# Think Silicon Completes Ambitious 2.5 Year Plan with the Successful Finalization of the EU Funded GPU-WEAR Project

PATRAS, GREECE, November 15, 2018 /EINPresswire.com/ -- Think Silicon, a leader in ultra-low power graphics IP technology, announced the completion of an ambitious 2.5 year plan with the culmination of an array of innovative ultra-low power Graphics-Processing-Unit (GPU) IP-technology, together with a complete ecosystem of development-tools. Key highlights for the company include filing 10 international patents (six granted, four pending) and extending the sales channel in Europe, North America, Taiwan and Japan. The impressive project goals, established in 2015, resulted in numerous exhibits at major trade events such as the International Consumer Electronics Show, Mobile World Congress, Embedded World and executive speaking opportunities at the Synopsys ARC Processor Summit, Linley Processor Conference 2017, HiPEAC 2018, DATE Conference, and many more.

"To reach a meaningful impact-level of ultra-low power consumption, required by Wearable, IoT and Embedded Display devices, represents a technological challenge", says Dr. Georgios Keramidas CSO of Think Silicon and GPU-WEAR project lead. "This worthwhile effort required a multidisciplinary design methodology spanning circuits, architectural, compiler, and API-level power efficient techniques to work in a seamless fashion. We are very thankful for the support of the European Union's 'Horizon 2020' Research and Innovation Programme."

> This worthwhile effort required a multidisciplinary design methodology spanning circuits, architectural, compiler, and API-level power efficient techniques to work in a seamless fashion."
> *Dr. Georgios Keramidas CSO of Think Silicon and GPU-WEAR project lead*

During the Horizon 2020 program, Think Silicon achieved a variety of technology achievements including:
 Holistic power reduction techniques
The main objective of the project was to develop holistic power reduction techniques by reducing power not only on ASICs (Chip) level, but also for the entire system (Display device). To achieve this, the company developed and implemented multiple techniques, such as value- memorization, new image/texture/z-buffer compression methods, smart clock gating, power gating, and adaptive backlighting.

Transparent "display-aware" and "QoS-aware" graphics libraries
One of the biggest challenges that graphics application developers face is the lag of transparency accessing graphics libraries. Think Silicon implemented a "Run-time system" in the GPU driver as well as a QoS (Quality-of-Service) extension to graphics APIs. In addition, the cross-platform middleware GLOVE™ has been developed, which translates at runtime, OpenGL® ES / EGL calls and ESSL shaders to Vulkan® commands and SPIR-V Shader.

 NEMA®|SDK
As an essential toolbox for developers to develop power-aware yet still high-performance software applications for Wearable, IoT and Embedded display devices, NEMA®|SDK is a complete ecosystem of tools providing the utmost access to the GPU hardware. The NEMA®|SDK tool-box is comprised of six tools: NEMA®|GFX-API, NEMA®|GUI-Builder, NEMA®|Bits, NEMA®|PIX-Presso, NEMA®|SHADER-Edit and GLOVE™.

 Heterogeneous GPU
NEMA®|tS (tiny-small) helps to achieve an optimal combination of power-performance load balancing.

 NEMA®|xNN
Because Machine Learning and Deep Neural Networks (DNN) are complexity intensive models that require vast processing power, NEMA®|xNN was developed to address the 1000x gap (in terms of power and/or performance) compared to what competitive solutions offer.

Think Silicon has been recognized by global news outlets including Electronics Weekly, Packt, Microcontroller Tips, Programmable Web, the prestigious John Peddie Research and many more. Additional news about Think Silicon is available online at https://think-silicon.com/category/news/.

About Think Silicon:
Think Silicon S.A. is a privately held Limited Company located in: Patras/ Greece (HQ), Toronto/ Canada (Business Development & Marketing office), San Jose/CA, USA (Sales office), Cologne, Germany/EMEA region (Sales office), Taipei/TW (Sales office), Tokyo/JP (Sales office). Think Silicon is specialized in developing and licensing high-performance graphics and AI IP technology for ultra-low power and area limited digital mobile, wearable, embedded devices and IoT end-nodes for fabless semiconductor technology customers.

THINK SILICON, GLOVE and NEMA and combinations thereof, are registered trademarks of Think Silicon. Other names are for informational purposes only and may be trademarks of their respective owners.

Khronos®, EGL and Vulkan are trademarks or registered trademarks of The Khronos Group Inc. OpenGL is a registered trademark and the OpenGL ES logo are trademarks of Hewlett Packard Enterprise used under license by Khronos.

Georgia Protogerou
Think Silicon S.A.
2610911543
email us here

---

This press release can be viewed online at: http://www.einpresswire.com