Andes Technology Corporation (TWSE:6533) and GLOBALFOUNDRIES (GF) jointly announced that Andes’ 32-bit CPU IP cores joined GF’s 22nm FD-SOI (22FDX®) platform. GF’s 22FDX platform offers the optimum combination of performance, power consumption and cost for IoT, mainstream mobile, RF connectivity and networking applications. GF’s 22FDX is a natural CPU IP solution for Andes Technology, with its focus on small and efficient processors.

“Our 32-bit power-efficient small-footprint cores have been wildly successful for deeply-embedded applications, especially in the growing global market. We are excited to be part of GF’s FDXcelerator Program with AndesCore™ on GF’s 22FDX process. Our newest products, N25 32bit and NX25 64bit RISC-V based cores coupled with a mature toolchain, will provide even more value to customers in these advanced nodes by providing both high speed and power efficiency,” said Charlie Su, CTO and VP of Engineering of Andes Technology.

“IoT designs demand the lowest power consumption as well as the lowest possible cost. The combination of GF’s 22FDX process and Andes’ low power architecture and small footprint will deliver the power, performance, area (PPA) advantage to our IoT customers. We are also excited about Andes newest RISC-V CPU IP. Customer demand is pushing this Open Architecture solution and GF is pleased to support Andes’ customer solutions for the IoT and RF Connectivity markets,” said Jai Durgam, Vice President, Customer Design Enablement of GLOBALFOUNDRIES.
Andes Technology and M31 Technology Collaborated on Optimal Power Efficiency CPU for IoT SoC Market

Andes Technology Corporation, the leading Asia-based supplier of small, low-power, high performance 32/64-bit embedded CPU cores, and M31 Technology, a professional silicon intellectual property (IP) provider, jointly announced that AndesCore™ N705 CPU has adopted M31’s low-power silicon IPs and Power Management Kit (PMK) to provide a very low power consumption CPU solution for SoC design in IoT and related low power applications.

The AndesCore™ N705 is a 32-bit low-power small-gate-count CPU IP core, a member of AndesCore™ processor families from Andes Technology. Designed with the AndeStar™ V3m architecture and a 2-stage pipeline, N705’s dynamic power consumption is less than 60% and its power efficiency is more than 40%. It also supports features like PowerBrake and FlashFetch™ for additional power management and performance improvement.

“Together, the Power Management modes, the Dynamic Voltage and Frequency Scaling (DVFS), the Low Power Cell Libraries and Memories, and N705’s power efficient architecture make possible this impressive advancement for ultra-low power processor implementation,” he said. “As the requirements for the standby time and the operating time are ever-increasing in each new generation of battery-powered devices, we will continue cooperating on the low power technologies to provide comprehensive solutions for the industry.”

Willis Shih, RD VP of M31 Technology, stated, “M31 is very glad to cooperate again with Andes Technology. M31’s low-power silicon IPs and Power Management Kit (PMK) provide a total solution for SoC design whether on dynamic power consumption or on static power consumption. These low power consumption features are particularly applicable for the IoT and wearable products market; helping enhancing customer competency and to satisfying the overall design requirements on IoT applications, such as low power consumption, low cost, and power management goals.”

“In the future, M31 will continue its IP development and validation in advanced process technologies to provide distinctive silicon IP to the worldwide chip design community. These IP solutions will satisfy customer SoC design on various low voltage supply and low power consumption, in order to help customers grasp market opportunities through short design cycles, low manufacturing cost, and high product competitiveness.”

As a result of this collaboration, M31 provides further low-power IP solutions in 40nm process technology. These IPs include “Low Power Cell Library” and “Green Memory Compiler” for Andes N705 CPU at the physical implementation level:

- Low Power Cell Library, which includes the Standard Cell Library, the unique Low Power Optimization Kit, and the Power Management Kit (PMK).
- Green Memory Compiler, with “dual-rail memory operation” to help customers with “Dynamic Voltage Frequency Scaling (DVFS); with “Power Gating Technology” to handle the “Static Leakage Power Consumption” in different operating modes.

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Andes Technology Corporation (TWSE: 6533), the only publicly-traded CPU IP company in Asia, which independently develops small, low-power, high performance embedded CPU cores, was awarded the “Top 25 IoT Solution Providers of 2017” by APAC CIOoutlook Magazine.

“Top 25 IoT Solution Providers of 2017” were selected from over 1,200 IoT design services providers in the past year. APAC CIOoutlook Magazine compiled opinions, recommendation and assessment from CIOs of medium/large-sized companies in the Asia Pacific region and experts from related areas to showcase leading Asia Pacific region IoT solution providers in 2017.

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Andes Technology Corporation has devoted its resources to R&D and innovation and constantly enhancing the brand value of the company. While the IoT market has unlimited potential, to be awarded the honor of one of the best IoT solution providers in the world at this time, is recognition of our team's continuing endeavor,” stated Andes President, Frankwell Jyh-Ming Lin. “IoT has been a key focus of Andes in recent years. Because our IP features low power and high performance, particularly applicable to the development of IoT products, it has been adopted by many customers. Andes will continue to develop CPU IP that provide higher performance efficiency and that integrate related services to provide customers the greater advantage and best value.”

**Importance of IoT in the Individual Everyday Life**

IoT applies digital technology to the individual's everyday life; the applications and products are already numerous, including Smart Home, Car Networking, Smart Health Care, Smart City, and much more. The applications in this market are diverse, involves the consumer market and offers great potential. Because of its diversity, providing the best solutions that allow companies to develop distinctive products is a major requirement for suppliers such as Andes. Another requisite is enabling customers to go into production quickly and ahead of their competitors.

Andes leverages its application experience in wireless communication and embedded control systems to develop CPU IP that satisfies the SoC’s demand for low power and high performance. Andes' products have been widely adopted by IoT devices by being able to meet the diverse requirements of IoT equipment. Andes’ software tool service and Knect.me, an ecosystem built for IoT applications, have received recognition from customers and experts, and eventually led to Andes' accolade of “Top 25 IoT Solution Providers of 2017.”

**Evaluate Andes IP Cores**

Andes has over 130 licensees and in 2016 Andes-embedded products shipped in more than 430 million devices around the globe from licensees in Taiwan, Japan, Korea, China, Europe, and USA. The company is expanding into the Americas.

If you have an SOC design in need of a low power, low memory footprint CPU with full toolchain and peripheral support, contact us to arrange a free evaluation. Let us help with your next design. E-mail us at info@andestech.com. Andes Technology USA Corporation 2375 Zanker Road, Suite 210, San Jose California 95131.