NOVASPARKS

Pure FPGA Market Data Solutions

Product Update
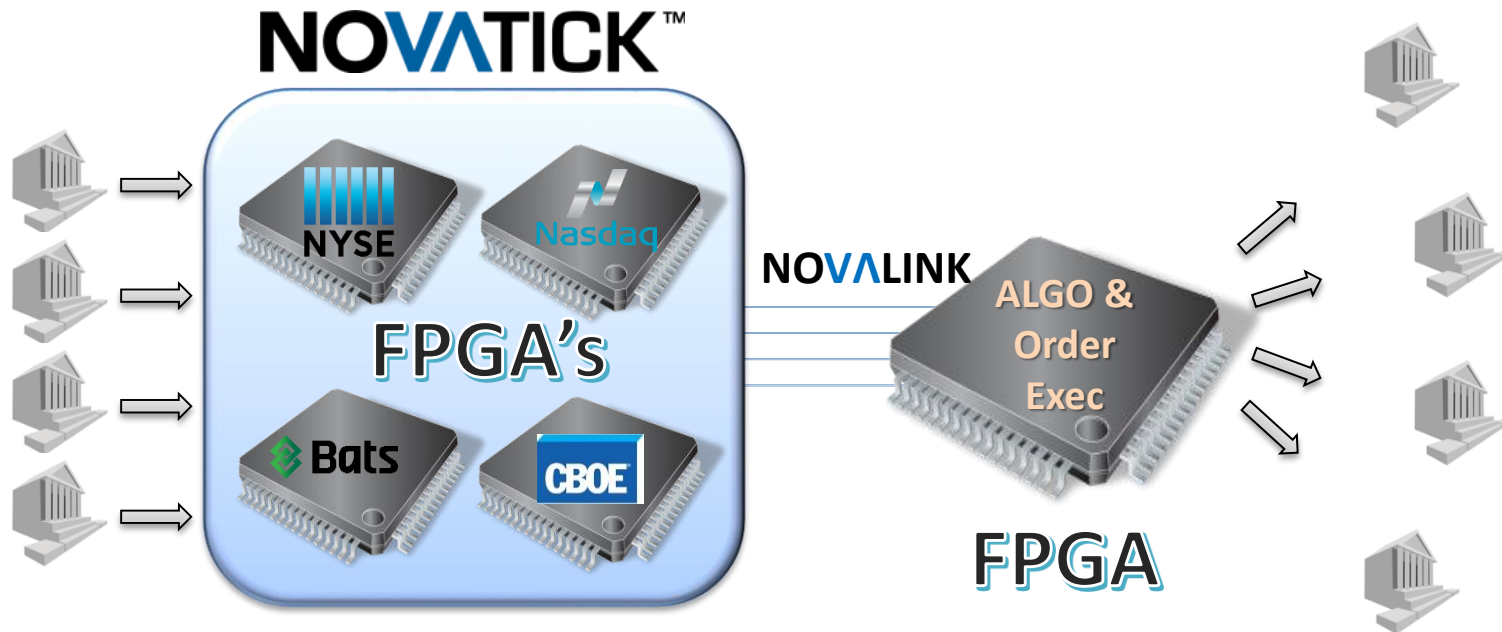
NovaLink 30% latency drop

New feeds and features

STAC - Spring Summits 2017

New York and Chicago

What is NOVΛLINK?

