

# Контроллеры серии АРАХ-55 ХХ, АРАХ-56 ХХ, АРАХ-6572

## ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ

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# APAX-5580

Intel® Core™ i7/i3/Celeron DIN-Rail IPC  
w/ 2 x GbE, 2 x mPCIe, VGA

NEW



susiAccess RoHS COMPLIANT 2002/95/EC CE FCC

## Features

- 4th Generation Intel® Core™ i7/i3/Celeron Processors up to 1.7 GHz with 4GB/8GB DDR3L Memory
- 2 x GbE, 4 x USB 2.0/3.0, 1 x RS-232 /422/485, 1 x VGA, Audio
- Dual power input and UPS support
- Compact with Fanless Design
- Supports Fieldbus Protocol by iDoor Technology
- 3G/GPRS/GPRS/Wi-Fi Communication by mPCIe
- Chassis Grounding Protection
- LAN Redundancy (Teaming)
- Fault-Protected RS-485 Transceivers With Extended Common-Mode Range
- One button system recovery
- 10 year lifetime RTC battery

## Introduction

Advantech's APAX-5580 is a powerful DIN-Rail PC Controller with an Intel Core i7/i3/Celeron CPU. It is the ideal open control platform to be combined with APAX I/O modules, and features flexible I/O expansion, real-time I/O control, network capability through various interfaces, and support dual power input and UPS module for robust power system. It also has a built-in the standard mini PCI express interface for wireless communication and Advantech's iDoor technology. The APAX-5580 is the best solution for data gateway, concentrator and data server applications, its seamless integration with I/O can save your costs and fulfill a diverse range of automation projects.

## Specifications

### General

- Certification** CE, FCC
- Dimensions ( W x D x H )** 128 x 106 x 110 mm
- Form Factor** Regular Size
- Enclosure** Aluminum Housing
- Mounting** DIN-Rail
- Weight (Net)** 1.8 kg (4.0 lbs)
- Power Requirement** 24 V<sub>DC</sub> ± 20%
- Power Consumption** 28 W (Typical), 72 W(Max)
- OS Support** Microsoft® Windows 7/8, Linux Kernel 3.X

### System Hardware

- BIOS** AMI UEFI 128Mbit Flash BIOS
- Watchdog Timer** Programmable 256 levels timer interval, from 1 to 255 sec
- Processor** Intel® Core™ i7-4650U ULT 1.7GHz Haswell Dual Core, 4MB L2  
Intel® Core™ i3-4010U ULT 1.7GHz Haswell Dual Core, 3MB L2  
Intel® Celeron 2980U ULT 1.6GHz Haswell Dual Core, 2MB L2
- System Chip** Integrated Intel 8 Series Chipset
- Memory** On-board 4GB (8GB optional)
- Graphics Engine** Intel® HD Graphics 5000/4400
- Ethernet** Intel® i210-IT GbE, 802.1Qav, IEEE1588/802.1AS, 802.3az  
Intel® i218-LM GbE, Intel® AMT, IEEE1588/802.1AS, 802.3az
- LED Indicators** LEDs for Power, battery, LAN (Active, Status), Tx/Rx and HDD
- Storage** 1 x mSATA, 1 x SD, 1 x SD (for OS backup)
- Expansion** 1 x Full-size mPCIe slot, 1 x Half-size mPCIe slot, mPCIe 2.0

### I/O Interfaces

- Serial Ports** 1 x RS-232/422/485, DB9, 50-115.2kbps
- LAN Ports** 2 x RJ45, 10/100/1000 Mbps IEEE 802.3u 1000Base-T Fast Ethernet
- USB Ports** 4 x USB Ports (2 x USB 2.0, 2 x USB 3.0 compliant )  
1 x internal USB
- Display** 1 x VGA, supports 1920 X 1080 @ 60 Hz 24 bpp
- Audio** Line-Out
- Power Connector** Dual power input and UPS support
- Grounding Protection** Chassis Grounding

### Environment

- Operating Temperature** - 10 ~ 60°C (-4 ~ 140°F) @ 5 ~ 85% RH with 0.7m/s airflow
- Storage Temperature** - 40 ~ 85°C (-40 ~ 185°F)
- Relative Humidity** 10 ~ 95% RH @ 40°C, non-condensing
- Shock Protection** Operating, IEC 60068-2-27, 50G, half sine, 11ms
- Vibration Protection** Operating, IEC 60068-2-64, 2Grms, random, 5 ~ 500Hz, 1hr/axis (mSATA)

## Ordering Information

- APAX-5580-4C3AE** Intel Celeron 1.6 GHz with 4 GB memory, no external expansion slot
- APAX-5580-433AE** Intel Core i3 1.7 GHz with 4 GB memory, no external expansion slot
- APAX-5580-473AE** Intel Core i7 1.7 GHz with 4 GB memory, no external expansion slot

