

ATCA Building Blocks Today and Tomorrow



Agenda

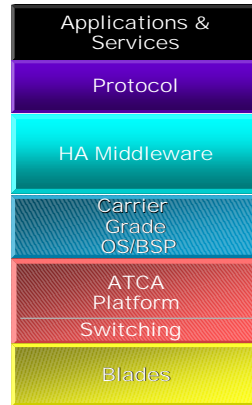
- A look at ATCA Building Blocks today
 - Where they fit in in the Building Block hierarchy
 - What you need to know if you are a user of Building Blocks
- What to expect from Building Blocks tomorrow



Blade Building Blocks - Today



ATCA-6890
ATCA high performance SBC
-one or two next-gen Xeon processors
-up to 3.2,3.46,3.5,3.67 GHz
-Intel E7520 chipset
-DDRII-400 up to 16GB



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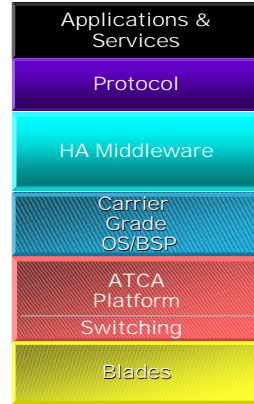
- Data Interfaces
 - Fabric Interface
 - Topology
 - Dual Star
 - Dual-Dual Star
 - Mesh
 - Protocol
 - PICMG 3.1 Ethernet
 - PICMG 3.2 Infiniband
 - PICMG 3.3 Star Fabric
 - PICMG 3.4 PCI Express
 - Base Interface
 - Compute Performance
 - Power Dissipation



Switch Building Blocks - Today



ATCA-3100
ATCA Base/Fabric Interface
Switch
-Base Interface :1000BaseT
Gigabit Ethernet
-Layer 3 switching
-Support for 14 node slots



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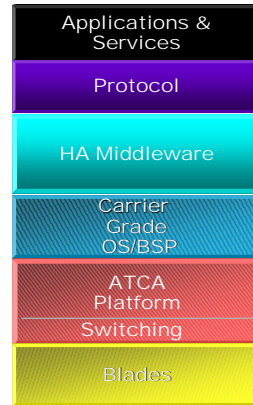
- Data Interfaces
 - Fabric Interface
 - Same as Blade
 - Compute Performance
 - High Availability Features
 - Number of Slots Supported
 - Type of Switching
 - Management Capabilities



Platform Building Blocks - Today



ATCA-8014 10U ATCA Shelf
-enables 4 shelves per telecom frame
-14 ATCA front boards(12 nodes+2 fabric)
-200W power dissipation per slot



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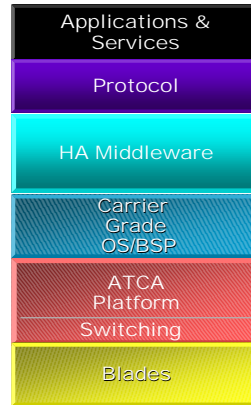
- Backplane
 - Data Interfaces
 - Fabric Interface
 - Topology
 - » Dual Star
 - » Dual-Dual Star
 - » Mesh
 - Power/Cooling Capability per Slot
 - Total Power Available

OS/BSP Building Blocks - Today



Carrier Grade Linux

- High availability
 - Redundant networking, Disk mirroring, Raid disk mirroring
- Serviceability
 - Application heartbeating, Runtime application patching, Remote boot, Event logging, IPMI support



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Important Info:

- Compatibility
 - Is it compatible with my other building blocks?
 - Will my platform be able to use all of the features?



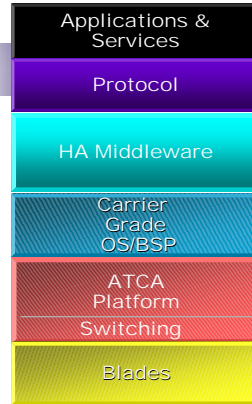
OS/BSP Building Blocks - Today



HA Middleware

-Hides the hardware HA implementation from the application code – allows applications to be vendor independent.

- Hardware Platform Interface (HPI), Application Interface Specification (API),



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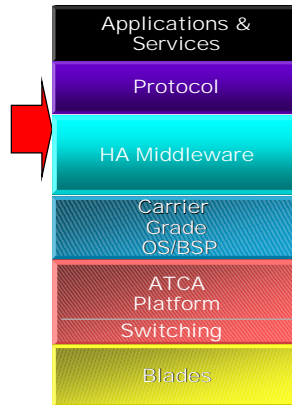


OS/BSP Building Blocks - Today



Protocol Stacks

- SS7
- 2.5/3G Wireless
- VoIP



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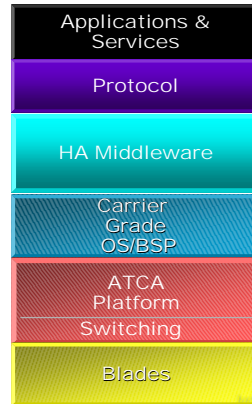
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Application Building Blocks - Today

Value Added by TEMs



What is the problem with today's building blocks?

