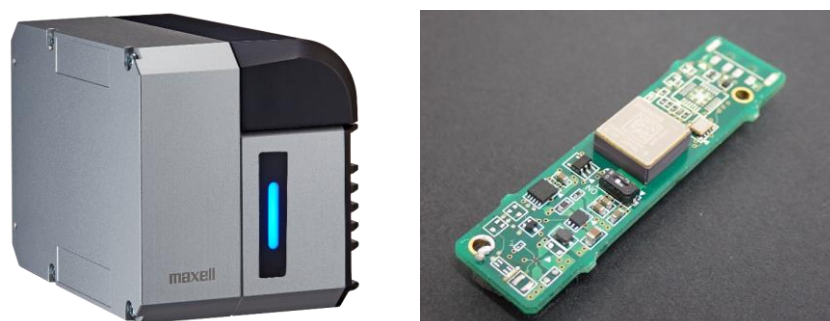


October 29, 2024

Maxell, Ltd.

## **Maxell's all-solid-state battery PSB401010H adopted for the intelligent image recognition unit “iXAM Vision Engine\*1”**

For real-time clock\*2 backup utilizing features of its high heat-resistance\*3



Intelligent image recognition unit “iXAM Vision Engine” (left)  
and the electronic board incorporating the all-solid-state battery “PSB401010H” (right)

The ceramic-packaged all-solid-state battery “PSB401010H” of Maxell, Ltd. (President and Representative Director: Keiji Nakamura / hereinafter “Maxell”) has been adopted for the intelligent image recognition unit “iXAM Vision Engine\*1 (iXAM-VE120A-DIO)” developed by its subsidiary, Maxell Frontier Co., Ltd. (hereafter “Maxell Frontier”), as a backup power supply for the real-time clock\*2 (hereinafter “RTC”).

Maxell and Maxell Frontier have long cooperated in the development of all-solid-state batteries as part of their research and development efforts by leveraging group synergies, and this latest adoption was made possible through such cooperation. This is the first time that the “PSB401010H” has been adopted as a backup power supply for RTCs.

The “iXAM Vision Engine\*1” is an edge AI-enabled intelligent image recognition unit suitable for integration into automated production lines and equipment. Compatible with a variety of camera interface standards (GigE Vision, USB3 Vision), the unit incorporates image processing and edge AI functions to realize a stable AI image inspection system with no computer required.

The “iXAM Vision Engine\*1” released in 2022 had a challenge in installing a backup battery for the RTC because of the high temperature inside the device generated by its image processing and edge AI functions and high-density packaging design. In the process of selecting a battery that can be used even in prolonged high-temperature environments, the Maxell's all-solid-state battery “PSB401010H” had been chosen because it solves the issues mentioned above and it is surface-mountable by reflow-soldering, which contributes to space saving and reduction of manufacturing

processes due to high-density mounting for image recognition units that are becoming smaller and smaller.

In addition, by taking advantage of high heat-resistance feature of all-solid-state batteries\*<sup>3</sup>, user convenience will be improved.

In order to solve as many social issues as possible, utilizing its analog core technologies, Maxell will continue to develop reliable, high-performance all-solid-state batteries that can be used in areas where existing batteries cannot be used by focusing on the following four features: long lifetime, high temperature resistance, high output, and high capacity.

\*1 iXAM Vision Engine: iXAM Vision series, including the iXAM Vision Engine, are sold only in Japan.

\*2 Real-time clock: IC with time function

\*3 high heat-resistance, high heat-resistance features of all solid-state batteries: Please see Maxell's all solid-state battery web page for details. [https://biz.maxell.com/en/rechargeable\\_batteries/allsolidstate.html](https://biz.maxell.com/en/rechargeable_batteries/allsolidstate.html)

### **Trademarks**

All company and product names mentioned herein are trademarks or registered trademarks of their respective companies.

### **All-solid-state battery webpage**

[https://biz.maxell.com/en/rechargeable\\_batteries/allsolidstate.html](https://biz.maxell.com/en/rechargeable_batteries/allsolidstate.html)

### **Contacts**

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Inquiry form: [https://biz.maxell.com/en/rechargeable\\_batteries/inquiry\\_form\\_input1.html](https://biz.maxell.com/en/rechargeable_batteries/inquiry_form_input1.html)

Appendix
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## iXAM Vision Engine Hardware Specifications

Items		Specifications
Series Name		iXAM Vision Engine
Model		iXAM-VE120A-DIO
Shape		image recognition unit
External I/F	USB	USB3.0 host 2CH
	LAN	1000Base-T 1CH
	DisplayPort	DisplayPort 1CH
	LED light	3 ports
	parallel	Isolated input/output: 4 points/4 points
	Parallel (Extended)	Isolated input/output: 8 points/8 points
	Encoder	RS422 1CH(A/B/Z)
Clock	Configuration	RTC
	Backup	Equipped with rechargeable battery <sup>*1</sup>
Voltage	Voltage	DC24V±5%
	Current Consumption	LED light not connected:1.00A(max) LED light connected:3.25A(max)
Dimensions(mm)		99.4×88.6×135
Environmental conditions	Operating temperature	Temperature: +5°C~ +40°C Humidity:30%RH~80%RH (non-condensing)
	Storage temperature	Temperature:-20°C~ +60°C Humidity:30%RH~80%RH (non-condensing)
Application		AI Image Inspection & Development Applications iXAM Vision Meister

\*1 Equipped with rechargeable battery: Time to full charge is up to 12 hours.

Note: iXAM Vision series, including the iXAM Vision Engine, are sold only in Japan. Product specifications are subject to change without notice.