

## Linaro, GIGABYTE and Socionext Jointly Offer Development Environment Compliant with 96Boards

Standard Environment with ARM v8 architecture Enables Development of Versatile Software

**Yokohama, September 22, 2017** --- Socionext Inc., Linaro and GIGABYTE have jointly built a software development environment that complies with Linaro's 96Boards open hardware specification. Under the collaboration, GIGABYTE manufactures the 96Boards-compliant hardware with Socionext's SC2A11 processor, and Linaro provides support through its 96Boards community. The companies expect the new development environment to help the expansion of ARM®-based software in a broad range of applications including IoT gateway, edge computing and servers. The environment will become available to customers starting December 2017.

The rapid growth of IoT (Internet of Things) has led to an increasing demand for processing large amounts of data at high speed, in each phase, from data collection at gateways to edge computing to large-scale cloud servers in data centers. With these applications, the ARM architecture becomes a promising option for improving energy efficiency and reducing costs. In order to address these requirements, Linaro, GIGABYTE and Socionext have built an environment with a power-efficient processor that enables easy development of highly-versatile software using the ARM-native instruction set.

Socionext's SynQuacer SC2A11 integrates 24 cores of ARM Cortex-A53, the 64-bit, v8-based low power core, in a single chip. The processor has been optimized to handle tasks whose throughput is critical, though each of the individual tasks being relatively small-loaded. The chip consumes only 5W of power, thanks to its optimal low-power design. In addition, ARM TrustZone with extended feature is implemented into SynQuacer SC2A11, and the processor can be used for applications such as IoT gateways, where reliability and robustness are essential. With the SC2A11 built onto the 96Boards Enterprise-compliant standard hardware, customers can make full use of software from Linaro and use extension boards provided by the partners, to easily develop highly versatile software.

"Hardware availability has long been a barrier to native software development on ARM. Linaro created the 96Boards program to put the latest ARM hardware into the hands of developers," said George Grey, Linaro CEO. "Providing the Socionext SynQuacer 24-core SoC on a 96Boards Enterprise-compliant microATX motherboard and in a desktop system from GIGABYTE promises to deliver native software development capability on Arm to developers worldwide. We are delighted to be collaborating with Socionext and GIGABYTE on this program."

"I am delighted to announce the launch of this new hardware", said Fumiya Hasegawa, Sales Director of GIGABYTE. "With GIGABYTE's expertise in hardware engineering, Socionext's processor technology and power of Linaro community, we are excited to make contribution to this project that delivers unprecedented functionality and performance to emerging applications such as IoT."

"In close collaboration with Linaro and GIGABYTE, we were able to build a 96Boards-compliant development environment with Socionext's high efficiency processor SC2A11," said Jun Watanabe, Senior Vice President, SynQuacer Project, at Socionext. "Through the promotion by 96Boards community, we expect that the tools and applications that fully utilize the features of the SC2A11, such as parallel processing and high power efficiency, will be expanded significantly in the future."

SynQuacer SC2A11 is applicable to multi-CPU parallel processing, in combination with Socionext's proprietary DDT (Direct Data Transaction) technology. At this moment, Socionext has verified the operation of sixty-four SC2A11 chips in sync. It is now in the process of expanding its DDT technology to make thousands of SC2A11s work in parallel. With this innovative scalability, the SC2A11 achieves the optimum balance between performance and power consumption, in a wide range of applications from the gateway, the edge, to the cloud.

Socionext will demonstrate the new development environment at Linaro Connect San Francisco, starting September 25, 2017.

Linaro Connect : <http://connect.linaro.org/>

### **About Linaro**

Linaro is leading collaboration on open source development in the ARM ecosystem. The company has over 300 engineers working on consolidating and optimizing open source software for the ARM architecture, including developer tools, the Linux kernel, ARM power management, and other software infrastructure. Linaro is distribution neutral: it wants to provide the best software foundations to everyone by working upstream, and to reduce non-differentiating and costly low level fragmentation. The effectiveness of the Linaro approach has been demonstrated by Linaro's growing membership, and by Linaro consistently being listed as one of the top five company contributors, worldwide, to Linux kernels since 3.10.

To ensure commercial quality software, Linaro's work includes comprehensive test and validation on member hardware platforms. The full scope of Linaro engineering work is open to all online. To find out more, please visit <http://www.linaro.org> and <http://www.96Boards.org>.

### **About GIGABYTE**

For more information about GIGABYTE, please visit <http://b2b.gigabyte.com>.

## **About Socionext Inc.**

Socionext is a new, innovative enterprise that designs, develops and delivers System-on-Chip products to customers worldwide. The company is focused on imaging, networking, computing and other dynamic technologies that drive today's leading-edge applications. Socionext combines world-class expertise, experience, and an extensive IP portfolio to provide exceptional solutions and ensure a better quality of experience for customers. Founded in 2015, Socionext Inc. is headquartered in Yokohama, and has offices in Japan, Asia, United States and Europe to lead its product development and sales activities. For more information, visit [www.socionext.com](http://www.socionext.com).

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Photo 1: The SynQuacer 96Boards  
[view larger image](#)



Photo 2: The SynQuacer 96Boards  
(side panel removed)  
[view larger image](#)

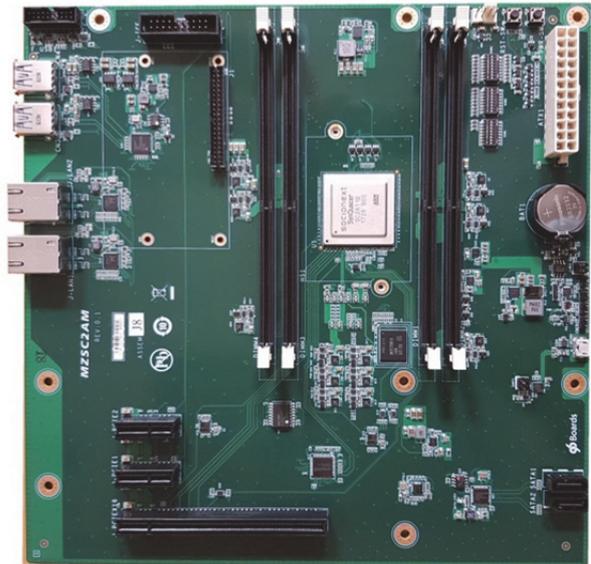


Photo 3: The microATX Board with  
SynQuacer SC2A11  
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