- **FPGA to FPGA Link with Customer side Hardware API**

- **Extend NovaTick internal processing pipe to customer FPGA**
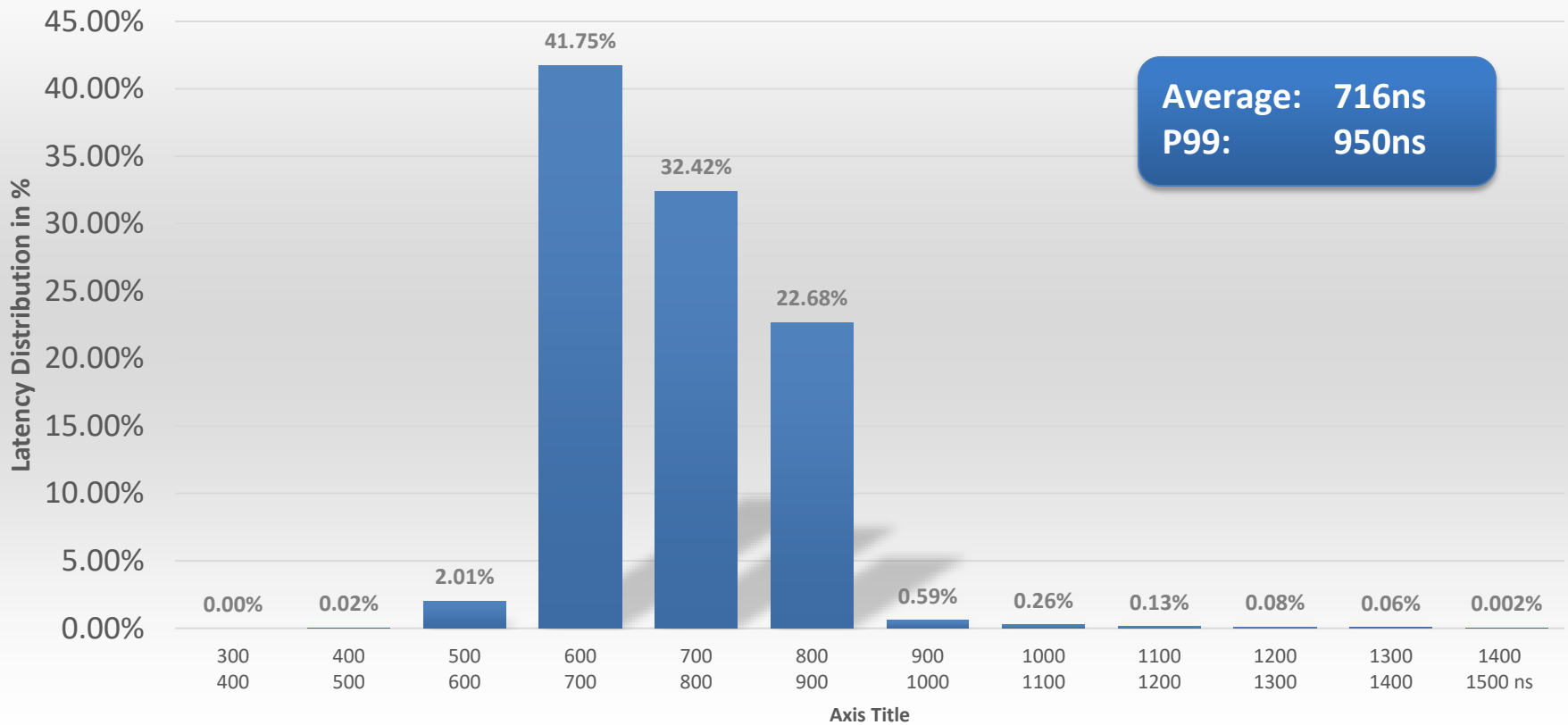
- **Available for 50 markets**

Support for complex strategies that would not fit on a single FPGA:

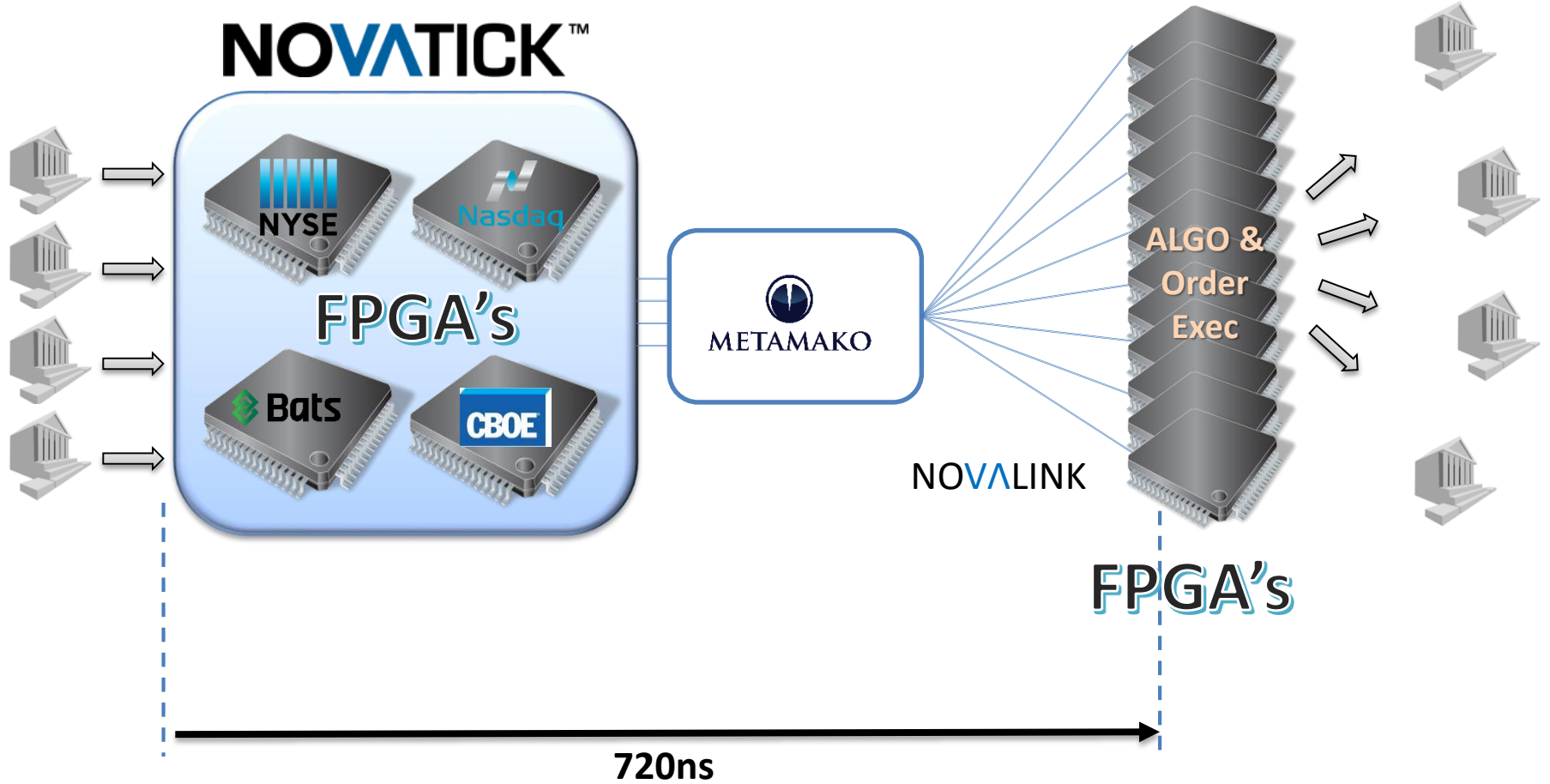- Full instrument universe strategies

- Cross market strategies

NOVALINK: 30% Drop in Latency

NovaLink - Wire-to-FPGA Latency - Cut-through processing*
NASDAQ 9K instruments, Level 1, 2x10G Ethernet NovaLink

Average: 716ns
P99: 950ns

*not STAC benchmark

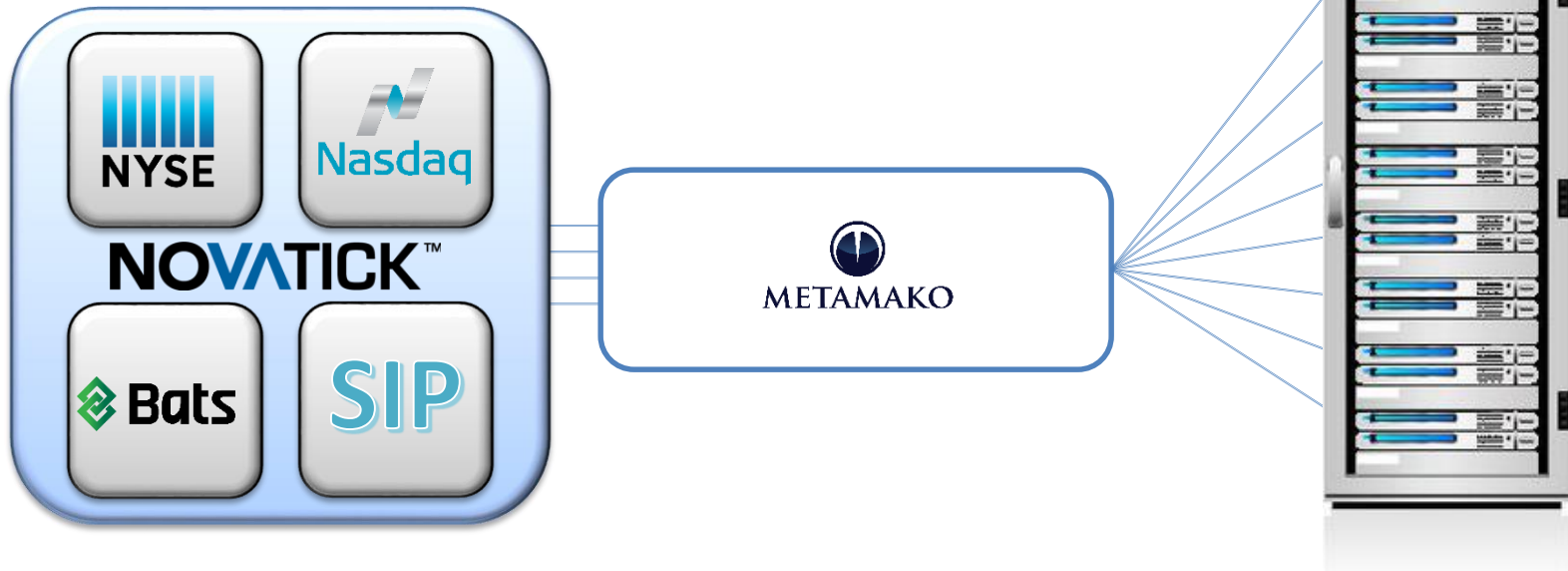# NOVALINK Distribution via Metamako Switches

