INTRODUCTION

Algo-Logic Systems’ 5th generation FPGA accelerated Gateware Defined Networking® (GDN) CME Tick-To-Trade (T2T) System is a sub-500 nanosecond trading solution. It supports all CME Group exchanges including CBOT, COMEX, and NYMEX. The solution is built using Algo-Logic Systems’ internally developed, pre-built IP cores that significantly reduce time-to-market and provide flexibility for customizations.

KEY BENEFITS

- Ultra Low Tick-to-Trade Latency of <500nsec
- Quote Cancellation
- On Fill Triggers
- Turbo Spreading
- Supports customized Triggers through HLS utilization
- Fast Time to Market
- C++ API and control software

SOLUTION OVERVIEW

The Algo-Logic’s CME Tick-to-Trade System built on the Alveo U50

Rackmount Trade Server

- OMS Dashboard
- Client Software
- Tachyon GUI
- Existing Order Management Software (OMS)
- ALSDK C++ API
- Management Software
- PCIe
- Kernel Bypass
- NIC

Unfiltered Market Data

Market Data

CME

iLink Session

Sub-500 nanosecond Trading Latency

Algo-Logic Gateware in Alveo U50

Control, Event Logs

iLink, ArQ

Adaptable. Intelligent.
FPGA Accelerated CME Tick-to-Trade
Powered by Xilinx Alveo U50 with HLS

CME Tick-To-Trade System Features and Base Specifications

<table>
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<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td>FPGA Accelerated Trading</td>
<td>Multi-leg turbo spreading, quote cancel, and on fill triggers</td>
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<tr>
<td>Pre-Built IP Cores</td>
<td>CME Feed Handler, CME Futures &amp; Options Order Book, 10G TCP Endpoint, ULL 10GE PHY+MAC</td>
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<tr>
<td>Multicast Channels for Market Data</td>
<td>Up to 16</td>
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<tr>
<td>Order Book Configuration</td>
<td>20 security IDs with L2 snapshots containing BBO, all 10 book levels</td>
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<tr>
<td>FIX Sessions and Order Queues</td>
<td>32 and 64 respectively, with 2 Kbyte per queue message size limit</td>
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<tr>
<td>Turbo Spreading in Logic</td>
<td>Fast arbitrage across multiple legs</td>
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<tr>
<td>Configurable Number of lean Legs</td>
<td>2 with full support for quoting one or two legs of a spread or strategy</td>
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<tr>
<td>Logging and Event Notifications</td>
<td>FIX logs, Raw Market Data logs, CME Order Book BBO, Trigger events</td>
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<tr>
<td>FPGA Device and Platform</td>
<td>Xilinx UltraScale+ with 10 Gbps Ethernet on Alveo U50</td>
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Sub-microsecond latency

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Learn more about – www.algo-logic.com
Reach out to Algo-Logic Sales – sales@algo-logic.com