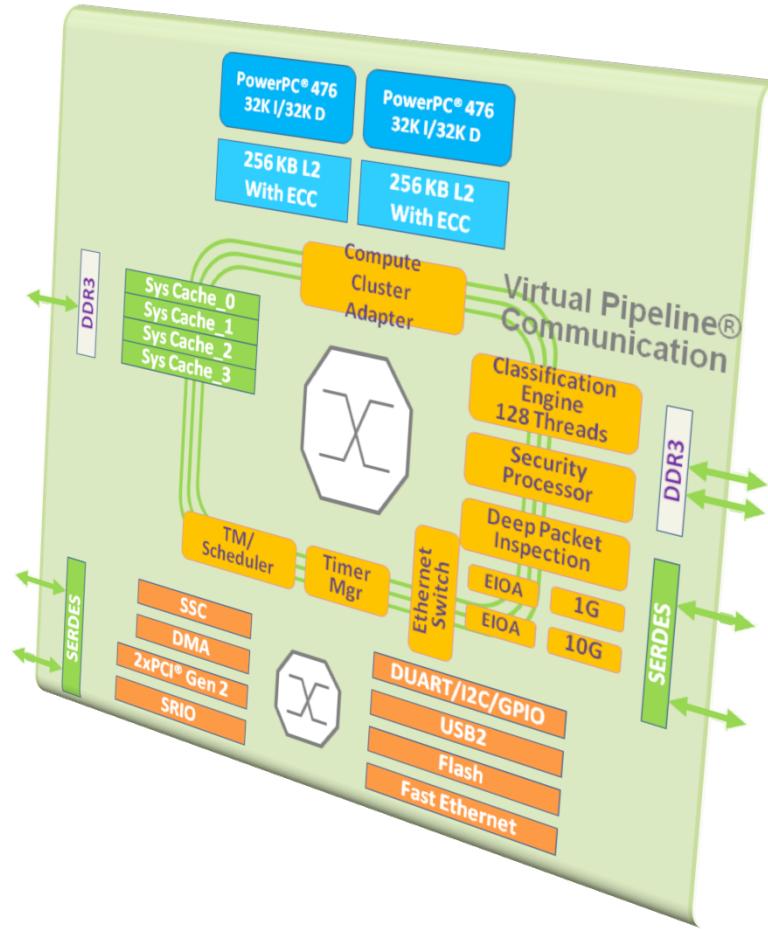
Development Tools & Support

The Axxia platform provides a complete framework for developing high-value mobile networking applications. The ability to integrate customer IP allows for additional competitive advantage.

