5 Innovations in 5 minutes

Matthew Grosvenor

STAC Innovation Roundup, Fall 2017

ExaLINK Fusion

Multi-purpose, modular platform

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Multi-purpose, modular platform

1) ExaLINK Fusion Core (L1)

ExaLINK Fusion

Multi-purpose, modular platform

1) ExaLINK Fusion Core (L1)
2) ExaLINK Fusion Mux (L2)
3) ExaLINK Fusion Switch (L2+)
4) ExaLINK Fusion Appliance (FPGA/x86)

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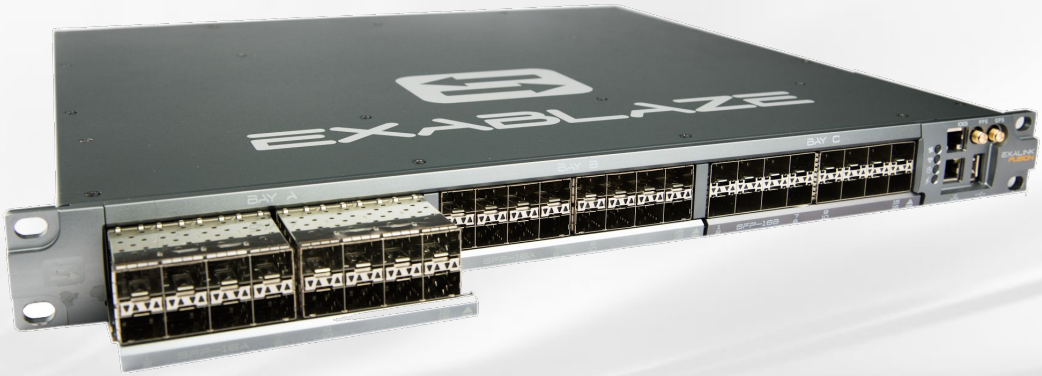
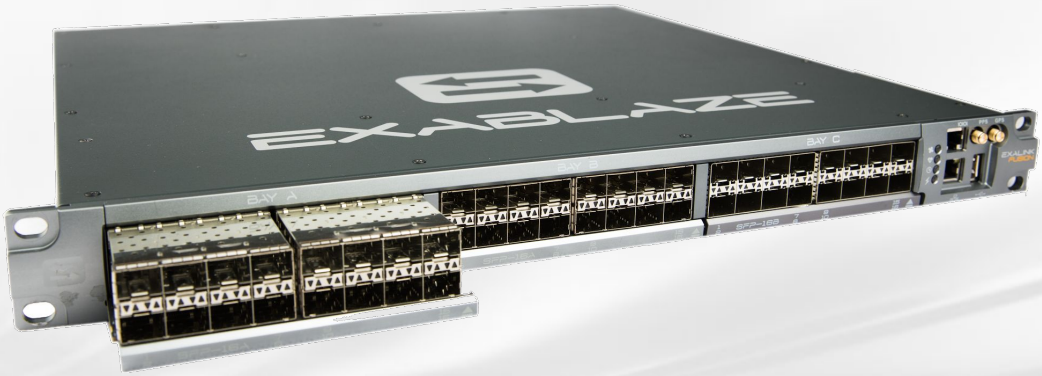
Innovation 1

ExaLINK Core, Model B, Line card



EXABLAZE

ExaLINK Core, Model B, Line card



ExaLINK Core, Model B, Line card

- TX counts
- RX counts
- Error counts
- Link up/down counts
- Packet capture / inspection

