Smart Technology for Homes and Buildings

Introduction


The advent of "smart" embedded computer technology and IoT gateway devices has made the Internet of Things (IoT) possible for home and building usage. Embedded computer systems and IoT gateway devices now can collect and transfer data on routine behaviors to control centers via the cloud for analysis - then program the devices at the edge to automatically deliver preferred settings and course of actions.

Each edge device such as the thermostat, door locks, appliances and more can be very "smart". When you get home, your thermostat will already have warmed up the house to the preferred temperature, your door will be unlocked when you pull into your driveway, your lights will be activated, and security features will be deactivated for entry. New appliances like "smart" ovens can now set an optimal cooking temperature and time based on the size/weight of the meal and you can also receive notifications of when the meal is finished through your phone. For a closer look at your meal, even in a different room, these "smart" ovens can also send video feeds to you so that you can keep an eye on Thanksgiving dinner while not being stuck in the kitchen. All operations can be overridden and controlled via tablet, phone or even wearable devices.
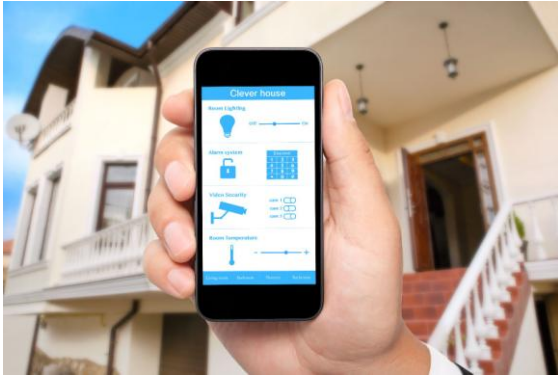
Convenience is not the only focus of smart technology. Embedded computer system and IoT gateway devices can be integrated into "smart" homes and buildings to lower energy consumption. The systems can be used to manage battery storage of solar energy and regulate operations at home, buildings and warehouses. The systems can monitor energy usage and manage operations for an optimum level of efficiency.

Axiomtek's eBOX embedded systems and rBOX DIN-rail embedded controllers and the ICO300-MI are well suited to control systems operations; data collection and communications to control centers through the cloud for data analysis; connectivity with other mobile devices; camera operations and image transfer. These industrial grade computers have many advanced features including high performance/low power consumption CPUs, the Intel® IoT Gateway Solution, fanless designs, multiple wireless connectivity options, wide operating temperature ranges, and more.

To learn more about Axiomtek's eBOX embedded systems and rBOX DIN-rail embedded controllers, contact us at info@axiomtek.com.tw.

About Axiomtek Co., Ltd.

Axiomtek Co. Ltd. is one of the world's leading designers/manufacturers of PC-based industrial computer products. From our roots as a turnkey systems integrator specializing in data acquisition and control systems, Axiomtek has mirrored the PC evolution in various industries by shifting our focus toward the design and manufacture of PC-based industrial automation solutions.

Axiomtek Co., Ltd. established in 1990, has more than 60 distributor partners globally. Axiomtek offers Industrial PCs (IPC), Single Board Computers and System on Modules (slot CPU card, small form factor embedded boards & SoM), Fanless & Rugged Embedded System (eBOX and rBOX), Intelligent Transportation System (tBOX), Industrial Firewall Platform, Industrial IoT Gateway Solution, EtherCAT Master Controller, Touch Panel Computers (TPC), Medical PCs (MPC), Human Machine Interface (HMI), Digital Signage and Players (DS), Industrial Network and Network Appliances (NA).

As an associate member of the Intel® Internet of Things Solutions Alliance, Axiomtek continuously develops and

delivers cutting edge solutions based on the latest Intel® platforms.

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