

# SYNTIANT

## RZ Ecosystem Partner Solution

# SYNTIANT Multimodal (Vision+Voice) AI Solution



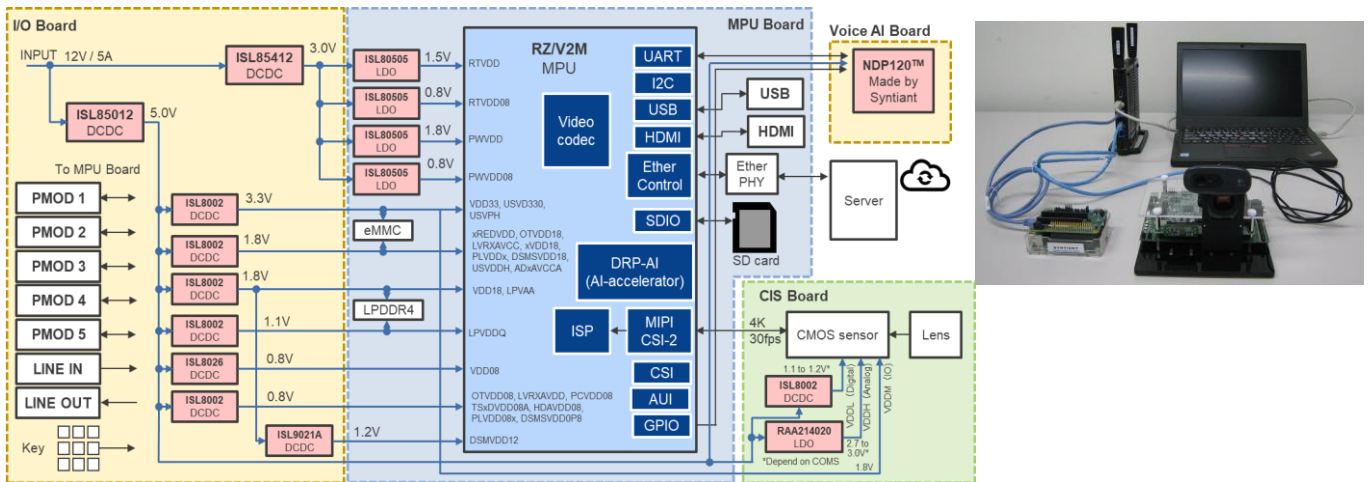
### Solution Summary

Advanced voice and image processing capabilities at the edge are provided through a unique combination of low-power, multi-modal, multi-feature AI inference capabilities. This solution combines Renesas' [RZ/V2M](#) vision AI microprocessor unit (MPU) and Syntiant's NDP120 Neural Decision Processor™

### Features/Benefits

- Always-on functionality with quick voice wake-up
- Seamless hands-free user experience for AI-based Vision systems
- Ultra-low standby power provided by the Syntiant Neural Decision Processor™ voice activation technology

### Diagrams/Graphics



### Target Markets and Applications

- Smart Appliance
- Surveillance Camera
- Access Control
- Retail
- Healthcare/Medical
- Service Robot

<https://www.syntiant.com/ndp120>

# SYNTIANT

## Always-On Voice

powered by custom AI Silicon

The Syntiant® NDP120 is a special purpose edge AI processor for always-on speech, audio, image and sensor applications. The NDP120 applies neural processing to run multiple applications simultaneously with minimal power consumption. Built using the Syntiant Core 2™ programmable deep learning architecture, the NDP120 is designed to natively run multiple Deep Neural Networks (DNN) on a variety of architectures, such as CNNs, RNNs and fully connected networks.

### NDP120 Neural Decision Processor™

#### Neural Processing

Second generation Syntiant Core 2 supports energy efficient inference and delivers 25x the tensor throughput compared to NDP100/101

#### Ease of Use

Flexible methods to access neural processing engine where neural designers have full control of network configurations

#### Multi-sensor fusion

PDM, SPI, I2S and I2C interfaces for microphone and sensor applications

#### Multi-feature

Concurrent neural networks to run multiple applications simultaneously with minimal power consumption

#### Audio Processing

DNN + DSP support both machine learning and traditional audio and voice algorithms

Company Name	Syntiant Corp
Headquarter Address	7555 Irvine Center Drive Suite 200 Irvine, CA 92618 United States
Date of Succession	April 2017
President and CEO	Kurt Busch
Business Description	Syntiant's end-to-end deep learning solutions bring a highly accurate, ultra-low-power AI interface to always-on image, voice, audio and sensor applications. Syntiant's Neural Decision Processors™ (NDPs) are being designed into earbuds, wearables, smart speakers, mobile phones, health monitoring devices, laptops, monitors and automobiles, as well as other consumer and industrial devices.
Common Stock	Syntiant is a private company.
Investors	Microsoft M12, Intel Capital, Bosch Ventures, Amazon Alexa Fund, Applied Ventures, Atlantic Bridge Ventures, & other leading investors.
Number of Employees	80-100
Web site	<a href="https://www.syntiant.com/">https://www.syntiant.com/</a>