Artiza Networks to Develop Intel® Agilex FPGA-based SmartNICs for COTS servers

Press Release

- **Artiza's SmartNIC development is a response to expected changes in the wireless baseband market brought on by vRAN and O-RAN technologies**
- **The product in development is a high-performance FPGA-based hardware accelerator.**

TOKYO

Artiza Networks, Inc. (TSE: 6778) announced today that it has started development of a SmartNIC (Smart Network Interface Card), based on the Intel SmartNIC N6000-PL platform featuring Agilex FPGA, that plugs into PCIe slots in COTS servers. The platform supports Intel® Open FPGA Stack (OFS) put forward by Intel.

As 5G and Beyond 5G technologies demand higher speeds and capacities, higher processing performance is also required for wireless base station equipment. Until recently, radio access network (RAN) equipment has been based on dedicated hardware and software developed exclusively for RAN applications. However, technological innovation in the IT field, especially in data centers, has progressed remarkably, and virtualization technology that improves hardware performance and separates hardware and software has become widely available. In the telecommunications industry, vRAN (virtual Radio Access Network), which incorporates this virtualization technology into the RAN, has attracted a great deal of attention.

vRAN is a method for executing wireless baseband processing via software. One of the main advantages of virtualizing RAN is that allows RAN functions to be executed on a general-purpose server (COTS server) without the need for dedicated hardware. The O-RAN alliance, which Artiza Networks is a member of, is currently studying the opening and standardization of RAN interface technology specifications. Artiza believes that the virtualization of RANs and the opening of RAN technology interfaces will continue to progress and have a dramatic impact on the wireless base station equipment industry, which has conventionally consisted of proprietary hardware and software.

Against this backdrop, we have initiated the development of a product (codenamed Griffin) based on the Intel® FPGA SmartNIC N6000-PL platform to accelerate the advancement of vRAN and O-RAN technologies.

Griffin is a high-performance, FPGA-based hardware accelerator that accelerates FEC and channel coding workloads (L1 processing) running on the CPU in 5G/4G vRAN, which are essential for wireless base stations. It is equipped with high-precision time synchronization using IEEE 1588 PTP and clock synchronization using SyncE. It also supports O-RAN LLS-C1, C2, C3 configurations. The card integrates FH connectivity, FEC acceleration, timing and clock synchronization saving PCIe server slots. It also supports Virtual Cell Site Router (vCSR), 5G User Plane Function (UPF) offload.

This product supports Intel® OFS. Intel Open FPGA Stack (Intel OFS) is an efficient, scalable, source-accessible hardware and software infrastructure that addresses the challenges associated with designing FPGA-based acceleration platform solutions in Intel Xeon processor-based servers. Intel OFS eases workload development by providing a reference infrastructure and UVM verification environment with all the necessary components that you may choose to modify or leverage as-is.

We intend to market the Griffin product both domestically and internationally to network operators, network equipment manufacturers, and the 5G enterprise market, where demand is expected to increase.

The expected impact of the above on our business performance for the current fiscal year is currently negligible. Artiza is currently examining the impact on its business performance for the next fiscal year and beyond and will promptly announce any matters that should be publicly announced.

About Artiza Networks

Artiza Networks is the leader in radio access network (RAN) and core network (CN) testing for 3G, 4G, and 5G. For over 25 years, Artiza has collaborated with the industry's top vendors and operators in testing the RAN and core network nodes of the world's most advanced cellular networks. With extensive engineering resources including PCB and FPGA/DSP development, award-winning customer support, and a sales force versed in mobile network technology, Artiza meets the full range of customer needs through innovative, in-house development of products and solutions.

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