Arista 7130

The Latest Innovations in Low-latency Networks

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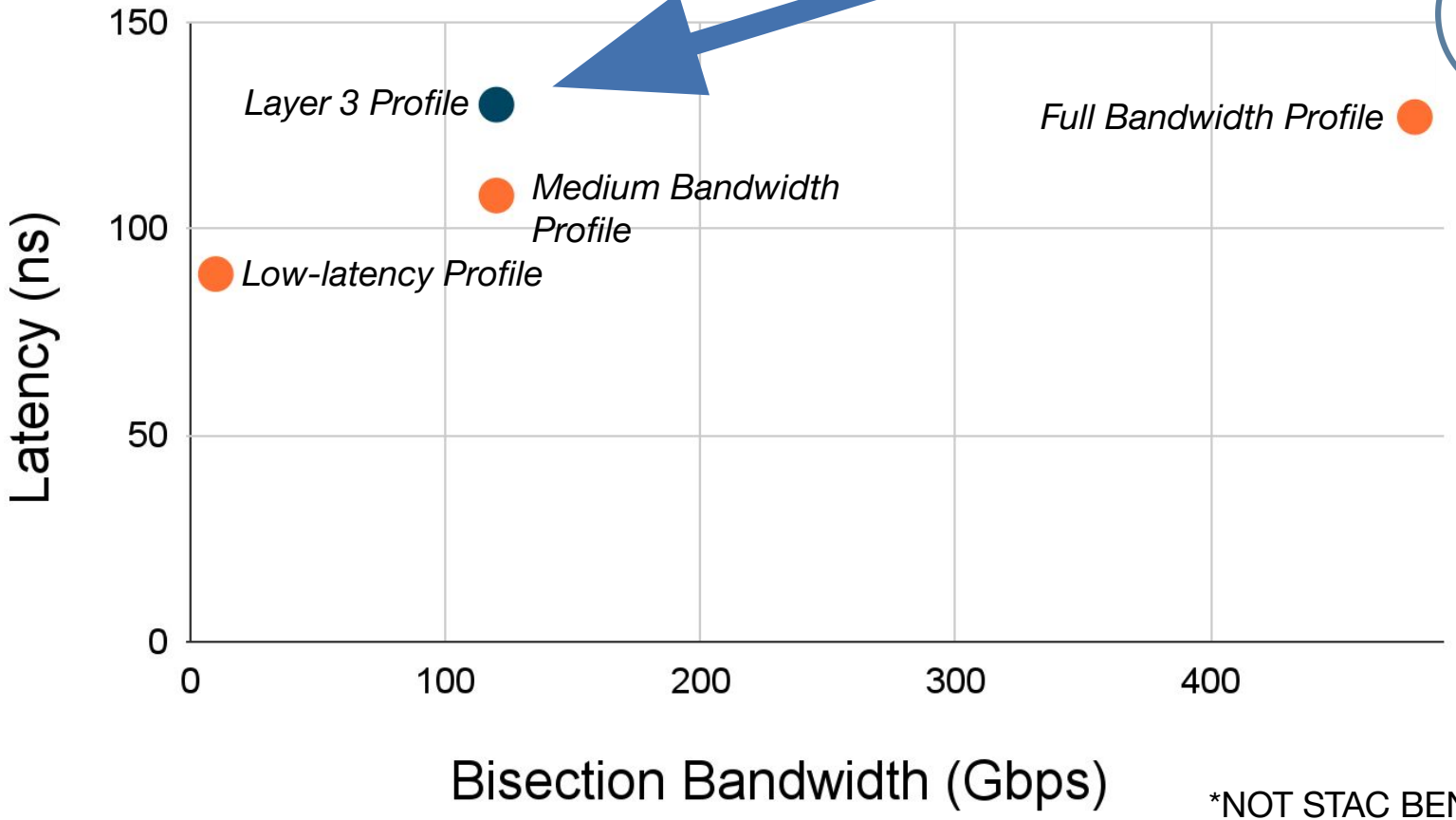
SwitchApp - Now the **fastest* Layer 3** switch too