## Accessories

- APAX-5430** APAX Battery Module
- APAX-5343** AC to DC APAX Power Supply
- APAX-5402-E2A1AE** 2 expansion slots with APAX Bus and PCI express
- APAX-5402-E2A0AE** 2 expansion slots with PCI express only
- SQF-SMSM4-XG-S8E** SQFlash 820 series mSATA MLC 16/32/64/128G (-40~85°C)

## Application Software

	<p>Version : V3.0 or above</p> <p>An innovative remote device management software, allowing efficient remote monitoring, quick recovery &amp; backup, and real-time remote configuration, to create a more intelligent and interconnected embedded computing solution.</p>
	<p>Version : V7.1 or above</p> <p>WebAccess, as the core of Advantech's IoT solution, is full web browser-based software package for HMI and SCADA software. All HMI and SCADA software features including: Animated Graphics Displays, Real-time Data, Control, Trends, Alarms and Logs, are available in a standard web browser. WebAccess is built around the latest internet technologies. With its open architecture, vertical domain applications can easily be integrated.</p>

# APAX-6572

Intel® Atom™ D510 1.66 GHz, 2 GB RAM  
Controller with 3 x LAN, 2 x COM, VGA



RoHS  
CE FCC

## Features

- Intel Atom D510 1.66 GHz CPU
- Onboard 2 GB DDR2 DRAM
- Backup system with two controllers (master and slave) to ensure continuous I/O control
- Expands I/O by connecting with APAX-5000 I/O modules
- Supports Windows WES2009 and Windows CE
- Provides C/C++ and .NET library for I/O control and communication
- Supports real-time control tasks under Windows CE through ProConOS
- 2 x RS-232/422/485 (automatic flow control)
- 3 x 10/100/1000 Mbps LAN, 4 x USB 2.0

## Introduction

The APAX-6572 is a high performance controller with an Intel Atom D510 CPU. By installing Windows WES2009 or Windows CE operating system, it becomes an application ready platform. It is an ideal open control platform which can be combined with APAX I/O modules, and features flexible I/O expansion, real-time I/O control, and powerful computing and networking capability through various interfaces.

## Specifications

### General

- **Certification** CE, FCC Class A
- **Cooling System** Fanless
- **Mounting** DIN-rail, Wall mount (panel mount)
- **Dimensions (W x H x D)** 222 x 155 x 140 mm
- **Enclosure** Aluminum + SECC, ABS + PC (I/O)
- **Weight** 2.6 kg (APAX-6572)
- **Power Consumption** 35 W @ 24 V<sub>DC</sub> (APAX-6572, Typical, Without I/O modules)
- **Power Requirement** 10 ~ 36 V<sub>DC</sub> (e.g. +24 V @ 1 A) (Min. 24 W), AT

### System Hardware

- **CPU** Intel Atom D510 1.66 GHz
- **Memory** 2 GB DDR2 DRAM (onboard)
- **Battery Backup SRAM** 1 MB
- **Watchdog Timer** Programmable 7-tier event handler, from 1 ~ 255 seconds for each tier
- **LED Indicators** Power, CF, LAN (Active, Status), Serial (Tx, Rx)
- **Display** VGA (DB15 connector), up to 1600 x 1200 @ 85Hz
- **Audio** Line in, Line out, Mic in
- **Storage** 1 x internal Type I/II CompactFlash card slot

### Software

- **Operating System** Windows WES2009, Windows CE
- **Control Software** C/C++ and .NET library with utility  
KW MultiProg (development), ProConOS (kernel)
- **Remote Management** Built-in Advantech DiagAnywhere agent  
Modbus/ASCII master/slave mode  
KW MultiProg (development), ProConOS (kernel)

### I/O Expansion

- **Accompanied I/O slots** 4 x APAX/PCI combo slots
- **Connected I/O Modules** 32 (max.)\*
- **Digital Signals** 768 (max.)
- **Analog Signals** 192 (max.)

### Communication

- **Serial Ports** 2 x RS-232/422/485 (supports automatic RS-485 data flow control)
- **Serial Baud Rate** 50 ~ 115.2 kbps
- **LAN Ports** 3 x RJ-45 Ports, 10/100/1000 Mbps
- **USB Ports** 4 x USB 2.0

### Environment

- **Operating Temperature** -10 ~ 50°C (when mounted vertically)
- **Storage Temperature** -40 ~ 70°C
- **Operating Humidity** 20 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **Vibration Protection** 2 Grms @ 5 ~ 500 Hz  
(Random, operating, 1hr/axis)  
(Conforms to IEC 60068-2-64)

## Ordering Information

- **APAX-6572** Intel Atom D510 1.66 GHz, 2 GB RAM Controller
- **PWR-244** Panel Mount Power Supply

### PAC softlogic option (for CTOS only)

- **SQF-P10S2-8G-ETE** Suggested CF 8G CF NR, DMA (-40 ~ 85°C)
- **2070012262** WinCE image with KW support for APAX-6572
- **2010000007** License Agreement for KW ProConOS Embedded

