Advantech's WISE-Marketplace is an online app and software services store that offers pre-made industrial apps (I.App) to meet the needs of industrial users such as Domain Focused Integrators (DFSI), hardware/software developers, and system integrators. WISE-Marketplace forms part of a larger ecosystem that helps industrial manufacturing customers realize their digital transformation potential. Wei-Chieh Chen described the creation of a typical industrial app, “To develop an industrial app, companies need to spend considerable time conducting R&D, collecting data, preparing SDK/APIs, deploying edge devices, and designing a cloud interface. WISE-Marketplace replaces this process with pre-tested and certified I.App/utilities for download and plug-and-play functionality. This enabled Ei solutions to configure for peripheral equipment integration, data and cloud connectivity, and AI model execution, as well as solution ready for data and security management and storage applications.

From the layered architectures of IoT perspective, Ei solutions come in three categories. These include Ei-Edge, Ei-Servers, and WISE-Marketplace solutions. Ei-Edge solutions have multiple peripheral data acquisition interfaces. If users want to connect data sources from outside a preset range, they can easily access them using the EdgeX API. Moreover, Ei-Edge integrates cloud interface functions such as AWS, Azure, and AliCloud, and supports the deployment and management of Docker Container and K3s.

Ei-Servers form the connecting link from the cloud to the front end. They centrally manage all devices, applications, or microservices in the environment, and also provide management functions such as load balancing, horizontal expansion, and seamless updates for K8s/K3s clusters. Advantech’s WISE-Marketplace app and software services store provides a convenient Ei landing page, which contains more I.App offerings, technical documents, and other useful tools. In addition, there are specific release mechanisms for I.Apps, microservices, and containerized or non-containerized environments, as well as self-developed or third-party packages. WISE-Marketplace provides a forum and authentication mechanism to guide target customers such as industrial users, DFSI, peripheral equipment vendors, and I.App developers to ensure that I.App listings, procurement, and usage processes are consistent and of the highest quality; it also ensures that all I.App or utilities are compatible and integrate well with each other.
Ei contains many unique advantages, being able to be used quickly and easily with little or no code, and part of its appeal is that it ensures a high degree of integration between different services and apps. Moreover, users can not only use the application ready environment of Ei out of the box, but also flexibly extend it with more application upgrades.

Many successful Ei applications have already been tried and tested by the industrial and retail domains. Taking industry as an example, a metal processing plant was looking for a more economical way to update their device management. So, they partnered with Advantech and after careful consultation integrated edge devices, EdgeLink, and I.Apps into their industrial environment. They now have a much better understanding of their production capacity and the health status of their CNC production lines. In the retail industry, many advertisers use Advantech’s digital signage player solution (with DeviceOn and SignageCMS software package) to remotely manage digital signage devices and schedule playback of advertising content. Other retailers have downloaded and activated various iRetail apps from WISE-Marketplace to implement smart POS applications or construct smart retail scenarios.

Through WISE-Marketplace, Advantech hopes to promote change in their sales model so that customers can order Ei products from their online platform as well as obtain technical services through dedicated businesses lines, carry out technical consultation through forums, and obtain software services for application expansion through the WISE-Marketplace. This model simplifies market communication and helps users quickly deploy their smart solutions and services.