ExaLINK Core, Model B, Line card

Special Introductory Offer
USD$900 trade-in
for STAC attendees

Code: STACF17

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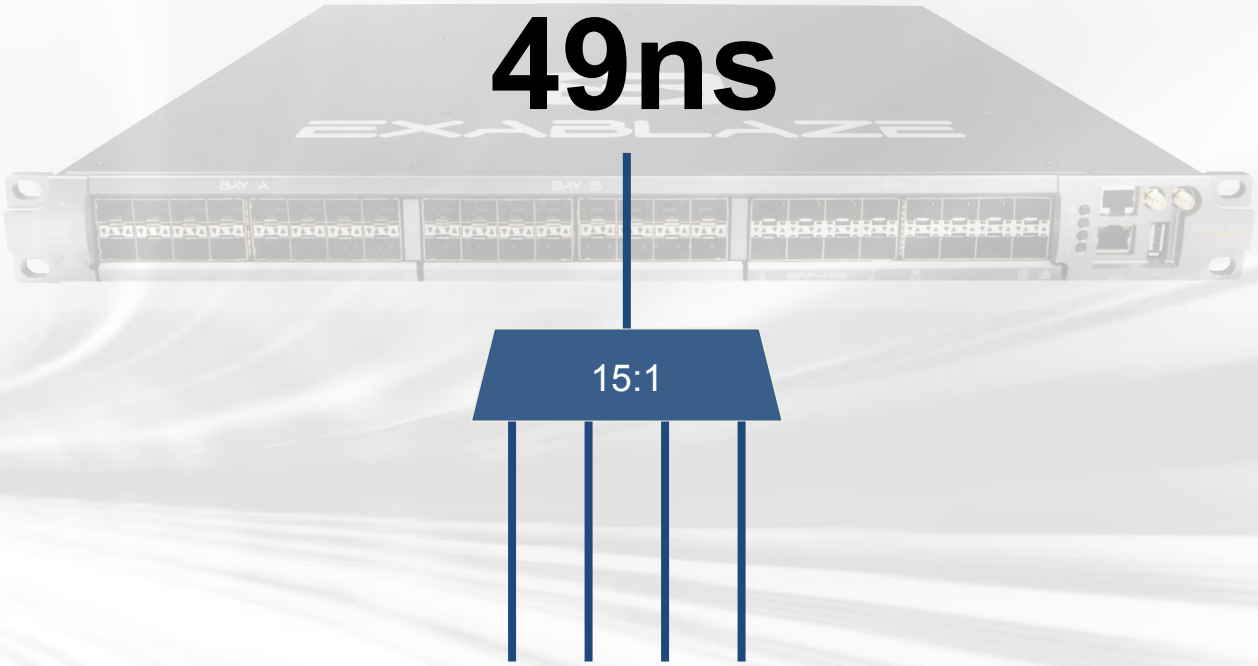
ExaLINK Fusion

