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Build Frictionless Arm Native Cloud

From Edge to Hyperscale

Ampere Computing

Kaiben Sun

Markets & Trends Driving Arm Native Cloud

Real Time Behavior, Edge AI & Analytics

Autonomous Vehicles

5G->Proximity to User/Device

Smart Everything

Guaranteed Service Delivery

Cloud Gaming

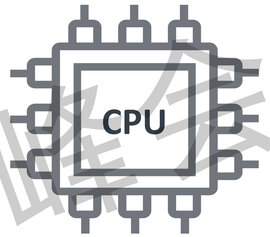
Content Sharing/Streaming

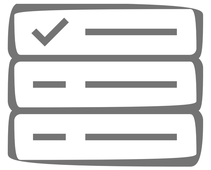
AR/VR

Arm Native Cloud is Ready from Edge to Hyperscale

Arm microarchitecture provides the needs of modern cloud:

- High Performance and performance/watt efficiency
- Scalability from Hyperscale to Edge
- Server class RAS, efficient virtualization and power management





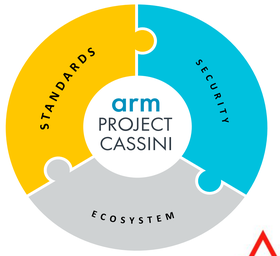
SystemReady SR provides a solution for servers that Just Works:

- Allowing partners to deploy Arm servers with confidence
- Ensures that Arm-based servers work out of the box
- Offering seamless interoperability with OS, hypervisors, and SW

arm SystemReady

Project Cassini ensures a cloud-native experience across edge ecosystem:

- Design to support and enable diverse Arm based hardware
- Enable the ecosystem to leverage the significant investment in cloud native SW



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Ampere Builds Innovative Products for Cloud

Hyperscale
Cloud

Edge
Cloud

Industry’s First 128-Core and 80-Core Cloud-Native Processor Family

Leadership Performance

higher Power Efficiency

higher Core Density

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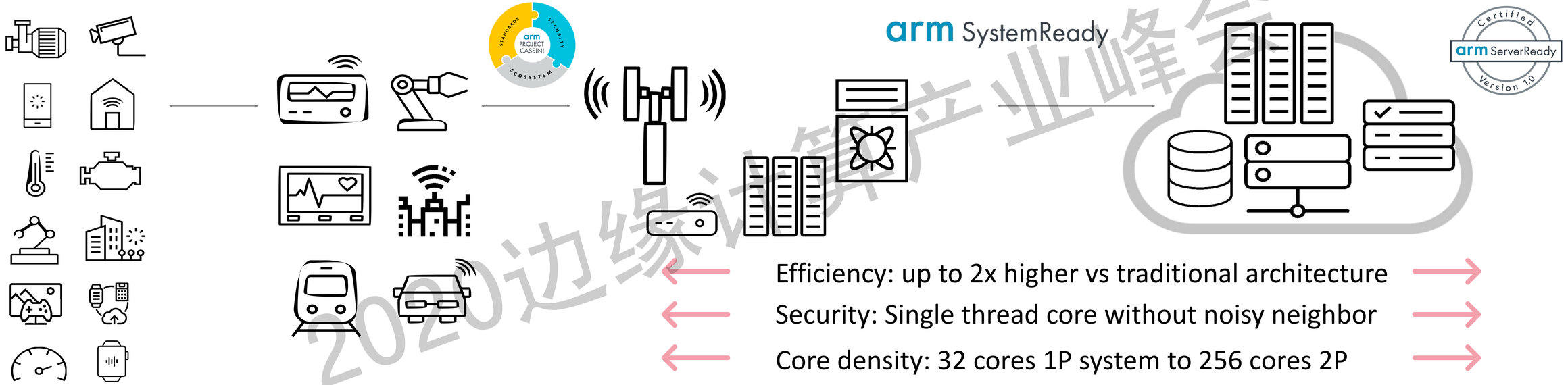
Ampere Altra™ Full Stack Bridges Edge Infrastructures and Hyperscale

Data streams from 1T connected devices	Industry 4.0 compute platforms	Open platforms for 5G RAN	Intent based Networks	TCO-driven data center compute



- Efficiency: up to 2x higher vs traditional architecture
- Security: Single thread core without noisy neighbor
- Core density: 32 cores 1P system to 256 cores 2P
- Memory: 4-8 DDR4 channels, 2DPC option per socket
- IO: 128 lanes PCIe-G4 1P to 192 lane 2P across SKUs
- Power: TDP ranges from 50w to 210w across SKUs

Extremely Scalable Ampere® Altra™ Family

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Arm Native Cloud Creates App Innovation

	History	The Recent Past	Present	The Near Future
Architecture Cluster?	Single Board Computers	eMag 32 Cores	Altra 160+ Cores	Altra Max – 256 Cores!
Application Instance Density	1000	10K+	500K+	Millions
Application Instance Performance	Low	Medium	High	High
Solution Maturity	Inflexible *Replica of mobile App*	1st Generation *App Ported to Cloud*	Scalable Cloud *App Built in Cloud*	Resilient Cloud *App Transformed*
Cloud Gaming	Very small market SW: Native OS	1st Gen Games SW: Entry VMM & Containers	Many Games Ported New Developer Model	Native Cloud Gaming + 5G & Edge Enablement
Enterprise App Streaming or VMI	Very Small Market	Entry Level Applications	Mobile App Streaming Enterprise Security & Regulations	Multi-Cloud & Multi-Device Enabled
Application Test & Development	Access Limited Sea of Boards	Entry Level CI/CD Immature Tools Limited Developer Access	Developer Base Expands Tools written for Native Cloud	Born in Cloud New developer tools = New Apps

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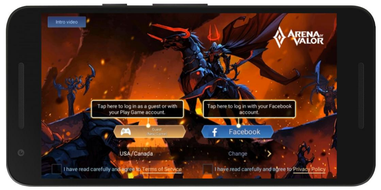
Ampere® Altra™ in Arm Native Use Cases



Strong integer Performance
High core count
Large cache and memory footprint
Strong QoS
High IO Fanout (more GPUs)
High Memory BW

A perfect choice for AIC use cases:
Predictable per instance performance
Maximum Instance Capacity
Greater GPU capacity
Arm Native OS Support
64-bit & 32-bit App Support

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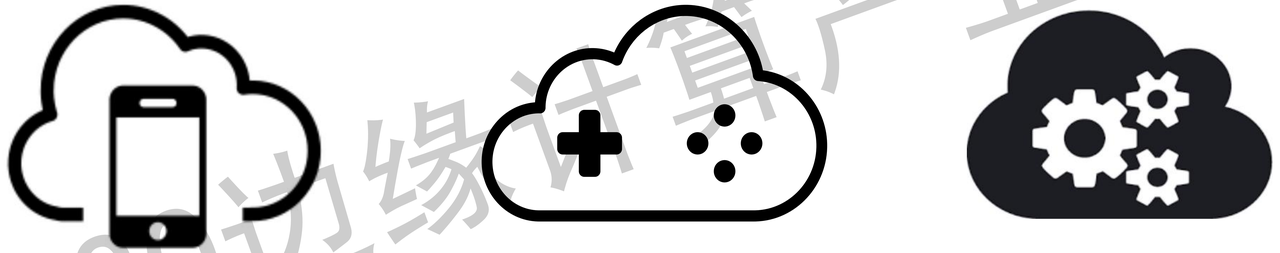
Partnering on Arm Native Solutions



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THANK YOU!