System Elite Technology Demonstrates an Edge AI Acoustic Detection SoC Platform on Arm Cortex M4

A Customizable Dual Core System-On-Chip SoC Architecture with Bluetooth & WiFi Enables the Integration of Acoustic Detection AI Models Based on Low Power Arm M4

System Elite Technology

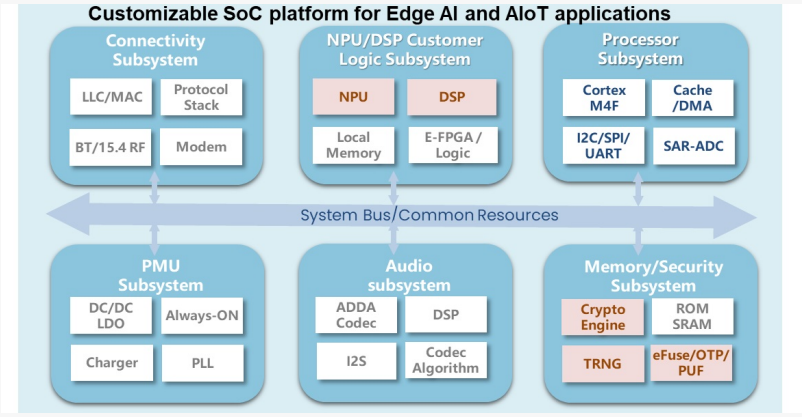
FREMONT, CA, UNITED STATES, October 8, 2024 /EINPresswire.com/ -- System Elite Technology, ("System Elite"), a Fremont CA startup since 2019, demonstrates today at the Embedded World N.A its AI Acoustic Detection SoC (System-on-Chip) Platform based on Arm Cortex M4 CPU. Leveraging its extensive know-how on the low power MCU design and wireless protocols, System Elite demonstrates a Neural Network model for Acoustic Detection in a low power, high performance SoC meeting the need of low power, low cost, and quick time-to-market in the fast-growing Edge AI market.

> "System Elite, serving as an IC design team to customers, enables leading system companies to own a custom SoC at a fraction of a cost and reduce the development time"
>
> *Warren Kao, CEO of System Elite*

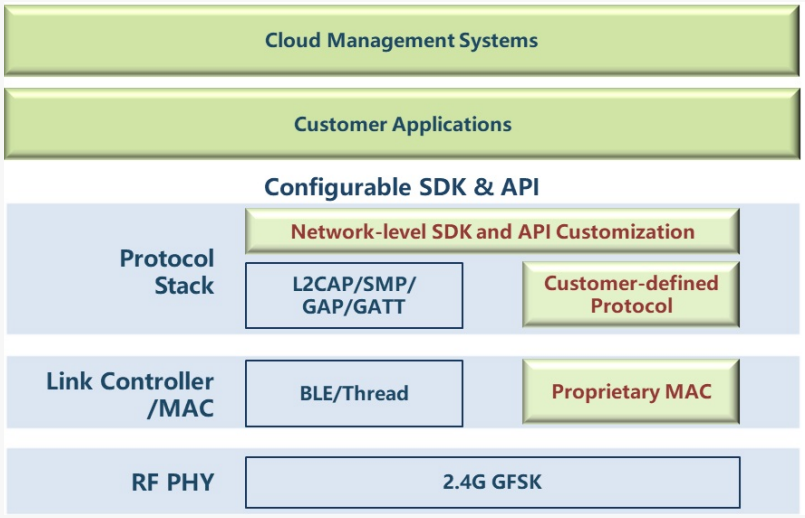
Incorporating the opensource libraries and popular AI development tools, System Elite has implemented the AI Acoustic Detection SoC Platform in a low latency, low power, and low cost SoC with BLE communication. This SoC platform runs the Acoustic Detection AI inference with less than 4K parameters on an Arm M4 CPU at 64Mhz with less than 100Kbyte of RAM and 150Kbyte of Flash. The acoustic model is able to detect pre-trained sounds such as different sirens, power tools, car horns, gun shots, and etc.

Targeting at Edge AI devices with wireless connectivity, this customizable SoC Platform includes the best-in-class Arm & RISC-V CPU cores, Bluetooth and wireless connectivity, AI accelerator, PSA certified on-chip IoT security, power-saving management, and audio subsystem. The

platform also includes software development tools (SDK & API) for developers to easily integrate customized features with optimized performance and power efficiency. This platform is catering to customers with limited engineering resources and budget, and provides an accessible path to a fully customized SoC with IoT connectivity for Edge AI devices.



Customizable SoC Platform for Edge AI and AIoT Applications



SW SDK & API for Custom Smart AIoT SoC

System Elite partners with tier-one IP companies, foundries, protocol stacks, and EDA tool vendors to provide the silicon proven solutions for quick time-to-market and yet customized System-on-Chip products.

“System Elite, serves as an IC design team to system companies, enables leading brand companies to own a custom SoC at a fraction of a typical cost while reducing the development time”, says Warren Kao, CEO of System Elite. “By incorporating the customizable AI capability in a lower power and low cost SoC, an Edge AI device company is able to directly control the production and capacity utilization, compared to relying on off-the-shelf MCU suppliers. Thus, alleviate the supply chain disruption that many device companies are now incorporating into their supply chain strategy.”

At the Embedded World N.A. in Austin TX, System Elite showcases a customizable AI acoustic detection SoC technology platform based on Arm M4 and RISC-V CPUs. This SoC platform takes the sound inputs, runs the trained AI acoustic detection model, detects and classify a particular sound, issues an actionable command through BLE communication to an external Bluetooth device to perform pre-defined tasks.

About System Elite Technology
Video https://www.youtube.com/watch?v=-jDedkoyAGQ
System Elite Technology, established in 2019 with teams in Taiwan and California, is a System-on-Chip (SoC) design partner for leading branding companies in the Edge AI and Smart IoT markets. Dedicated to AI powered IoT Connectivity SoC designs through its innovative SoC design service platform (iSoC foundry), System Elite provides the most efficient and least effort to develop each

and every custom SoC for customers based on customer specific applications.

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