720ns

*not STAC benchmark

Strengthening of US Equities Offering

- **PTP timestamping**

- **SIP Feeds to complete the already existing coverage of the direct feeds for the 12 protected markets**
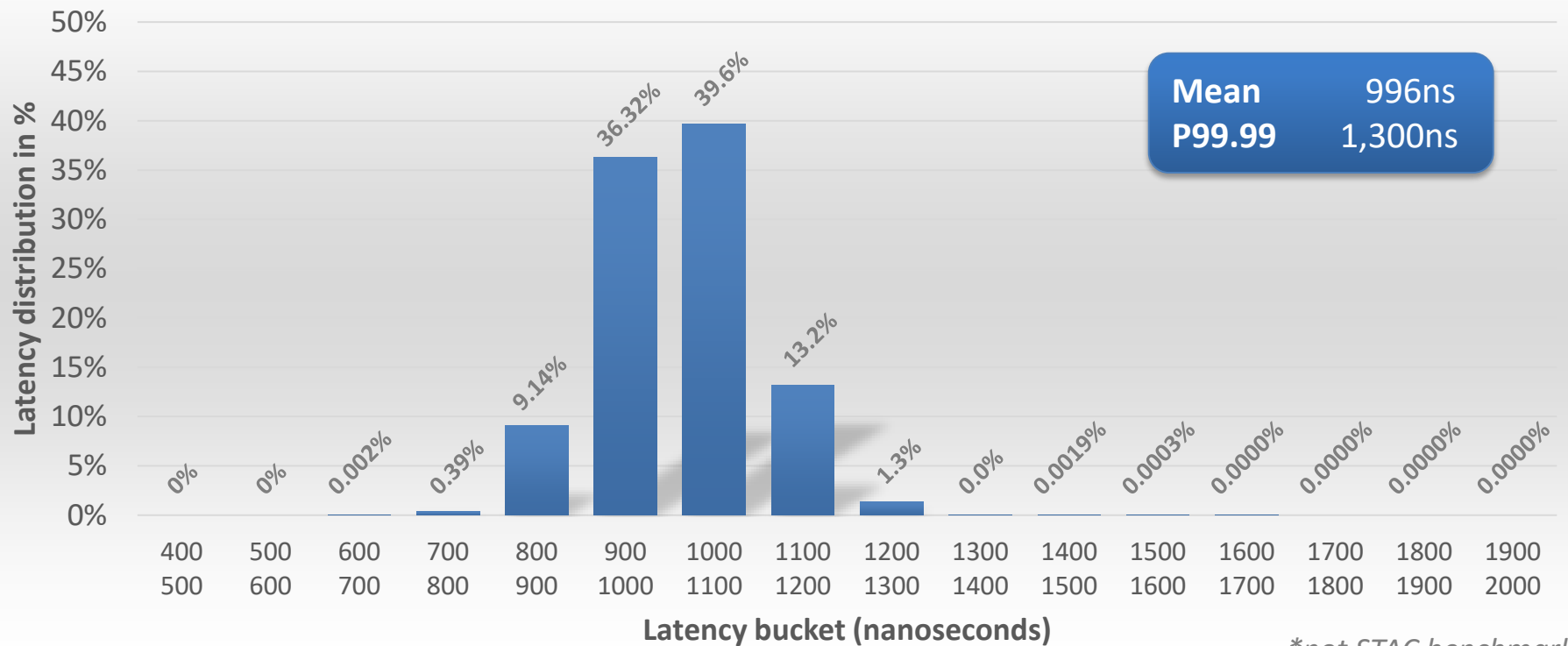
- **Distribution via Metamako switch**

BATS BZX and EDGX Options

- **Increased Cash Equity Options Coverage**

- **First Order Based feed after level based CBOE (C1 and C2)**

- **Density: 128K instruments on 2 FPGA modules**

Wire-to-wire latency - BATS BZX Options - 128K instruments
(Includes book building. Measured from EOP In to SOP Out)

Mean	996ns
P99.99	1,300ns

not STAC benchmark

THANK YOU...

NOVATICK™

Contact: sales@novasparks.com