

# FPGA as a Service (FaaS)

## Add FPGA Speed to Existing Trading Platforms

### Use FPGA Side-by-Side with Your Existing Trading System

### Simple Integration, Fast Time to First Trade

#### Description

Whether responding to a fill or injecting orders based on certain market conditions, FPGA execution speeds are dramatically faster than software solutions. For the first time, you can add FPGA acceleration with very few modifications to your existing Order Management Software (OMS) trading system.

The FPGA processes market data at line speed, much sooner than the CPU on a server. You can configure the FPGA to react to certain market events including fills, sweeps, large volume trades, new best bid/ask price, etc. When the specified event occurs, the FPGA releases preformatted messages at sub-microsecond latencies.

**Fill Trigger** – If Filled on an Order, FPGA can either submit a different Order, Cancel an Order, or Cancel Mass Quotes.

**Price Trigger** – If a Watch Price level is achieved, the FaaS will submit one of the following: a new Order, a Cancel Order, or a Cancel Mass Quote.

**Sweep Trigger** – When the FPGA detects that a Market Sweep of X Price Levels (up, down, or either) for a watch Instrument the following actions can be taken: submit a new Order, Cancel an Order, or Cancel Mass Quote.

**Large Quantity Trigger** – When a Large Trade in the watch Instrument occurs, the FaaS can submit a new Order, Cancel an Order, or Cancel Mass Quote.

**Cancel on Behalf** – Pull orders on one session from a second session. This allows firms to use FPGA as a separate When a Large Trade in the watch Instrument occurs, the FaaS can submit a new Order, Cancel an Order, or Cancel Mass Quote.

#### Implementing FaaS

- **FaaS Features**
  - Fast Execution – Leverage our Algorithms in Logic to deployment deep sub-microsecond latency for futures and options trading systems.
  - Flexible Algorithms – Develop customized triggers that immediately respond to changes in the Market Data by sending orders to the Exchange.
- **FaaS Connection**
  - Trusted – Leverage years of experience gained from running FPGA in the CME's fastest markets.
  - Quick – Complement your trading software with FPGA Acceleration delivering deep sub-microsecond latency even during heavy trading periods.
  - Flexible – Control the triggers using a variety of connection methods: REST, FIX, JSON.
- **FaaS Triggers**
  - Private Feed Events – Respond to fills by sending orders or cancels.
  - Private Feed Events – Respond to market data events by sending orders or cancels.
  - Powerful – Use the full capabilities the FPGA to implement your own unique strategies.

#### Fast Time to First Trade

##### Proven Trading Solutions

- Does not require significant changes to your existing Order Management Software.
- Designed for easy integration and operation.

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