

Sept 13, 2022

## Cybercore collaborates with NCXX on edge AI solution for retail industry

Cybercore Co., Ltd. (President and CEO: Hideshi Abe; hereinafter "Cybercore") and NCXX Inc. (President and CEO: Hidefumi Ouchi; hereinafter "NCXX") are pleased to announce that we will collaborate in the retail Edge AI tech field, which will become more active in the future.

Since 2007, Cybercore has specialized in developing image AI technologies, established original technologies such as image sharpening and model compression, and delivered its originally developed technologies to various fields including the automotive industry, public transportation including railroads and highways, construction, and factory automation (FA). In addition, we have won first place in the international competition at CVPR 2021 and 2022, one of the world's largest computer vision conferences, and our technological prowess has been recognized worldwide.

### Collaboration Objective

With the further evolution of devices and the deepening of AI algorithms in recent years, we intend to strengthen accessibility, especially in the retail tech market, through our collaboration with NCXX, in order to respond to the anticipated needs for edge AI in the future. Together with NCXX, we are committed to providing our customers with state-of-the-art technology that is more accessible, reliable and high-performance products in an environment that is easier for our customers to use.

### Collaboration Details

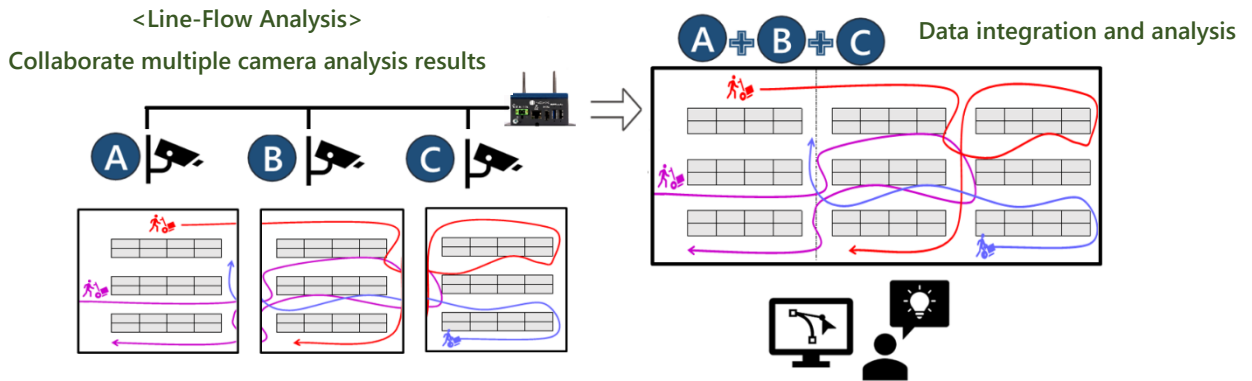
In this collaboration, the NCXX AI BOX "AIX-01NX", which is scheduled to be launched by NCXX at the end of September 2022, will be equipped with Cybercore's "Re-ID" (Re-Identification: a technology to recognize the same object with different cameras\*1) technology, which won an international competition in 2021, and "Multi-Class Product Counting & Recognition for Automated Retail Checkout" (a technology to recognize multiple classes of products at a retail self-checkout\*2) technology, which won the CVPR in 2022. In September 2022, we will start developing a combined solution for self-checkout that enables data analysis of customer attributes, purchase behavior, traffic flows, repeat purchase behaviors, etc., regardless of whether the store is large or small.

# News Release

\*1 "Re-ID" is an AI technology that detects vehicles and people from different images acquired from multiple cameras, assigns them IDs, and enables tracking.

[https://cybercore.co.jp/news\\_jp/2021/838/](https://cybercore.co.jp/news_jp/2021/838/)

\*2 "Multi-Class Product Counting & Recognition for Automated Retail Checkout" is a technology that recognizes multiple products from a video image of the product and automatically counts the quantity. [https://cybercore.co.jp/news\\_jp/2022/1167/](https://cybercore.co.jp/news_jp/2022/1167/)



<Person Detection・Attributes Analysis>



<Object Detection・Classification>



## 【About AIX-01NX】



CPU	CPU Board: NVIDIA® Jetson™ Xavier NX CPU: 6-core NVIDIA Carmel ARM® v8.2 64-bit CPU 6 MB L2 + 4 MB L3
GPU	384-core NVIDIA Volta™ GPU with 48 Tensor Cores
Chipset	SoC integrated
System Memory	1 x 8GB 128-bit LPDDR4x onboard
USB	External : 1 x USB 3.0(15W) , 1 x USB 2.0, 1×Micro USB (For maintenance) Internal : 1 x Micro USB 2.0
Ethernet	RS-10/100/1000 Mbps RJ45 x 1
Display	1 x HDMI 2.0 (3840x2160 @ 60Hz (Maximum) )
Storage	1 x M.2 Key M 2280 (NVMe SSD 256GB Initial Implementation)
WAN (3G/4G)	LTE cat.7 (MiniPCIe) LTE : band1,3,5,7,8,18,19,21,28,38,39,40,41 HSPA : band1,5,6,8,9,19 1 x SIM slot(nanoSIM)
Other	1 x Reset Switch, 1 x Recovery Switth, 2x SMA-type antenna connector
Power Spec	12~24VDC
Operating Temp.	-10°C to +60°C (TBD)
Operating Humidity	10% - 95%, non-condensing
Size	85(W)×118(H)×50(D) (except protrusion)
Weight	1.2 kg
Attachment	Main unit, blanket, quick start guide, 2 antennas, AC/DC adapter (sample)

\*Exterior design is subject to change.

※1 Communication speed is the maximum value based on technical standards for transmission and reception, and does not indicate the actual communication speed. Actual communication speeds may vary depending on the communication environment and network traffic conditions.

## 【Use Case】

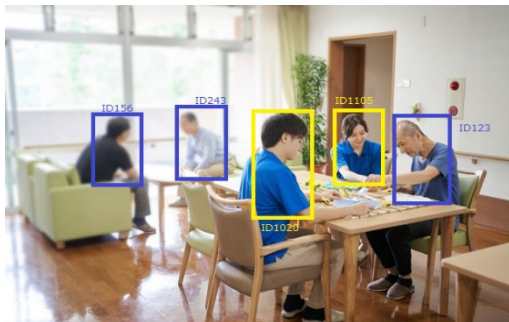
Marketing: Stores and Facilities, Traffic Flow Analysis, Customer Attributes Analysis, Purchase Analysis.



Security: Stores, Facilities, Parking Lot, Behavior Trace, Individual Identifications, Suspicious Person Detection



Caretaking: Nursing home, Anomaly detection, Worker/Staff, and Resident Identification



Traffic count: Vehicle types, Vehicle Driving Direction Judgement, Number Count



## 【About Cybercore, Co., Ltd.】

Since its founding in 2007, the company has been dedicated to research and development of image AI. We have a large number of talented engineers with international backgrounds and have achieved world-class results with our scientific approach to deep learning in AI, boldly challenging the limits of AI and creating many excellent solutions. We have been involved in the research and development of image AI as a specialized company, including R&D for a major automobile manufacturer, and we aim to further expand our business in the future by supporting our domestic and overseas customers in their efforts to promote DX.

For more information, please visit Cybercore's website (<https://www.cybercore.co.jp/>)

### ◆ Company Outline

Company Name: Cybercore, Co., Ltd.

Representative: Hideshi Abe, Representative Director and CEO

### ◆ For inquiries [please click here](#)