



Accelerate Your Trading Strategies: Introducing the New Alveo™ X3 Series

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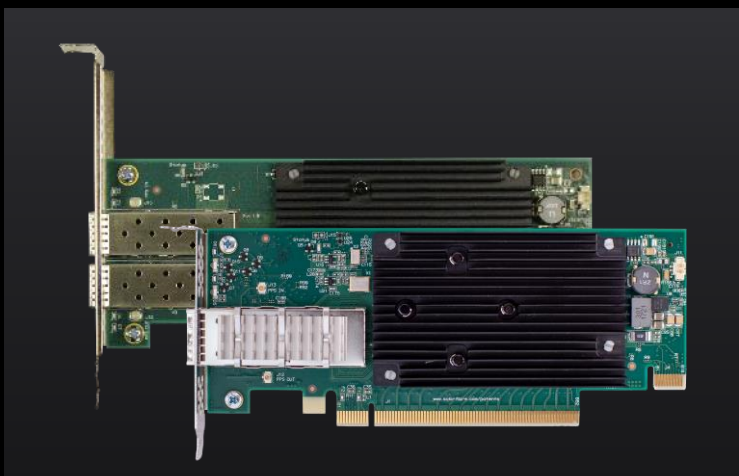
Oct 19, 2022



Introducing the Alveo™ X3 Series Adapters

In Production

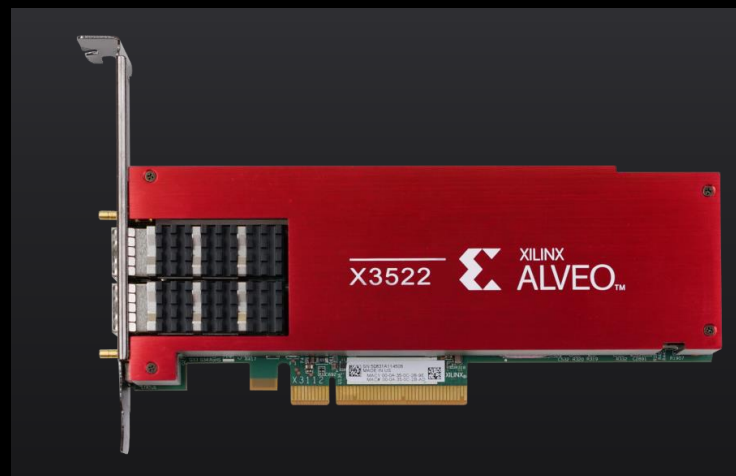
Alveo X3 Series



X2 Series

Offload NICs

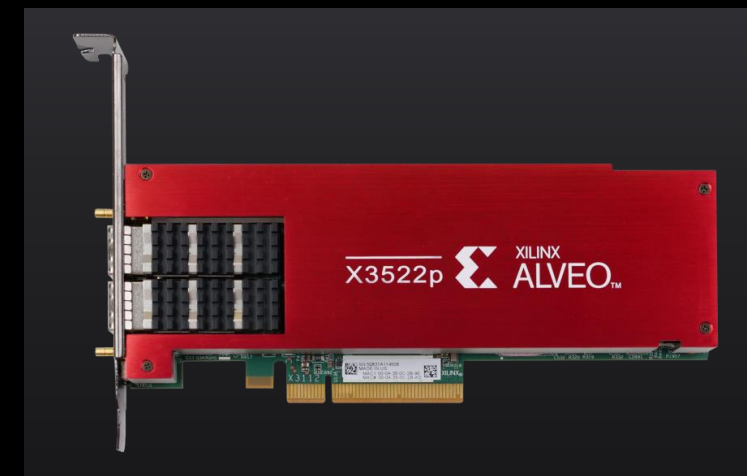
- X2522 Low Latency NIC
2x10/25G
- X2541 Low Latency NIC
1x 10/25/40/50/100G



Alveo X3522

Low Latency Network Adapter

- 4x10/25G
- Lower latency
- Improved architecture
- Upgradeable
- Optional upgrade access to 400K LUTs