LSI Axxia Communication Processor AXX2502 Summary

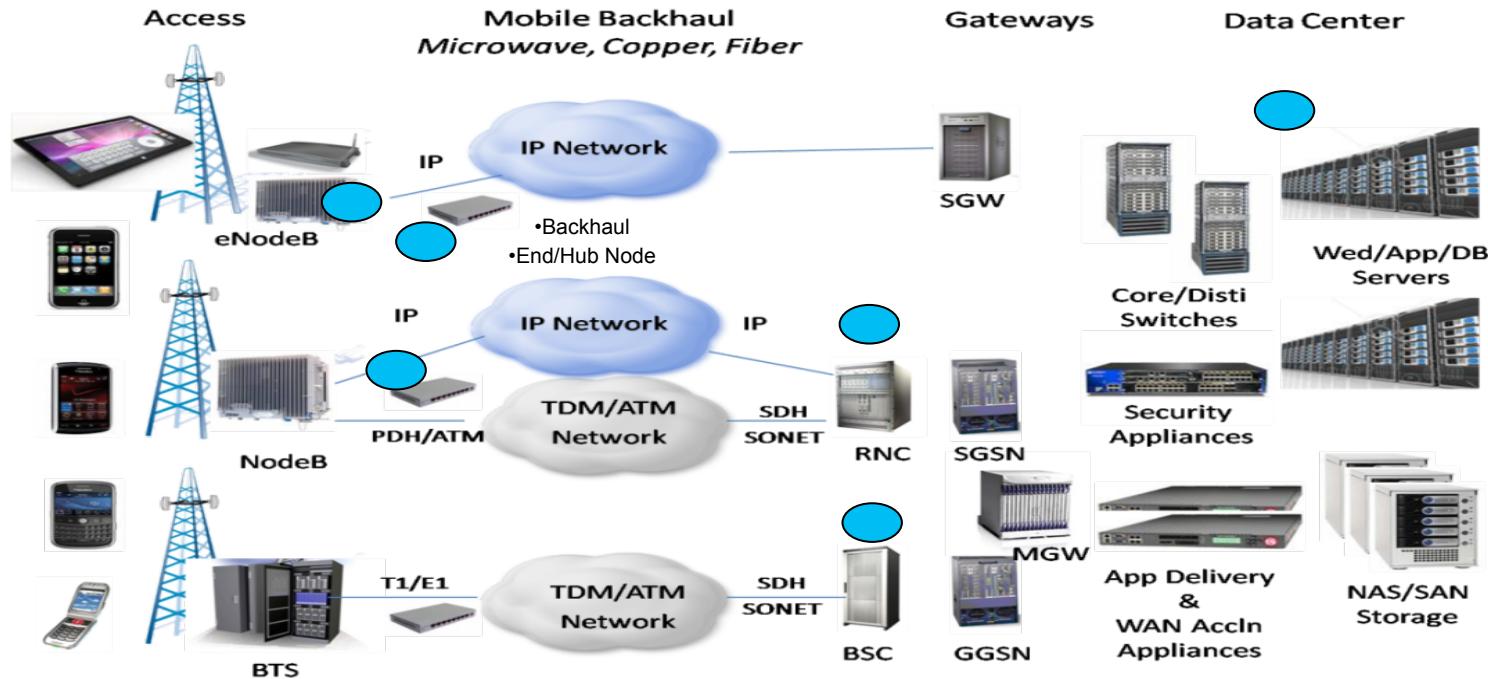
Accelerating Mobile Networks

- First Axxia Communication Processor to:
 - integrate GE & 10GE Ethernet switching capability (PCX)
 - feature secure system complex with multicore CPU's and fast path processing.
- Virtual Pipeline® technology: High performance fast data path processing (IPv6, IPSec, etc.) and offload for up to 20 Gbps performance.
- Integrated timing-over-packet solutions for IEEE 1588v2 and Synchronous Ethernet
- LSI's first 28nm standard networking product
- Available now.



Highly integrated device lowers BOM costs and power while increasing performance

Wireless Access and Mobile Backhaul Overview



Application	Market Trends
Basestation transport	Experiencing explosive growth of mobile data (video streaming) requiring higher performance transport processing and content caching processing at low power profiles.
Mobile backhaul, cell site, ODU/IDU uWave	Requires highly integrated, low-cost solutions that scale across multiple mobile backhaul equipment.
Service plane offload/line card application	Target wireless and wireline shelf controllers, service/control plane processing, and line card applications.

Evolving markets require: highly integrated device, minimizing silicon costs with scalable functionality, low power envelope, and high performance

Control Processing with Ethernet switching

- Cloud services are transforming Enterprise and datacenter networking infrastructure
- Axxia Communication Processor AXE2502
 - Target Markets
 - Enterprise switching and routing line cards
 - Datacenter offload acceleration, cloud computing, and virtualization
 - Enterprise (control/service plane offload)
 - Full offload programmable fast path architecture enables and accelerates highly scalable OpenFlow/SDN-based virtualized datacenters
 - Enables control plane offload acceleration with production-ready protocol processing modules
 - Provides high performance control processing, low latency, deterministic performance, and Ethernet switching



LSI Networking Summary

Commitment

- **Strategic:** Focused on networking solutions
- **Roadmap:** Multi-generational partnerships

Technology

- **Breadth:** Internal and ecosystem functional expertise
- **Depth:** Track record of deep domain expertise

Innovation

- **Platform:** Unique differentiation with Axxia solution
- **Ingredients:** Market-leading multicore architectures

Execution

- **Development:** Concurrent HW/SW development
- **Supply:** Robust and responsive supply chain

Collaboration

- **Track record:** 15+ years high value partnerships
- **Culture:** Open and transparent culture



Storage. Networking. **Accelerated.**[™]

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