- **Full-featured** 1/10G Layer 2/3 switch -- *implemented in FPGA*
  - Ultra-low latency packet forwarding averaging 89 ns (L2) or 133 ns (L3)
  - Full cut-through architecture
  - 48x 1/10G ports
  - 10k Uni- or multicast MAC addresses
  - 30k unicast, 22k multicast routes
- Fully **integrated** with EOS, running on 7130LB devices
  - Standard EOS CLI and protocols: STP, LLDP, IGMP, LAG
  - Standard EOS L3 stack: BGP, PIM, OSPF
  - Standard Management, telemetry, protocols, forwarding plane, CloudVision
- Layer 3 features are now generally available from EOS 4.28.0F
  - Download at: https://mako.arista.com/dyn/softwareportal/releases/#switchapp

SwitchApp looks, feels and tastes like any EOS switch

*NOT STAC BENCHMARKS

Arista SwitchApp Profiles



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SwitchApp - Now the **fastest* Layer 3** switch too

133 ns*

Average Latency

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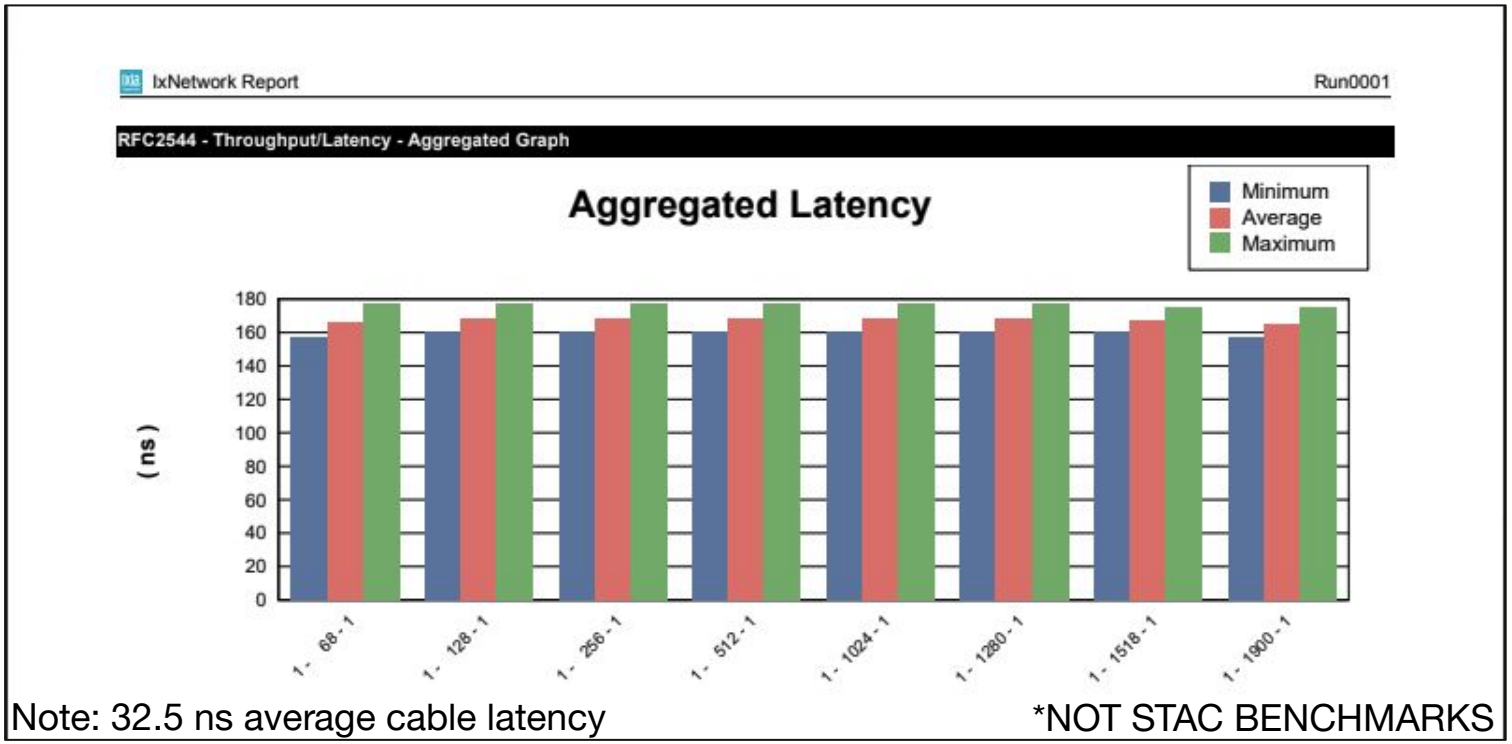
Full cut-through