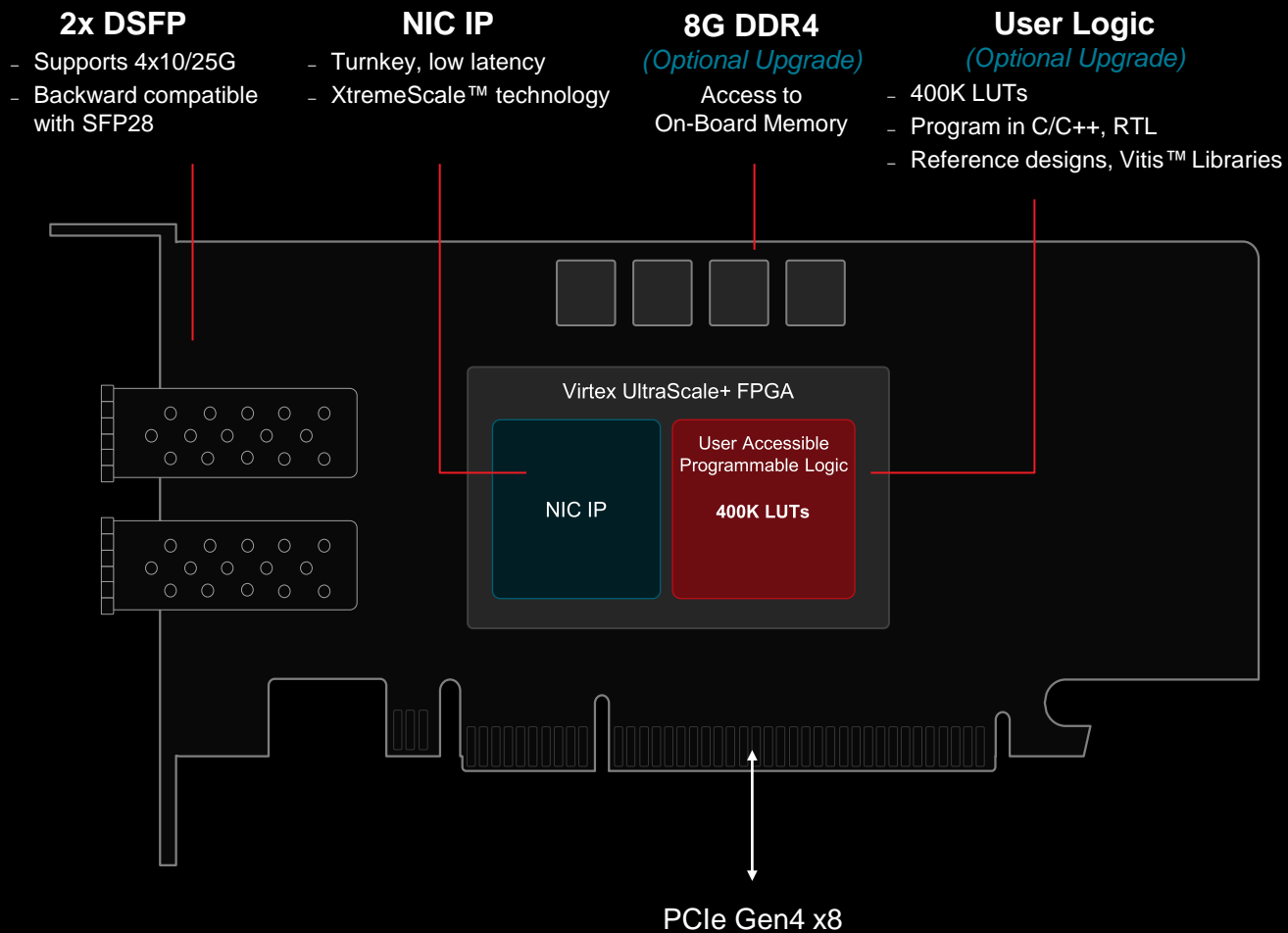
Alveo X3522PV

Accelerator Card

- 2x DSFP connectors
- Time synchronization (PPS In/Out)
- Access to ~1M LUTs
- -3 silicon enables up to 644MHz operation, 16b

