Press Release

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New FPGA-Module and PCIe Board Outperforming GPUs in AI and Vector Processing

From Computer Vision to IT-Security: Intel's powerful Stratix 10 NX is now available on a ready-to-use FPGA-module with Gidel's tool suite for accelerated development of FPGA solutions.

Gidel announced the immediate availability of its Proc10N and Proc1C10N, the market's first FPGA module and PCIe board based on the novel Intel Stratix 10 NX. These compact solutions enable entirely new offering for complex AI and other compute-intensive applications requiring high data rate and low-latency. The Stratix 10 NX incorporates newly developed Tensor blocks for fast AI and vector processing. The Tensor blocks integrated with HBM2 memory offers an unprecedented level of computation performance and memory bandwidth. Gidel, a Titanium member in Intel's Partner Alliance, has been chosen as one of the first companies to utilize the Stratix 10 NX.

The Stratix 10 NX groundbreaking capabilities offers tremendous potential to realize most demanding high-bandwidth real-time applications such as AI, video analytics, IT-security, 5G, and radar. Thanks to its compact design, it is well suited for small, low-power, weight-constrained embedded systems.

The Proc10N module boasts 1,600 Gb/s I/O throughput, Tensor compute blocks capable of 143 INT8 TOPS / block FP16 TFLOPS, and 400 GB/s access to HBM2 8 GB DRAM for fast AI, convolutions, FFT, encoders, filtering, linear algebra operation and beyond. The Proc10N module is extremely compact, 97.4 mm x 101 mm / 3.83" x 3.98", and enables full I/O interface customizability via a user or a Gidel carrier board.

Stratix 10 NX tests performed by Intel demonstrated an acceleration factor of 9.5 in batch processing of Long Short-Term Memory (LSTM) networks compared to Nvidia V100 GPUs. The Stratix 10 NX, in comparison to GPU and other FPGAs, also enables a new level of performance / power utilization.

Customized solutions can be developed within remarkably short time and at reduced risk and cost using the Proc10N module, Gidel's or user's carrier boards, and Gidel's ProcVision development suite. ProcVision simplifies the development on FPGA and significantly improves system integration and reliability. Gidel's ProcWizard application enables FPGA virtualization by enabling several applications to be accelerated by the same FPGA. ProcWizard automatically generates the Proc10N's Application Support Packages (ASP) optimized to the system requirements by mapping the board's resources to the applications' needs. The ProcVision suite also includes dedicated infrastructure for efficient and reliable capture from 100+ sensors concurrently.

The Proc10N and Proc1C10N are currently available in limited quantities. Gidel and its partners are already discussing dedicated system designs for diverse applications. Requests regarding the applicability and benefits of the Stratix 10 NX, the Proc10N module, and its carrier board are happily received by the Gidel support team.

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About Gidel
For nearly three decades, Gidel has been a technology leader in FPGA-based high-performance solutions. When high data rate applications require real-time processing, low latency, or high customization options, customers partner with Gidel. Our customers benefit from Gidel's world class FPGA platforms, development tools, expertise in algorithms, and design services. Gidel's easy-to-use system development tools significantly reduce customers' time to market and production of FPGA-based acceleration systems.
Typical applications are edge computing, mission-critical systems, embedded vision, and data centers. Besides custom solutions, Gidel also features a broad range of diverse off-the-shelf PCIe FPGA boards and FPGA modules.