### PC-base controller option (for CTOS only)

- **SQF-P10S2-16G-ETE** Suggested CF 16G CF NR, DMA (-40 ~ 85°C)
- **2070012263** WES2009 MUI for APAX-6572

\*APAX DI/O modules can use ID number 0 ~ 31, while AI/O modules and counter modules can only use ID numbers 0 ~ 15

# APAX-5520CE/KW APAX-5620CE/KW

PAC with Marvel XScale® CPU

PAC with Marvel XScale® CPU and CAN



APAX-5520CE/KW



## Specifications

### General

- **Certification** CE, FCC class A
- **Dimensions (W x H x D)** 30 x 139 x 100 mm
- **Enclosure** ABS+PC
- **Weight** 210 g
- **Power Consumption** 4.5 W @ 24 V<sub>DC</sub> (typical)

### System Hardware

- **CPU** Intel XScale PXA270 520 MHz
- **Memory Flash** 32M bytes, SDRAM 64M bytes
- **Battery Backup Memory** 256 KB file system, 256 KB direct access
- **Real-time Clock** Yes
- **Watchdog Timer** Yes
- **VGA** DB15 connector
- **SB Ports** 1 x USB 1.1
- **Storage** 1 x Type II CompactFlash card slot

### Software

- **OS Support** Windows CE
- **Control Software** C/C++ and .NET library  
KW Multiprog (development tool)  
KW ProConOS (runtime kernel)

### I/O Expansion

- **Connected I/O Modules** 32 (max.)\*
- **Digital Signals** 768 (max.)
- **Analog Signals** 192 (max.)

### Communication (Ethernet)

- **LAN Ports** 1 x RJ-45 Port, 10/100 Mbps
- **Offers Modbus/TCP Server and Client APIs**

### Communication (Serial)

- **Medium** 1 x Isolated RS-485 (2-wire, isolated)
- **Offers Modbus/RTU Master and Slave APIs**

### Environment

- **Operating Temperature** -10 ~ 55°C (when mounted vertically)
- **Storage Temperature** -40 ~ 70°C
- **Relative Humidity** 5 ~ 95% (non-condensing)

## Ordering Information

- **APAX-5520CE** PAC with Marvel XScale CPU, WinCE
- **APAX-5520KW** PAC with Marvel XScale CPU, KW

### Accessories

- **APAX-5002** 2-slot Backplane Module
- **APAX-5343E** Power Supply for APAX Expansion Module

\*APAX DI/O modules can use ID number 0 ~ 31, while AI/O modules and counter modules can only use ID numbers 0 ~ 15



APAX-5620CE/KW



## Specifications

### General

- **Certification** CE, FCC class A
- **Dimensions (W x H x D)** 60 x 139 x 100 mm
- **Enclosure** ABS+PC
- **Weight** 310 g
- **Power Consumption** 5 W @ 24 V<sub>DC</sub> (typical)
- **Redundancy** 25ms data sync, 20ms changeover time and 14kbytes for data sync

### System Hardware

- **CPU** Marvel XScale PXA270 520 MHz
- **Memory Flash** 32M bytes, SDRAM 64M bytes
- **Battery Backup Memory** 256 KB file system, 256 KB direct access
- **Real-time Clock** Yes
- **Watchdog Timer** Yes
- **VGA** DB15 connector
- **USB Ports** 1 x USB 1.1
- **Storage** 1 x Type II CompactFlash card slot

### Software

- **OS Support** Windows CE
- **Control Software** C/C++ and .NET library  
KW Multiprog (development tool), KW ProConOS (runtime kernel)

### I/O Expansion

- **Connected I/O Modules** 32 (max.)\*
- **Digital Signals** 768 (max.)
- **Analog Signals** 192 (max.)

### Communication (Ethernet)

- **LAN** 2 x RJ-45 Port, 10/100 Mbps
- **Offers Modbus/TCP Server and Client APIs**
- **Modbus/TCP under KW** Server : 64 connections  
Client : 128 connections

### Communication (Serial)

- **Medium** 2 x Isolated RS-485 (2-wire, isolated, max. distance 4,000 ft)
- **Offers Modbus/RTU Master and Slave APIs**

### Communication (CAN)

- **Medium** 2 x Isolated CAN
- **Protocol** CANopen (DS301/302)
- **Speed maximum** 1 Mbit/s

### Environment

- **Operating Temperature** -10 ~ 55°C (when mounted vertically)
- **Storage Temperature** -40 ~ 70°C
- **Relative Humidity** 5 ~ 95% (non-condensing)

## Ordering Information

- **APAX-5620CE** PAC with Marvel XScale CPU, CAN, WinCE
- **APAX-5620KW** PAC with Marvel XScale CPU, CAN, KW

### Accessories

- **APAX-5002** 2-slot Backplane Module
- **APAX-5343E** Power Supply for APAX Expansion Module

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