Low Latency NIC Features and Capabilities

Alveo™ X3522



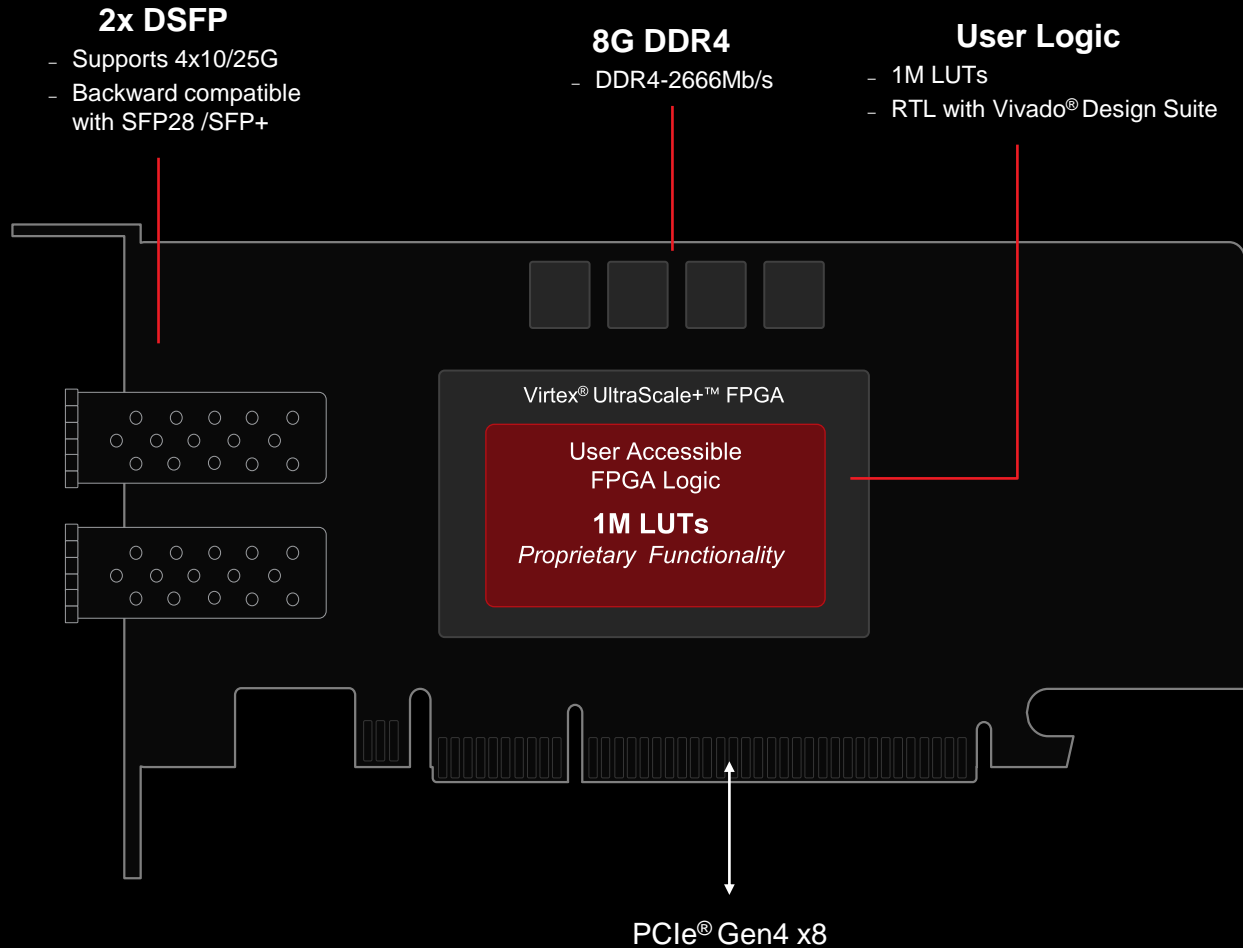
FEATURES

SPECIFICATION

Power	<ul style="list-style-type: none"> 35W (NIC mode) Up to 75W max power (hybrid mode) (PL dependent)
User Functional Space	400K LUTs (hybrid upgrade package)
Programmability	<ul style="list-style-type: none"> C/C++ High-Level Synthesis (HLS) RTL (hardware design) ULL Framework IP from Orthogone Technologies ANTS reference design (utilizes Onload®) Delegated Send
Memory	8GB DDR4 (hybrid upgrade package)
PCIe® Config	Gen4 x8
Network Port Config	4 x 10GbE/25GbE
1PPS Support	SMA connector, through IO bracket
PTP	Stratum 3 oscillator, PTPv2 support
Software	<ul style="list-style-type: none"> Vitis® SW Environment (C/C++, libraries) Onload SW for kernel bypass TCPDirect ef_vi API for latency optimization XRT runtime SW

