

Application Story

Bringing the Edge to Facial Recognition

(KIWI310)

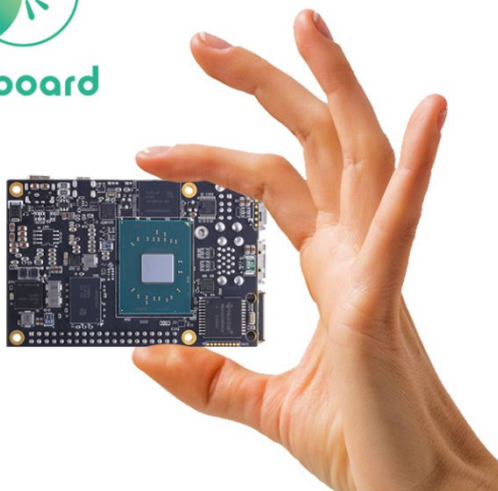
IPC becomes smaller and more versatile

Catalyzed by IoT and AI, the demand for industrial PCs increases vigorously around the world. However, the applications now are more than industry and reach our daily lives. For industrial PCs, being light and small doesn't only lower the cost but diversifies usability. Nowadays, we can find a credit card-sized SBC used in facial recognition systems.

Leveraged by its pocket size, the 1.8" SBC is expected to fit in any kind of occasion and strengthen the facial recognition systems. In restricted facilities like power plants or military bases, it identifies people on the blacklist and ensures security. In retail stores, it collects valuable data such as customer age, gender, and emotion or satisfaction level.

Thanks to the rich possibilities and applications, 1.8" SBC could be used in programmable controllers and edge computing applications, bringing IoT closer to many aspects of life.

Axiomtek KIWI310 - As small as a credit card, the smallest IoT device is just 1.8"



Accordingly, Axiomtek presents the smallest x86 embedded SBC, KIWI310. Its size is as small as a kiwi or a credit card, and it's being recognized as an excellent choice for space-constrained environments.

The KIWI310 is powered by the Intel® Celeron® processor N3350 with the Intel® integrated Gen9 graphic engine. It has 4GB of LPDDR4 onboard memory and 64GB eMMC storage. The onboard memory and storage make it workable right away and don't need extra expansion. It's

also noise-free and fanless. To clear space as much as possible, the power delivery is from the Type-C slot. Then, it supports Windows, Android and Linux operating systems.

The KIWI310 is versatile and incorporates flexible I/O interfaces for IoT providers. Through validation, it supports a variety of external devices such as PoE hat, temperature sensor, light sensor, LED, USB camera, touch screen and RFID kit, creating countless application possibilities.

The KIWI310 can function in a wide temperature range from 0°C to 60°C. To ensure reliable and stable operation, the KIWI310 also has hardware monitoring function to monitor CPU/system temperature and voltage.

Axiomtek's KIWI310 Enables Real-Time Facial Recognition Operations

According to MAREKETSANDMARKETS, the global facial recognition market size is expected to grow from USD 3.8 billion in 2020 to USD 8.5 billion by 2025, at a CAGR of 17.2%.

Facial recognition is a must-have in the near future and has a variety of applications in banking, retail, transportation and dining. In airports, facial recognition strengthens security and speeds up the flow; on drive-thru or restaurants, “face-pay” makes payment easier and contactless. With an additional sensor, you can even leave different amounts of tips with different gestures.

The KIWI310 has two USB 3.2 Gen1 ports for cameras, sensors, led indicators, and touchscreens. Furthermore, micro HDMI brings high resolution and no latency for facial recognition display. If you need to boost the speed and performance for real-time facial recognition operations or any visual-related computing, it has an M.2 Key E 2230 slot for integrating the Intel® Movidius™ Myriad™ X Vision Processing Unit or 5G module through Axiomtek's in-house 4G/5G expansion kit.

Due to its extremely small size, it gets the edge in security use. Even with a camera or sensor, it can be installed in any kind of venue, no matter it needs to be wall-mounted, on desktop or with a floor stand.

World-famous futurist Brett King once predicted that facial recognition will be commonly used

around the world. And KIWI310, the smallest choice in the embedded SBC markets, is one of your best choices.

KIWI310 Highlights



- Intel® Celeron® processor N3350
- Onboard LPDDR4 for up to 4GB of memory
- 1 GbE LAN
- Onboard eMMC for up to 64GB
- M.2 Key E slot
- 2 USB 2.0 and 2 USB 3.2 Gen1
- 1 micro HDMI
- 40-pin GPIO
- Supports operating system: Linux, Android, Windows
- Small form factor of 85 x 56 mm

*For detailed specifications, please visit www.axiomtek.com or go to Products > Boards & Modules > Industrial & Embedded Motherboard > 1.8-inch Embedded Board for [KIWI310](#)

About Axiomtek Co., Ltd.

Axiomtek has experienced extraordinary growth in the past 30 years because of our people, our years of learning which resulted in our tremendous industry experience, and our desire to deliver well-rounded, easy-to-integrate solutions to our customers. These factors have influenced us to invest in a growing team of engineers including software, hardware, firmware, and application engineers. For the next few decades, our success will be determined by our ability to lead with unique technologies for AIoT and serve our key markets with innovatively-designed solution packages of hardware and software – coupled with unmatched engineering and value-added services that will help lessen the challenges faced by our systems integrator, OEM and ODM customers and prospects alike. We will continue to enlist more technology partners and increase collaborations with our growing ecosystem who are leaders in their fields. With such alliances, we will create synergy and better deliver solutions, value, and the expertise our customers need.

Axiomtek is a Member of the Intel IoT® Solutions Alliance. A global ecosystem of more than 800

industry leaders, the Alliance offers its members unique access to Intel technology, expertise, and go-to-market support—accelerating deployment of best-in-class solutions.