Agenda

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2018 Highlights

Global Presence

Product Portfolio

Customer Success
Global Trends

Internet users by 2022: 60% of the population will be using the Internet, up from 45% in 2017.

Internet traffic by 2022: 85 GB of Internet traffic per month, per user, up from 29 GB in 2017.

Devices/connections by 2022: 3.6 networked devices and connections per person, up from 2.4 in 2017.

Exabytes per Month:
- 2017: 122
- 2018: 156
- 2019: 201
- 2020: 254
- 2021: 319
- 2022: 396

Source: Cisco VNI Global IP Traffic Forecast, 2017–2022
SiFive Core IP
Embedding Intelligence Everywhere

**Consumer**
AR/VR/Gaming devices
Smart Home
Imaging/Wearables

**Storage/Networking/5G**
SSD, SAN, NAS
Base Stations, Small cells, APs
Switches, Smart NICs, Offload cards

**ML/Edge**
Sensor Hubs, Gateways
Autonomous machines
IoT devices
SiFive Core IP 7 series

The highest performance commercial RISC-V processor IP

Common Feature sets
- Hard Real-time capabilities
- Unprecedented scalability

- 32-bit Embedded Processors
- 64-bit Embedded Processors
- 64-bit Application Processors

- ~60% increase in CoreMarks/MHz*
- ~40% increase in DMIPS/MHz*
- 10% increase in Fmax*

*Compared to SiFive 5 series
Core IP 7 Series
Standard Cores

01  E76, E76-MC
02  S76, S76-MC
03  U74, U74-MC

Standard Cores represent pre-configured implementations of a Core Series which are available for free RTL and FPGA evaluations.
SiFive 7 Series
Embedded Intelligence Everywhere

Scalable throughput provided by 8+1 cores per cluster

Extensible design via custom instructions

Configurable memory architecture for application specific tuning

Tightly integrated memory for low latency access

64-bit addressability for real-time latency sensitive applications

Mixed-precision arithmetic for efficient compute of ML workloads

Enhanced determinism for hard real-time constraints

Functional safety provided by in-built fault tolerance mechanisms

A single pre-integrated and verified deliverable

Cache lock capability for mission-critical computing

In-cluster coherent combination of real-time and application processors
- ITIM and FIO Ports provide fast local SRAM and Accelerators
- Coherent System with a shared Level 2 Cache Controller
- Front Port allows other masters access to U7-MC Core Complex Memories
Enterprise SSD

• FADU Annapurna SSD Controller
  • World’s first RISC-V SSD controller

• FADU Bravo Series Enterprise SSD

• 3.5GB throughput and 800K IOPS at less than 1.8W

• Powered by SiFive E51

“SiFive’s RISC-V Core IP was 1/3 the power and 1/3 the area of competing solutions, and gave FADU the flexibility we needed in optimizing our architecture to achieve these groundbreaking products.” J. Lee, FADU CEO
Intelligent Edge

- Microsemi’s **PolarFire SoC**
- **World’s first RISC-V SoC FPGA architecture** bringing Real-time to Linux
- Targeted for real-time Linux applications at the Edge
- **Defense-grade** security features
  - Secure boot
  - DPA safe crypto core
  - SECDED on all memories
  - Physical memory protection/PMP
- Powered by **SiFive U54-MC** and **SiFive E51**
Wearable AI

- **Huangshan No. 1 (MHS001)** from Huami using Upbeat Tech

- **Integrated biometric signal processor** with 4 dedicated AI engines and built-in CNN based inference engine

- **38 percent more efficient** than the Arm Cortex-M4

- Powered by **SiFive E31**

“The world’s first artificial intelligence powered wearable chipset”
SiFive Core IP Portfolio

Efficient Performance

Scalability

Compelling Feature Set

Embedding intelligence for a world of a Trillion Connected Devices