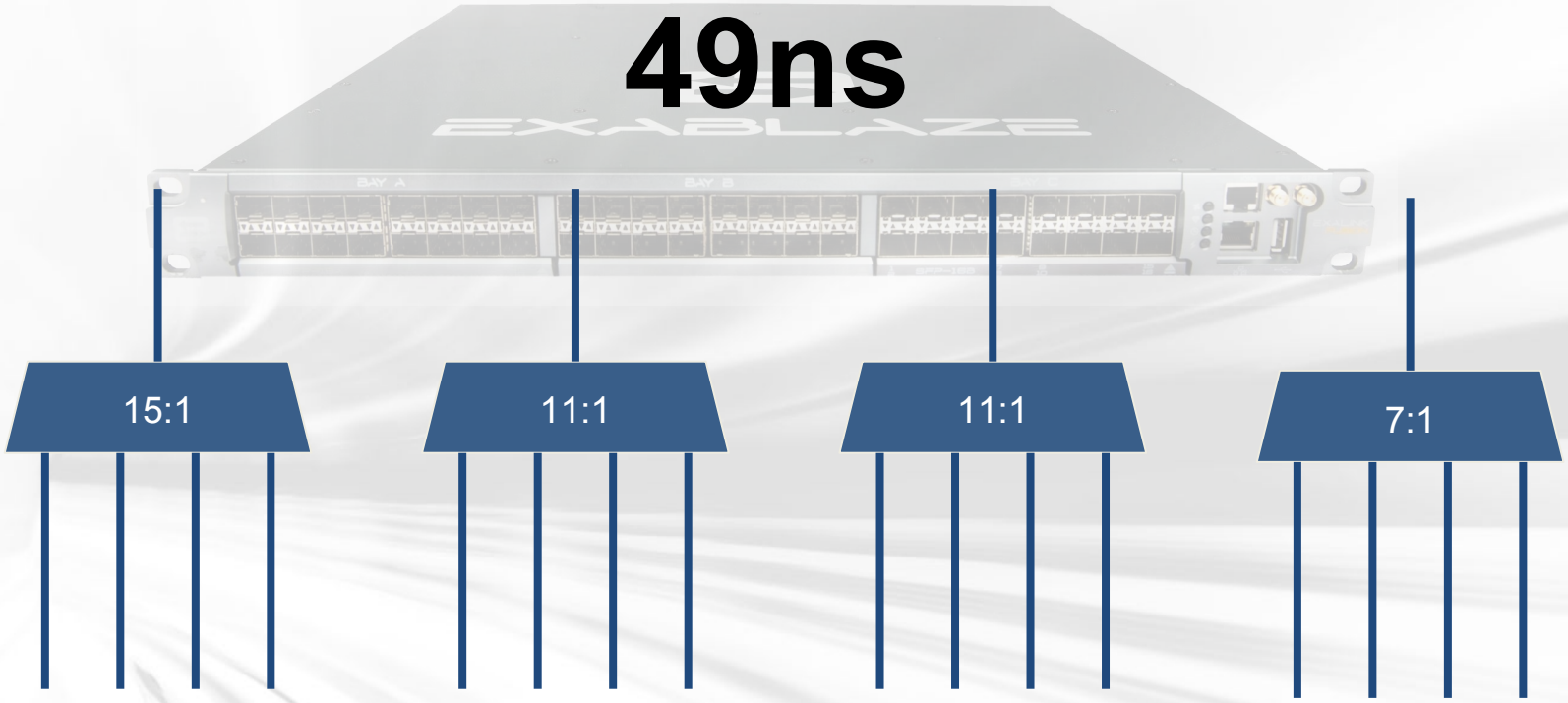


Fastest crosspoint enabled mux

*not a STAC measurement

Innovation 2

Multiple Fast Muxes



4x FastMux

*not a STAC measurement

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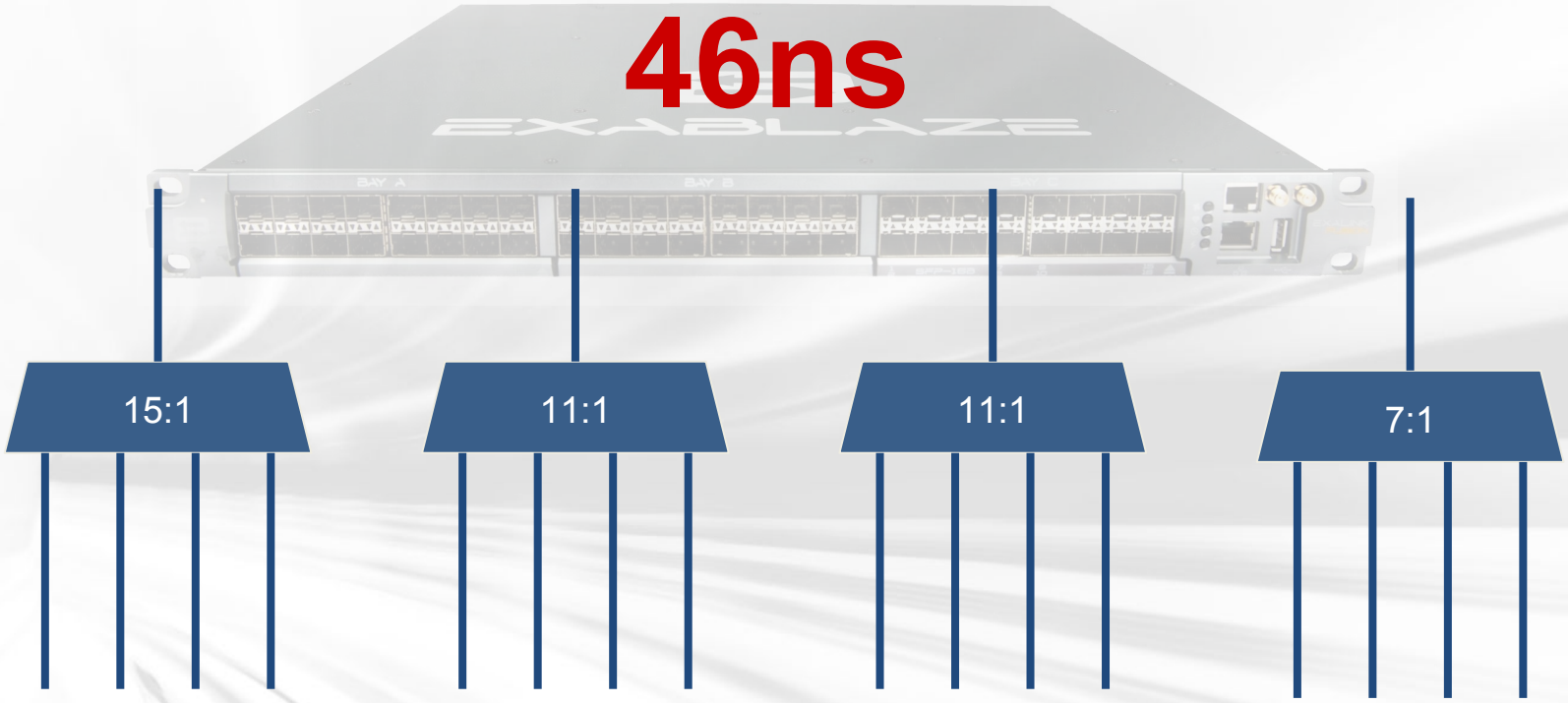
Innovation 3

Lower latency



4x FasterMux

