

## [CES2022] Semiconductor manufacturer "ArchiTek" that challenges the global edge computing market Exhibited at "CES2022", the world's largest technology market!

ArchiTek Co., Ltd. (Osaka City, Representative Director: Shuichi Takada, hereinafter ArchiTek), which develops edge processors and high-level software for AI and image processing, will be on January 5, 2022 (Sunday). - We exhibited at "CES 2022", the world's largest technology technology market held in Las Vegas, Japan on January 7th (Friday).



Consumer  
Technology  
Association™

At CES2022, ArchiTek will use an AI camera kit that utilizes the edge AI processor "AiOnIc® \* 2" that is equipped with its own architecture aIPE \* 1 and that smartly executes image and voice processing and AI inference. We exhibited a demonstration of SLAM processing.



State of the booth



Demonstration of Body Worn Camera

At the venue, a demonstration of the "AiOnIc®" AI camera kit equipped with the prototype LSI "beppu" was performed to imitate the Body Worn Camera worn by US police officers, and AI processing such as posture estimation and object identification of passersby was carried out. The we. Since data communication with the cloud is unnecessary because edge AI processing can be performed, communication and processing delays are small, the device size is as small as 70 mm × 38 mm, and the power performance that can be operated with a mobile battery We have received a lot of feedback, and we have received further expectations from visitors regarding future mass production. We also demonstrated the SLAM processing using the prototype LSI "beppu" by displaying the information processed by the device on the monitor. This exhibition was an opportunity for visitors from all over the world to be interested in our technology and development capabilities.



Demonstration

**\* 1 aIPE**

Abbreviation for ArchiTek Intelligence® Pixel Engine. Architecture that realizes flexibility, small size, and low power consumption that can be used for various purposes (basic structure of processor)

**\* 2 AiOnIc®**

A solution for smart execution of AI with LSIs and IPs (Intellectual Property) equipped with aIPE

**• Future outlook-Comments by Shuichi Takada, Representative Director and CTO-**

**Reasons for exhibiting at CES2022**

We are a Japanese semiconductor company that manufactures in Japan, but we thought that we really had to go out to the world as a semiconductor, so we exhibited at CES in the United States. We are looking forward to the response of the exhibition (of CES2022) in the future.

**About growth image as ArchiTek through CES2022**

We believe that our semiconductors are chips that can definitely beat Silicon Valley and other venture companies in the world. We would like you to know the good points and think about the place of our activities, and we would like to support the development together while proposing.

**Finally, about ArchiTek's growth vision**

We believe that our chips can read human emotions, detect dangerous behaviors, and play an active role in terms of safety and security through AI and image processing. We believe that we can play an active role in stores, long-term care facilities, and various other places, so we would like to recommend it.

URL : <https://youtu.be/e8TbXqoBDvE>



**Profile**

Representative Director and CTO Shuichi Takada

- Joined Matsushita Electric Industrial Co., Ltd. (currently Panasonic) in 1989. Assigned to Information Systems Research Laboratories.
- R & D of computer architecture in R & D department
- Workstation development, mobile information device development, AV device development, game console development

## •About AiOnIc

ArchiTek has developed "AiOnIc®", an edge AI processor that smartly executes image / audio processing and inference AI based on its unique architecture aIPE. In the NEDO business \* 3 that we worked on from 2018 to 2020, the processing time was shortened to 1/20 compared to general-purpose CPUs for SLAM processing, which is indispensable for autonomous driving, and general-purpose for executing skeleton / attitude estimation algorithms with AI. Compared to GPU products, the operating speed has been improved several times.

### \* 3 NEDO business

Part of this result was obtained as a result of the commissioned work of the New Energy and Industrial Technology Development Organization (NEDO).

"AI chip that enables high efficiency and high-speed processing, next-generation computing technology development / innovative AI edge computing technology development / evolutionary, low power consumption AI edge LSI research and development"

URL : [https://www.nedo.go.jp/koubo/IT3\\_100047.html](https://www.nedo.go.jp/koubo/IT3_100047.html)

URL : [https://www.nedo.go.jp/news/press/AA5\\_101318.html](https://www.nedo.go.jp/news/press/AA5_101318.html)

## •About CES

HELP: CES (Consumer Electronics Show) is the world's largest technology market, hosted by the Consumer Electronics Association (CTA), held annually in Las Vegas, Nevada, USA. Many new products will be exhibited at the exhibition, many prototypes will be exhibited, startups will also participate, and new fields will be exhibited. Although the previous CES 2021 was held digitally for the first time, about 1,950 companies exhibited and about 80,000 people visited. It was held in real time at CES2022 for the first time in two years, and was also distributed online in parallel.

- Session: January 5th, 2022 (Sunday) -January 7th, 2022 (Friday)
- Venue: Las Vegas, Nevada, USA
- Organizer: Consumer Technology Association (CTA: Consumer Technology Association)
- Exhibition booth: Eureka Park J-Startup / Japan Pavilion Exhibition area
- Booth number: 62102
- CES official website: <https://www.ces.tech/>

## •About ArchiTek

ArchiTek is a J-Startup venture that researches and develops simple and beautiful architectures and algorithms. We are developing AiOnIc®, an edge AI processor that is the core of DX (Digital Transformation), in fields such as smart cities, smart care, smart factories, smart retail, and smart agri. As a platformer for edge AI technology, ArchiTek will take on the challenge of popularizing AiOnIc®, which is optimal for battery drive and fanless, from Japan to the global market. For details, please see the homepage(<https://architek.ai/en/business-home-en/> )

## •Contact

Please contact us from "Contact" on the ArchiTek Co., Ltd. website.

URL: <https://architek.ai/ja/business-home-jp/contact/>

Company name: ArchiTek Co., Ltd.

## •Company

Location: 1-29 Kitahorie, Nishi-ku, Osaka City, Osaka Prefecture

Representative: Representative Director and CTO Shuichi Takada

Setting: September 29, 2011

URL: <https://architek.ai/ja/business-home-jp/>

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Business description: Logic circuit development of "AI / image processing edge processor", development and sales of high-level software