

High-Bandwidth IPsec and VPN

IPsec and VPN Accelerator

INTRODUCTION

Many enterprise IT systems are secured by the Internet Protocol Security (IPsec) protocol suite and Virtual Private Network (VPN) tunnels. In large-scale SD-WAN and Secure Access Service Edge (SASE) deployments, the number of sessions/VPN tunnels and aggregate network bandwidth per node increase continuously. Consequently, the computational load increases significantly. Especially in latency-sensitive applications, this often exceeds the compute capacity of conventional systems which do not leverage advanced end-to-end hardware acceleration. The **Xelera IPsec and VPN Acceleration software** takes the performance bottlenecks out of VPN systems and increases the bandwidth by an order of magnitude over conventional systems. It enables customers to take IPsec/VPN throughputs to the next generation of network capacity.

PERFORMANCE

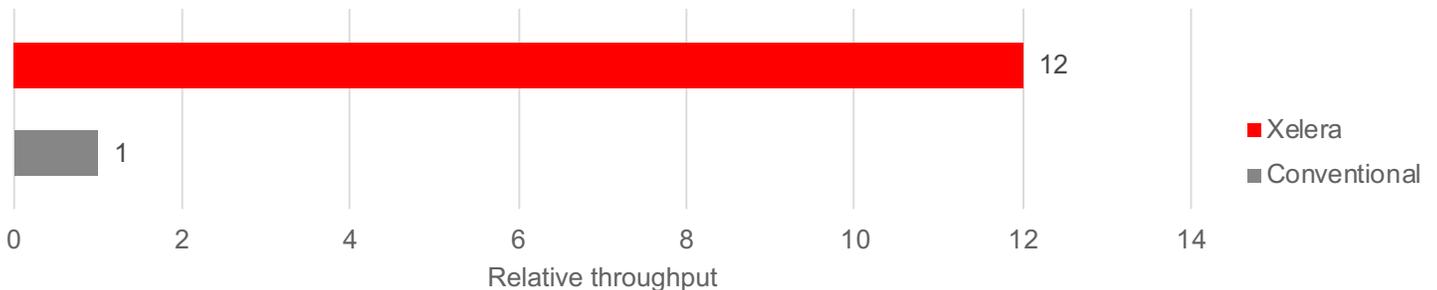
The Xelera IPsec and VPN Acceleration software provides 10x higher aggregate throughput compared to conventional IPsec software systems. It achieves this by offloading the computationally demanding parts to datacenter-grade FPGA accelerators, which are available as standard on-premises hardware and in the public cloud.

DEPLOYMENT

The accelerator is deployed as a turnkey system. It emulates standard network interfaces in the host system in order to integrate seamlessly with the external customer software. All FPGA specificities are handled internally by the Xelera software. All sessions are controlled through a single, intuitive accelerator management system.

BENCHMARK

The benchmark compares the throughput of the Xelera IPsec and VPN Accelerator (running on a Xilinx Alveo U50 Datacenter Acceleration Card) with a conventional software VPN system (running on a Intel Xeon CPU E5-2620 v4).



TAKE THE NEXT STEP

Further information and licensing: sales@xelera.io

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SOLUTION BRIEF





- Internet Protocol Security and Virtual Private Network Accelerator
- 10x higher bandwidth than conventional VPN systems
- Built for COTS server and FPGA hardware, or cloud instances