- RFC2544 tests show full cut-through for all tested packet lengths



Note: 32.5 ns average cable latency

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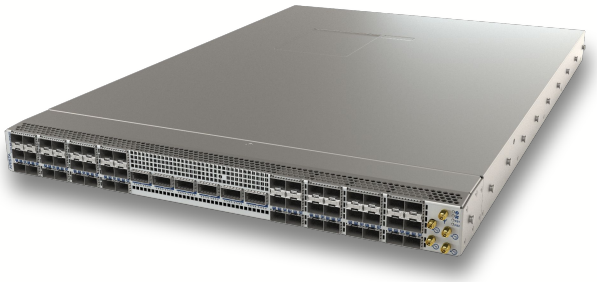
Introducing 7130LBR and 7130B



7130LBR with Broadcom Jericho 2

48x SFPs and 6x QSFP-DD (NRZ)

- Converged Layer 1 and L2/3 switch
- FPGAs for market edge applications

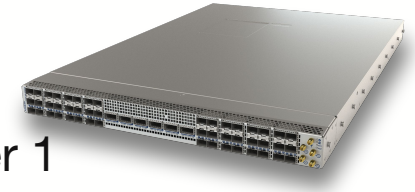
7130B with Intel Tofino

32x QSFP-DD (NRZ)

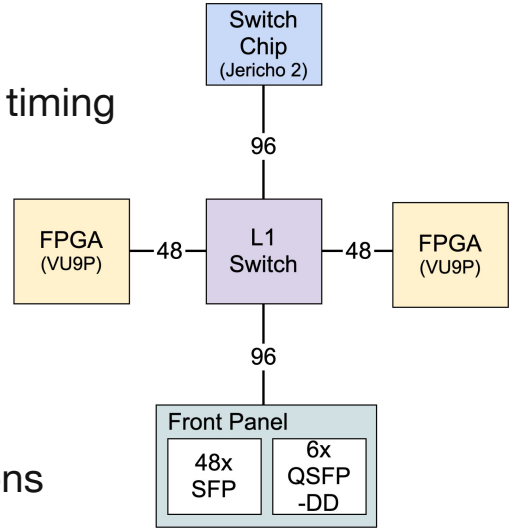
- 256-lane converged L1/2/3 switch
- Scaling out Layer 1 networks

Converging Layer 1 with Layer 2 / 3 for scale

Introducing 7130LBR-48S6QD



- Agility: Key composable elements, fully connected via Layer 1
  - External connectivity – 96 **front panel ports**
  - Full-featured Broadcom Jericho2 switch – 96 **interfaces**
  - FPGA applications – Two 48-port **programmable FPGAs**
  - High precision timing – Integrated GPS and Atomic Clock
  - Performant – 6* ns Layer 1, 40* ns muxing, 16* ps resolution timing
- Innovation: Fully integrated device
  - >2.5x Capacity in **less than 1/3rd the space**
  - High density QSFP-DD significantly **reduces cable count**
  - All-in-one solution **eliminates inter-device latency**
- Simplified: Trade network to exchange edge
  - Compatible with existing Arista and custom FPGA applications
  - Runs EOS and supports 7280R3 feature-set