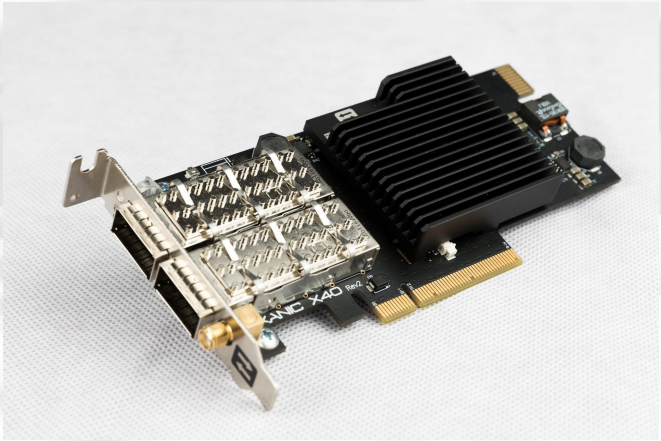
*not a STAC measurement

EXABLAZE

Network Application Cards

ExaNIC X10

ExaNIC X40



Network Application Cards

ExaNIC X10

ExaNIC X40

- Kintex Ultrascale KU035
  - 444K logic cells
  - 19.0 Mb block RAM

Firmware development kit (FDK)
- 3[illegible] PCS/PMA PHY
- PCIe DMA engine
- Tools, software, etc

