



## Lattice sensAI Delivers 10X Performance Boost for Low Power, Smart IoT Devices at the Edge

May 20, 2019

*Award-winning sensAI Solutions Now Supported by Expanded Partner Ecosystem*

- Seamless user experience with support for new neural network models, machine learning frameworks, and faster design cycles
- New customizable reference designs for popular IoT applications like object counting and presence detection
- Growing partner ecosystem including design services and full product development to accelerate time-to-market

HILLSBORO, Ore.--(BUSINESS WIRE)--May 20, 2019-- [Lattice Semiconductor Corporation](https://www.businesswire.com/news/home/20190520005136/en/) (NASDAQ: LSCC), the low power programmable leader, today announced major performance and design flow enhancements for its award-winning Lattice sensAI™ solutions stack. The Lattice sensAI stack provides a comprehensive hardware and software solution for implementing low power (1mW-1W), always-on artificial intelligence (AI) functionality in smart devices operating at the Edge.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20190520005136/en/>



#LATTICE

The Lattice sensAI solutions stack brings low power, always-on AI functionality to Edge devices.  
(Graphic: Business Wire)

that make it a challenge to use off-the-shelf ASSPs. The Lattice sensAI solutions stack lets us easily add low power, flexible AI inference support to our existing and new camera designs, and get our value-added products to market faster."

"Our sensAI stack was developed to address the growing need for Edge devices with AI support, and we're encouraged by the market's response to our solution," said Deepak Boppana, Senior Director of Segment and Solutions Marketing, Lattice Semiconductor. "In addition to the multiple industry awards received by sensAI, it is exciting to see the broader partner ecosystem and customers developing low power sensAI-based solutions for always-on IoT devices such as smart doorbells and security cameras."

New enhancements to the Lattice sensAI solution stack include:

- 10x performance boost over previous version – driven by an updated CNN IP and neural network compiler with features like 8-bit activation quantization, smart layer merging and a dual-DSP engine
- Seamless user experience – accelerates the design cycle with several new features including:

IHS forecasts 40 billion devices will be operating at the network Edge by 2025. For reasons including latency, network bandwidth limitations, and data privacy, OEMs designing always-on Edge devices want to minimize sending data to the Cloud for analytics. Lattice sensAI enables such OEMs to seamlessly update their existing designs with low power AI inferencing optimized for their application requirements. Incorporating such local intelligence also lowers expenses related to Cloud-based analytics by only sending relevant data for further processing.

"At Pixcellence, our expertise is in developing image processing and computer vision solutions with industry-first features like color night vision. Interest in the IoT is fueling demand for smart cameras that support AI applications like presence detection or facial recognition," said Seton P. Kasmir, CEO, Pixcellence, Inc. "However, smart cameras have strict power consumption and cost requirements

- Expanding neural network and ML frameworks support including Keras
- Support for quantization and fraction setting schemes for neural network training eliminates iterative post-processing
- Simple neural network debugging via USB
- New customizable reference designs accelerate time to market for popular use cases like object counting and presence detection
- A growing design service partner ecosystem, including full product design capability from partners such as Pixcellence, makes it easier for customers to get to market faster.

For more information, please visit [www.latticesemi.com/sensAI](http://www.latticesemi.com/sensAI).

#### **About Lattice Semiconductor**

Lattice Semiconductor (NASDAQ: LSCC) is the low power programmable leader. We solve customer problems across the network, from the Edge to the Cloud, in the growing communications, computing, industrial, automotive and consumer markets. Our technology, long-standing relationships, and commitment to world-class support lets our customers quickly and easily unleash their innovation to create a smart, secure and connected world.

For more information about Lattice, please visit [www.latticesemi.com](http://www.latticesemi.com). You can also follow us via [LinkedIn](#), [Twitter](#), [Facebook](#), [YouTube](#), [WeChat](#), [Weibo](#) or [Youku](#).

Lattice Semiconductor Corporation, Lattice Semiconductor (& design) and specific product designations are either registered trademarks or trademarks of Lattice Semiconductor Corporation or its subsidiaries in the United States and/or other countries. The use of the word "partner" does not imply a legal partnership between Lattice and any other entity.

**GENERAL NOTICE:** Other product names used in this publication are for identification purposes only and may be trademarks of their respective holders.

View source version on businesswire.com: <https://www.businesswire.com/news/home/20190520005136/en/>

Source: Lattice Semiconductor Corporation

#### **MEDIA CONTACTS:**

Doug Hunter  
Lattice Semiconductor  
503-268-8512  
[Doug.Hunter@latticesemi.com](mailto:Doug.Hunter@latticesemi.com)

#### **INVESTOR CONTACT:**

David Pasquale  
Global IR Partners  
914-337-8801  
[lscc@globalirpartners.com](mailto:lscc@globalirpartners.com)