Composable elements dynamically combined in myriad ways

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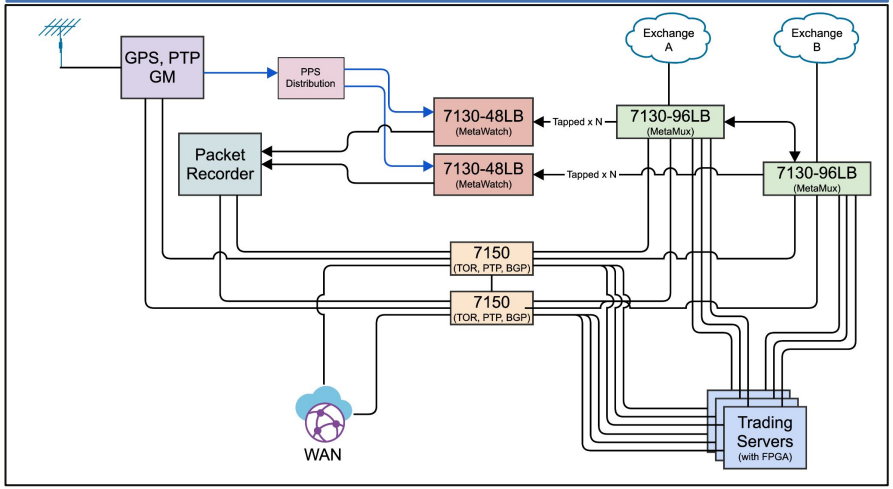
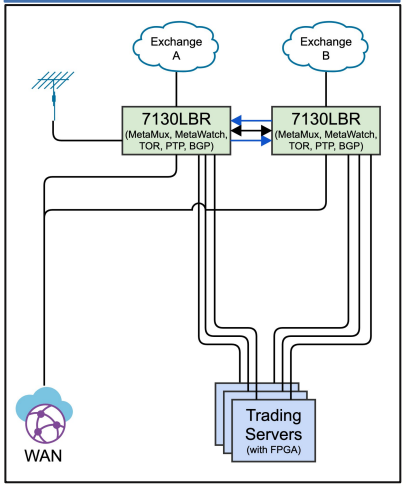
7130LBR Use Case: Converged Trade edge

Before - Multiple devices and tiers



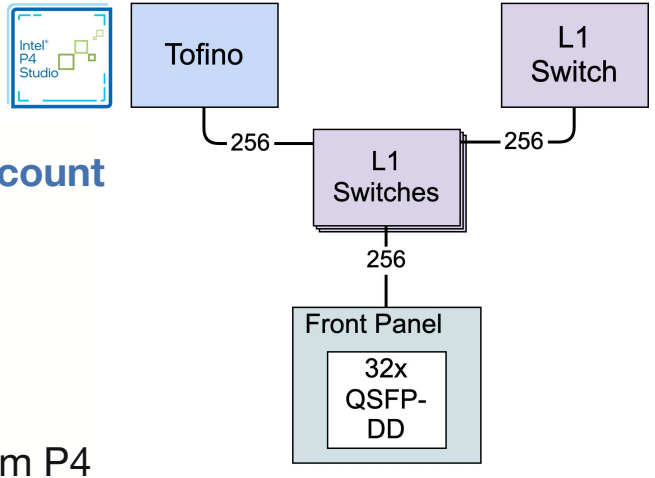
After - Collapsed



Typical Small Deployment	Existing Trading Infrastructure	7130LBR Composable Trading Infrastructure	Impact
Number of devices	8+ devices, 11 RU footprint	2 devices, 2 RU footprint	**75%+ Reduction in devices, rack space**
Number of cables (excl. servers)	Over 100 interconnections	<10 interconnections	**75%+ Reduction in cabling**
Typical Power Consumption (W)	2200 W	800 W	**65% Reduction in power consumption**

Introducing 7130B-32QD

- Agility: Highest density, fully connected via Layer 1/2/3
  - External connectivity – **256 front panel ports**
  - Full-featured Intel Tofino switch – **256 interfaces**
  - Ultra-low latency – **7* ns port-to-port**
- Innovation: Fully integrated device
  - >2.5x Capacity in **less than 1/10th the space**
  - High density QSFP-DD significantly **reduces cable count**
  - Integrated P4 Programmable switch chip
  - Scale-out solution **eliminates inter-device latency**
- Simplified: Trade network to exchange edge
  - Compatible with existing Arista profiles
  - Runs EOS and supports 7170 feature-set and custom P4



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Bringing it **all together** – A fabric for composition

Use case: Connect **FPGAs** to **services**

- 7130B as a dense spine
  - Connected via QSFP-DD
  - L2/3 switching
- 7130LBR as a leaf
  - Connect to many markets
  - Timestamping, aggregation
  - Replicate market data to spines

Allows low latency, arbitrary changes.

Observability + automation = safety