Case Study

Clinic Check-in and Queuing Management System

Solution for overwhelmed outpatient appointments at the hospital

Hospitals are usually overwhelmed with patients. Today, many hospitals have deployed clinic check-in and queuing management systems to ensure a more efficient workflow while also improving customer satisfaction. Self-check-in kiosks reduce long check-in queues for patients, free up hospital staff for other tasks and help improve flow in outpatient clinics. With a queue management system, hospital staff spends less time managing the queue, allowing them to focus more on care.

Challenges

The customer, Chilin Electronics was looking for a 4K digital signage player to build a clinic check-in and queuing management system for Taiwan's largest hospital. The signage player system needs to be compact with a thickness of less than 3cm, operate without a fan, support two LAN ports, and have a product life cycle of more than 5 years. Additionally, it must be manufactured in Taiwan to ensure information security, such as patient privacy.

Main Requirements

- Robust digital signage player with an extended product lifespan
- Compact size with a thickness less than 3 cm for limited space
- Fanless design for low noise environment
- Two GbE LAN ports and one HDMI supporting 4K resolution
- Made in Taiwan

About Chilin Electronics

Chilin Electronics, founded in Taiwan in 1978, specializes in queuing management systems, registration systems, LED displays and digital clocks, as well as sports scoreboards.

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The ultra-thin digital signage player provides 4K UHD display

Axiomtek has proposed its DSP300-318, a fanless slim-type 4K digital signage player powered by the onboard Intel® processor. Customers can choose from various supported processors according to their demands. It can deliver dazzling visual images and video advertising in 4K resolution via HDMI 1.4 or DisplayPort 1.2. Measuring only 20 mm in thickness, the DSP300-318 is sleek enough to fit in a small area behind signage displays and its fanless design enables easy installation without any

environmental limitation. What's more, the DSP300-318 supports wireless connectivity with an M.2 Key slot for Wi-Fi/Bluetooth and an M.2 Key B slot for 4G LTE.

Application

The digital signage player with kiosk streamline the check-in and queuing process

Chilin Electronics deployed Axiomtek DSP300-318 digital signage player to establish a check-in and queuing management system in hospital. The wall-mount kiosk is connected to a DSP300-318 and a card reader. This system enables patients self check-in with their health insurance cards, and the system will automatically determine the order of diagnosis and treatment, considering factors such as queue number, late patients, and priority for elderly individuals, among others.

System Configurations of the DSP300-318

- Intel® Pentium® processor N4200
- Two DDR3L-1600 SO-DIMM for 8GB of memory
- One HDMI 1.4 and one DisplayPort 1.2
- Four USB and two GbE LAN
- One M.2 Key E 2230 slot for Wi-Fi/Bluetooth
- One M.2 Key B 3042 slot for 4G LTE
- One M.2 Key M 2280 slot for 256GM SSD storage

- Windows 11 Pro operating system
- Only 20 mm in thickness

Why Axiomtek

More than industrial computers, Axiomtek has been dedicated to self-service systems for various use cases. Also, Axiomtek provides a design-in service to tailor-made solutions with our customers and brings the best experience for the end users.

“Our adoption of Axiomtek‘s DSP300-318 in our clinic check-in and queuing management system has ushered in a remarkable transformation in the patient check-in procedure. This high-quality system has significantly improved the hospital‘s daily operations and significantly increased efficiency, benefiting both hospital staff and patients,” said Chris Lo, Senior Manager of Product Development from Chilin Electronics.

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.