SOLUTION BRIEF

XILINX

Xilinx Quantitative Finance Library

XILINX ALVEO™

INTRODUCTION

Financial institutions require innovative solutions to meet increasing compute demands in trading and risk management. The Xilinx® Quantitative Finance Library provides enhanced functions and pre-built pricing models to allow developers to quickly build accelerated computational solutions while lowering the TCO.

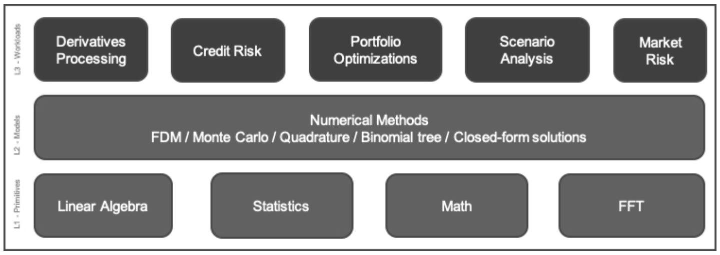
APPLICATIONS AND USE-CASES:

- Monte Carlo-Based Pricing Models
- Closed-Form Solutions
- Finite Difference Based Pricing Models
- Counterparty Credit Risk Analytics
- Regulatory Risk (FRTB, CCAR, RWA)
- Trade / Portfolio Risk
- Portfolio Optimization
- Pre-Trade Risk Checks
- Scenario / "What-If" Analysis

WORKLOADS	DESCRIPTION
Derivatives Processing	Pricing, risk sensitivities, calibration, and back-testing
Counterparty Credit Risk	Credit Valuation Adjustment (CVA), Standard Initial Margin Model (SIMM), Potential Future Exposure (PFE), Risk Weighted Assets (RWA)
Scenario Analysis	Stress testing, CCAR, complex "what-if" scenarios
Portfolio Optimization	ADMM models
Market Risk	Value at Risk (VaR), FRTB, stress testing
Risk Analytics	Risk modelling (credit models, simulations)

SOLUTION OVERVIEW

The Xilinx Quantitative Finance Library is available as C++ API calls, or can be used as a reference design for developers to modify.



XILINX

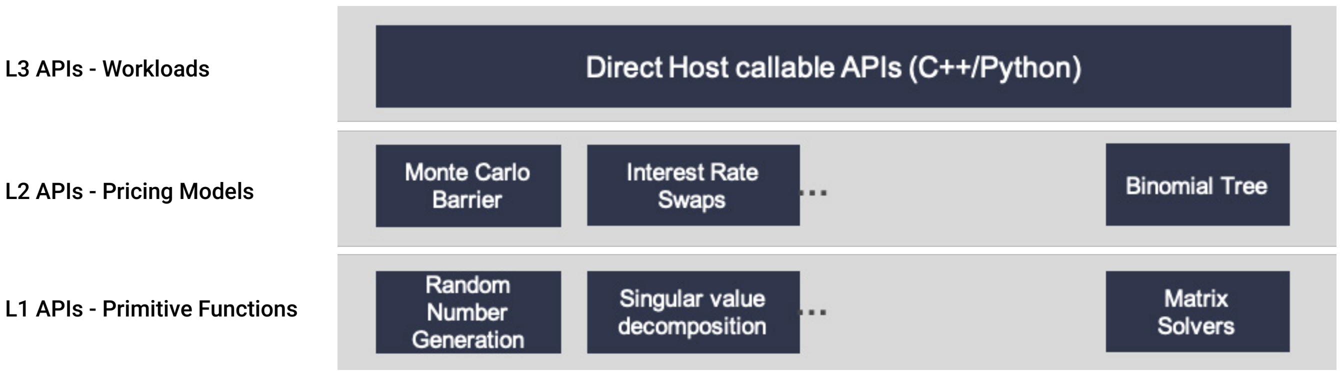
- Accelerated Compute Library for a Variety of Financial Workloads
- Fast-Track Statistics, Linear Algebra, Math and Financial Functions
- Common Financial Models Available (Black-Scholes, Heston, Binomial)
- Deploy in the Cloud, On-Premise, Grid or Desktop
- Shorter Development Cycle
- Lower TCO

Adaptable. Intelligent.

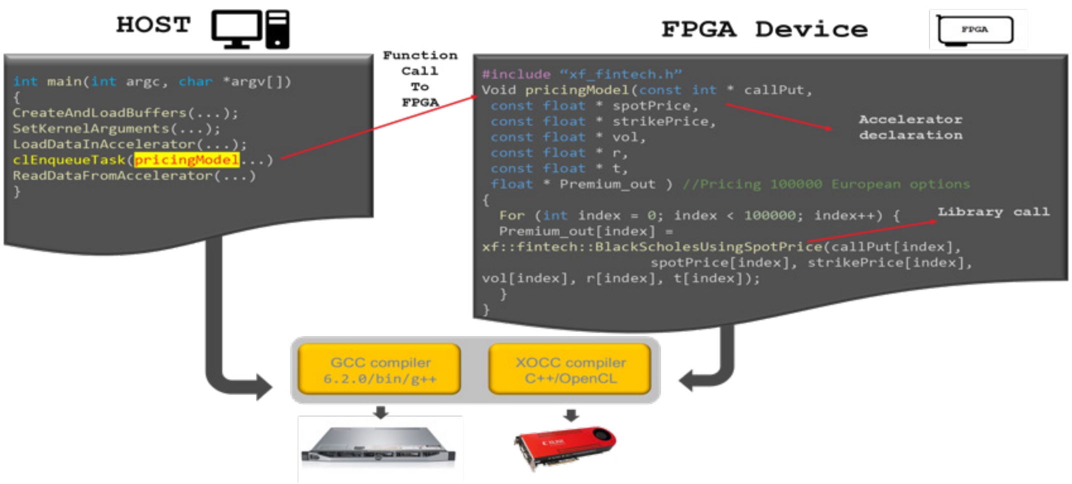
KEY BENEFITS

- > No prior knowledge of hardware language necessary to build applications
- > Rich set of primitive functions to support a variety of applications
- > Shorter development cycle
- > Open source approach
- > Pre-optimized set of libraries for high throughput and low power utilization
- > Supports both Vitis™ and Vivado® HLS tools

LIBRARY STRUCTURE



LIBRARY CALL EXAMPLE



TAKE THE NEXT STEP

Get started on Xilinx Alveo™ with the Xilinx Accelerator program

Learn about Xilinx solutions for the finance industry

Learn more about Alveo accelerators

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