Domain-Focused Embedded Systems: Automation, Transportation, Retail

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Embedded IoT Global Domain Focus

Automation

Retail

Transportation

ARK Generic

Digital Signage

ARK V/S/R
Fanless Box PC - ARK New Product Highlights

**ARK-1220F**
Ultra Small Series
- Intel Pentium N4200 QC processor
- Isolated LAN, COM and DIO with 2.5KV
- Front-side I/O for in cabinet installation
- Wide range 12~28VDC in
- Heavy industrial Certificate

**ARK-1551**
ULV Slim Series
- Intel 8th gen. U series core i5
- Dual Channel DDR4 up to 32GB
- Versatile IO update to 4x COM, 4x USB
- Swappable 2.5” SATA SSD
- Wide range 12~24VDC in

**ARK-3531**
Compact Desktop Core i
- Intel 9th gen Desktop Core i 35W CPU
- Dual channel DDR4 up to 32GB
- Up to 4x GbE, 8x COM, 8x USB 3.0
- Support 2 x 2.5” RAID 0/1 support
- Wide range 9~36VDC in
Power Up IoT Device with 24/7 Management

WISE-PaaS/DeviceOn
Empowers Edge Intelligence
DeviceOn.Dev

Device Management
- Device Monitoring and Diagnostics
- Device Control & Updating

Data Management
- Data Acquisition and Storage
- Secure Data Access

Connectivity Service
- Device Connectivity
- Plug-n-Play Peripherals

OTA
- Software & Firmware Updates
- Advantech BIOS Updates

Rule Engine
- Distributed Rule Monitoring
- Flexible Trigger and Action

Data Security
- McAfee Threat Protection
- Acronis Backup Recovery

DeviceOn.App

OTA
- Software, firmware & configuration updates
- Advantech BIOS updates

FaceView
- Facial recognition
- People counting
- Behavior detection

E2I
- Protocol conversion
- Edge intelligence
- Real-time virtualization

ePaper Manager
- EPD device auto-discover
- Fast transmission
- Device association
WISE-PaaS/DeviceOn - Over-the-Air Software Updates

Industry: Equipment Builder
Product: ARK-1220L and DeviceOn OTA
Customer Background & Requirements:
• The customer is a leading machine builder and their machines are installed in different locations by end customers
• The customer was looking for a solution to help end customers lower cost/time of equipment upgrades

Solution:
• DeviceOn QTA supports BIOS updates, Driver updates, HMI layout configuration updates
Case Study – Edge CNC Machine

Application:
The smallest of the EDGE Connect CNC offers flexibility for machine integration

Requirement:
- Palm-size system with essential I/O ports support wide temp -20~60°C
- Supports dual displays HDMI/DVI to connect touch panel and monitor
- Optional WIFI module support and RF certification FCC and RED ready

ARK-1123
Case Study – Airport Explosive Detection System

Application:
Baggage explosive detection system in the airport

Winning Point:
- Easy to install in X-ray rotating gantry
- Customized coating board, cable dispensing and iDoor
- Independent 2x GbE bandwidth and throughput to connect camera

ARK-1124
Case Study – Intelligent Self-Service Gate

Application:
The intelligent entry/exit ramp and self-service gate control in HK-Zhuhai-Macau Bridge

Winning Point:
- ARK-3500/3520 PCI/PCIE expansions and multiple I/O ports
- High performance for vehicle license number check and facial/fingerprint identification
- 7x 24 stable operating for harsh environment
# Smart Digital Signage Solutions

- **Entry Level**
  - High price-performance ratio
  - Low-power & fanless

- **Ultra-Slim**
  - 19mm thin & fanless
  - Available from core i to Celeron

- **Multi-Display**
  - Video wall solutions
  - Supports flexible configuration

- **OPS/SDM**
  - Intel Open Pluggable Standard
  - Slot-in & Cableless design

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**WISE-PaaS/DeviceOn**
**WISE-PaaS/SignageCMS**
McAfee
Acronis

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![Smart Digital Signage Solutions - Advantech](image-url)
DS-580
4K Digital Signage Player Up to 4 Independent Displays

Outstanding Graphic Performance
- Integrate nVidia GT1030 GPU on board
- Supports Quad independent HDMI outputs & up to 2 x HDMI 2.0
- 4K 60Hz video playback

The Latest Functions
- Intel Atom® x7-E3950
- Fan-less design for maximized reliability & stability
- Decode for HEVC/WMV9/VP9

Content Management & Data Security
- Content/device remote management
- System security & recovery
- TPM2.0 support

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Content Management & Data Security
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**DS-082**

The Most Slim 4K x 4 Signage Player

**Features:**
- AMD Ryzen V1807B & AMD Ryzen R1606G
- Four independent 4K outputs via HDMI 2.0
- Slim design with only 19mm thickness
- Fanless & cable-less design for easy maintenance
- VEGA core up to 11 CU, VP9 10bit, H.265 10bit

**DS-082GB-T4A1E**
High performance

**DS-082GB-U6A1E**
Excellent C/P

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<th>HDMI 2.0</th>
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Management Software Built-in

**WISE-PaaS/ DeviceOn**
- Securely Automated Device Onboarding
- Remote Device Monitor and Control
- Software Over-the-Air Updates
- Acronis/McAfee as backup/protection

**Device Management**
- Update Management
- PW on/off
- System Security

**WISE-PaaS/SignageCMS**
- Program contents editing
- Emergency information delivery
- Schedule by daily/weekly/monthly
- Dispatch the content/program

- **Layout Editing**
- **Program Scheduling**
- **Content Dispatch**
- **Alert & Action**
Case Study – 8K TV Wall

Application:
Retail Signage TV Wall in shopping mall
Displaying advertising/promotion video

Requirement:
• Supports 4K displays x 4
• Easy maintain

System Solutions: DS-082
• Independent 4 display
• Built-in WISE-PaaS/SignageCMS for layout editing & display
Application:
Retail Signage in supermarket
Displaying advertising/promotion video

Requirement:
- Supports multiple displays
- Easy maintain

System Solutions: DS-980
- Independent six displays
- Built-in WISE-PaaS/SignageCMS for layout editing & display
ARK-2250V/ARK-2250R/ARK-2250S
In-Vehicle, Railway and Roadside Systems

Exceptional Performance
- Intel® Core i7-6822EQ/i5-6442EQ
- Intel® Chipset QM170

Rich I/O Connectivity
- Multi Display (VGA + HDMI); Dual Lan ports
- 3 x RS232/422/485; 2 x USB2.0; 1 x USB3.0
- 2 x Full size Mini PCIe slot; 1 x M.2 E key slot

Harsh Environments
- -20~70 °C operating temperature for V/S series
- -40~70 °C operating temperature for R series
- Anti-vibration & shock proof

Certification
- EN50155 (DC 24V ready; 72V/110V developing) / EN50121-3-2 / EN50121-4 For R series
- EMark (12/24VDC) / ISO7637-2 For V series

ARK-2250VSR
ARK-2250+AMK-R10XE

Extension module
Case Study – Driver Safety System

**Application:**
- Remote monitoring driver and vehicle status
- AI tracks and analyzes driver behavior, and alerts to risky behavior

**Requirement:**
- Ruggedized to sustain in in-vehicle environment
- Rich I/O for peripheral/wireless connectivity

**System Solutions:**
- High performance / Fanless design / Extended operating temp.
- E Mark certification
- Peripheral integration service (Wi-Fi / 4G LTE / GPS)
Co-Creating the Future of the IoT World