- Requires that users understand the technology behind the building blocks
 - ATCA fabric topologies
 - Dual star
 - Dual – Dual star
 - Full mesh
 - ATC Fabric protocols
 - Gigabit Ethernet
 - 10 Gig Ethernet
 - PCI Express
 - Interoperability between PICMG 3.0, 3.1, 3.2....
 - Chassis cooling and power delivery per slot

What is the problem with today's building blocks Cont...?

- Requires that users integrate the building blocks into a solution
 - Selection of OS, middleware, protocol stacks
- Who is responsible for technical support when you integrate building blocks from multiple vendors?
 - You!
- These activities are not part of the value add that a TEM or NEP provides.

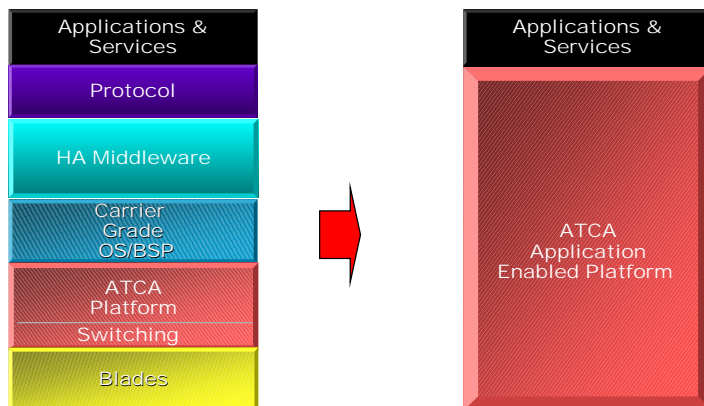


What are the Building Blocks of the Future?

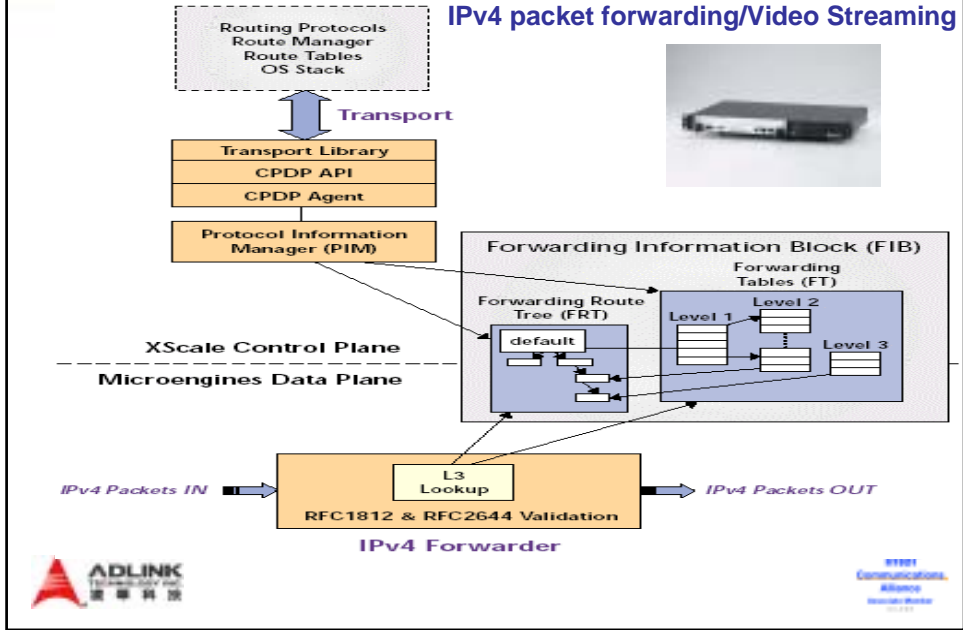


Application Enabled Platforms

- Integrates
 - Blades
 - Chassis
 - Operating System
 - Middleware
 - Protocol Stacks



IPv4 packet forwarding/Video Streaming



How to Specify Application Enabled Platforms?

- Application
 - Media Gateway
 - SoftSwitch
 - RNC
 - Signaling Gateway



What to look for in Next Generation Application Enabled Platform Supplier

- Ability to customize
 - Can your vendor help make your product unique?
- Support
 - Where is the support based?
- Capability
 - A track record of delivering and integrating Building Blocks



Summary

- How are you spending your valuable resources (time, money, people)
- Is integrating piece-part Building Blocks an efficient use of your resources?
- By using Application Enabled Platforms can you focus more resources on your value add?