Accelerator Card Features and Capabilities

Alveo™ X3522PV



FEATURES

SPECIFICATION

Power

75W Max Power

Device

- Virtex UltraScale+ XCUX35
- -3 speed grade

SerDes (GTY) Capability

16b, 644MHz operation supported

Programmability

Vivado Design Suite

Memory

8GB DDR4

PCIe Config

Gen4 x8

Network Port Config

4 x 10GbE/25GbE

1PPS Support

SMA connector, through IO bracket

Software

Vivado Design Suite

Sideband Support

PLDM over MCTP over SMBus

LUTs

1,030K

Embedded RAM

- 99 Mb UltraRAM
- 74.3Mb Block RAM

Alveo™ X3 Series Advantages



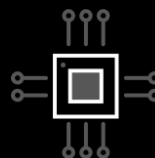
Low latency, plug-and-play NIC

High port density (4x 10/25GbE), based on Xtremescale™ NIC technology



Determinism for reliable trade execution

Reordering, underruns, collisions handled by NIC



CPU offload for hybrid trading

Offload business logic to NIC



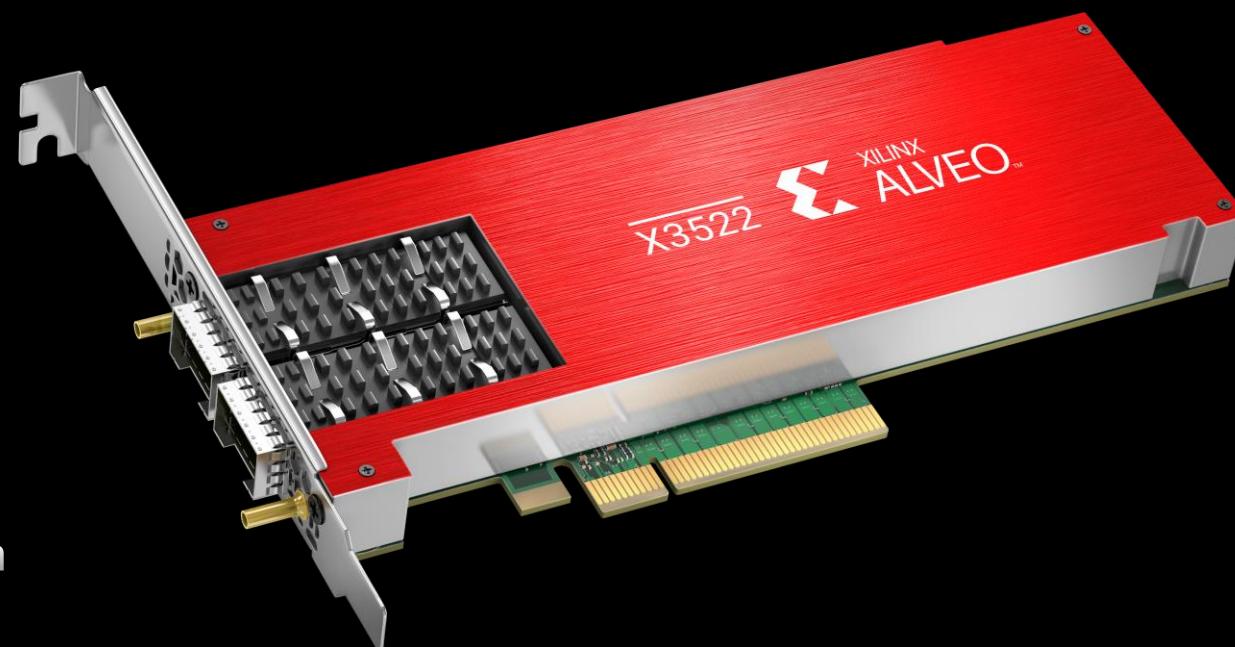
HW upgradeable after deployment

Integrate new features from AMD



Adaptable Acceleration and Customization

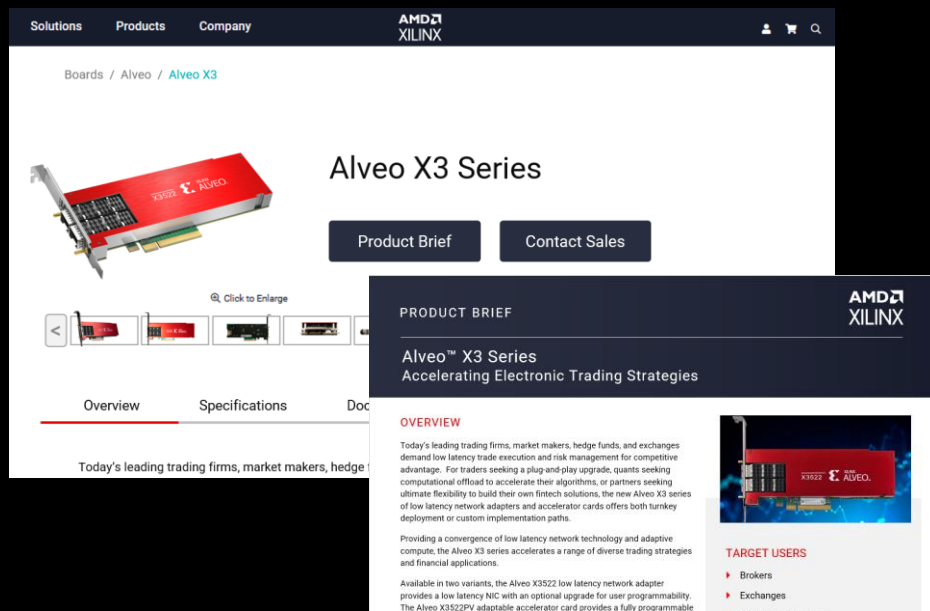
Hardware flexibility for custom fintech solutions



Get Started Now

Learn More

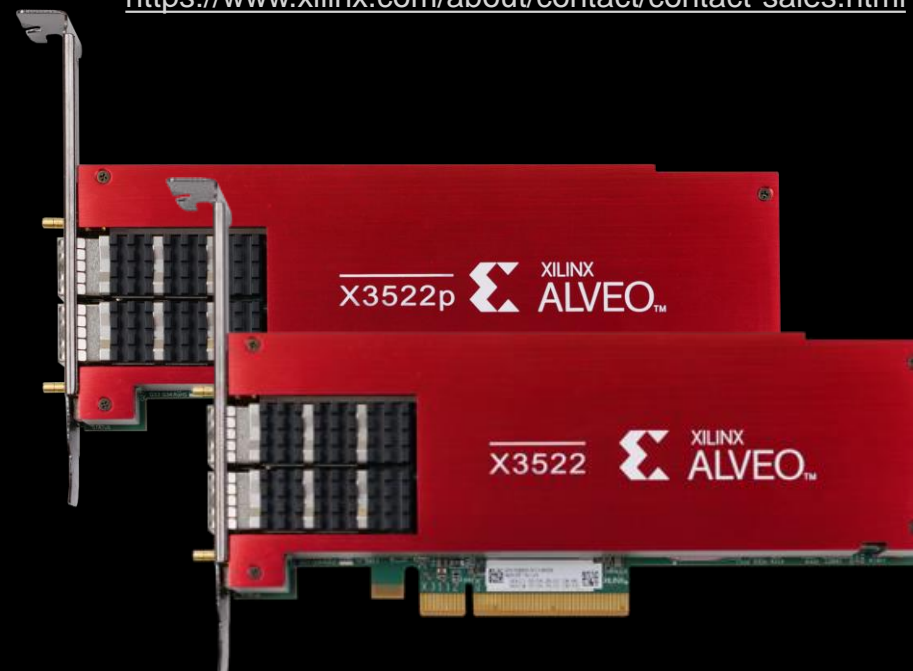
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