Network Application Cards

ExaNIC X10

ExaNIC X40

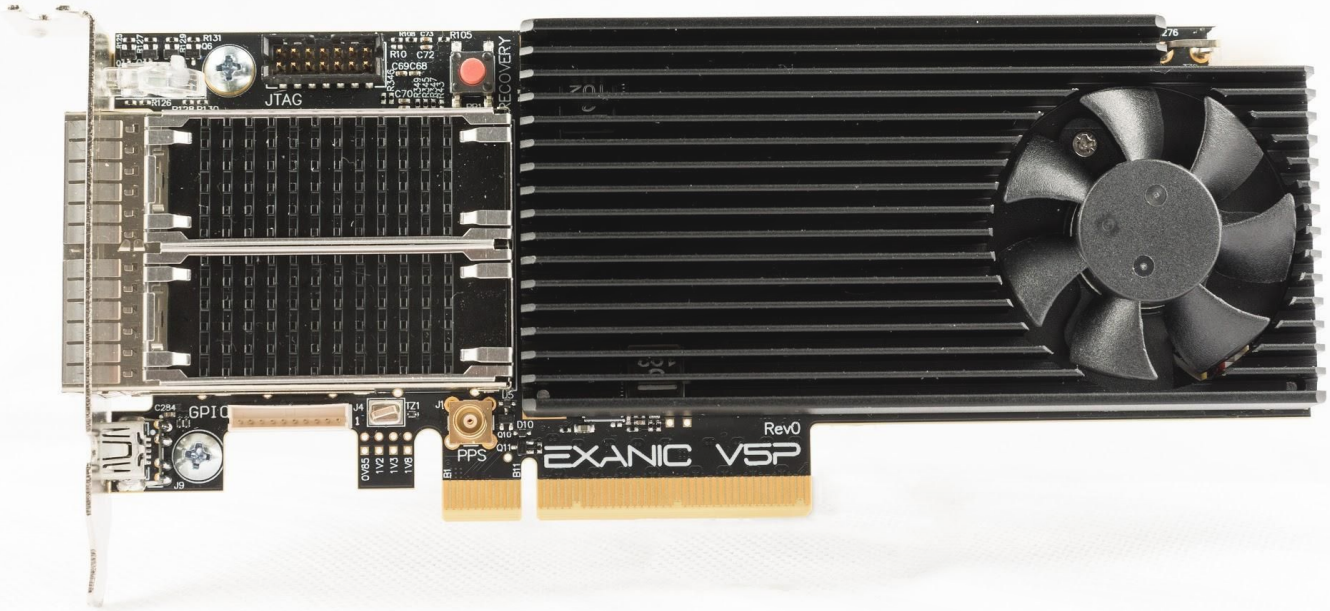
- Kintex Ultrascale KU035
  - 444K logic cells
  - 19.0 Mb block RAM

- Firmware development kit (FDK)
  - 33ns PCS/MAC IP
  - PCIe DMA engine IP
  - Tools, software, examples.

*not a STAC measurement

Innovation 4

ExaNIC V5P



Half-height, half-length, network application card

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ExaNIC V5P

- Virtex Ultrascale+ VU5P / VU7P
  - 1,314K logic cells
  - 36 Mb block RAM
  - 132 Mb UltraRAM

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3X larger FPGA

ExaNIC V5P

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  - 1,314K logic cells
  - 36 Mb block RAM
  - 132 Mb UltraRAM

3X larger FPGA
10X more on-chip RAM

ExaNIC V5P

- Virtex Ultrascale+ VU5P / VU7P
  - 1,314K logic cells
  - 36 Mb block RAM
  - 132 Mb UltraRAM

- 144Mb QDR-IV SRAM
- 9GB DDR4 DRAM

Plenty of additional SRAM and DRAM memory onboard

ExaNIC V5P

- Firmware development kit (FDK)
  - 33ns PCS/MAC
  - PCIe DMA engine
  - Tools, software, examples.
  - Low latency memory controllers
  - On board USB-JTAG

Extensive IP library

*not a STAC measurement

ExaNIC V5P

- Firmware development kit (FDK)
  - 33ns PCS/MAC
  - PCIe DMA engine
  - Tools, software, examples.
  - Low latency memory controllers
  - On board USB-JTAG

Extensive IP library
Easier to deploy and debug

*not a STAC measurement

Innovation 5

ExaNIC FDK

- Firmware development kit
  - ~~33ns~~ **9.6ns PCS/MAC**
  - PCIe DMA engine
  - Tools, software, examples.
  - Low latency memory controllers
  - On board USB-JTAG

Fastest PCS/MAC IP available

*not a STAC measurement

Thank you

More information:

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