



NEWS RELEASE

MORNINGCORE TECHNOLOGY LICENSES FLEX LOGIX'S EMBEDDED FIELD-PROGRAMMABLE GATE ARRAY ON TSMC'S 12FFC PROCESS

Another major company adopts EFLX eFPGA

Mountain View, Calif., January 21, 2019 – [Flex Logix® Technologies, Inc.](http://www.flexlogix.com) announced today that MorningCore Technology, a subsidiary of China telecommunications giant Datang, is licensing EFLX®4K eFPGA for TSMC's 12nm FinFET Compact technology (12FFC) process and the EFLX Compiler for programming the eFPGA. The application involves wireless communications. MorningCore is also licensing additional seats of the EFLX Compiler so some of their customers can program the chip with eFPGA themselves.

eFPGA for Communications Applications

Communications systems today are major users of FPGAs for flexibility and reconfigurability to allow for customization and real-time updating of protocols and algorithms. Flex Logix's EFLX eFPGA allows systems to be smaller, lighter and lower power by integrating the FPGA into the application specific integrated circuit/system-on-a-chip (ASIC/SoC).

"We are proud to work with MorningCore, who extensively evaluated Flex Logix's technology," said Geoff Tate, CEO of Flex Logix. "eFPGA can deliver significant improvements in performance, power and reconfigurability. We see China as being one the largest markets for both our eFPGA and NMAX™ neural inferencing technologies."

The EFLX4K Logic IP core has 4K 4-input-equivalent-LUTs, 632 inputs and 632 outputs and is a complete eFPGA. The EFLX4K DSP IP core replaces about ¼ of the LUTs with 40 multiplier-accumulators for DSP and artificial intelligence (AI) applications. The two EFLX4K cores can be tiled together to make larger arrays to support applications needing more LUTs as required, up to 7x7 with any mix of logic and DSP cores.

The EFLX arrays are programmed using VHDL or Verilog; and the EFLX Compiler takes the output of a synthesis tool such as Synopsys Synplify and does packing, placement, routing, timing and bitstream generation. The bitstream, when loaded into the array, programs it to execute the desired RTL.

About Flex Logix

Flex Logix, founded in March 2014, provides solutions for making flexible chips and accelerating neural network inferencing. Its eFPGA platform enables chips to be flexible to handle changing protocols, standards, algorithms and customer needs and to implement reconfigurable

accelerators that speed key workloads 30-100x processors. eFPGA is available for any array size on the most popular process nodes now with increasing customer adoption. Flex Logix's second product line, NMAX, utilizes its eFPGA and interconnect technology to provide modular, scalable neural inferencing from 1 to >100 TOPS using 1/10th the typical DRAM bandwidth, resulting in much lower system power and cost. Having raised more than \$13 million of venture capital, Flex Logix is headquartered in Mountain View, California, and has sales rep offices in China, Europe, Israel, Japan, Taiwan and throughout the USA. More information can be obtained at <http://www.flex-logix.com> or follow on Twitter at @efpga.

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