

APAX-5580

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

NEW



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/GPS/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 Control IPC 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 for robust power system. It also has a built-in 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 costs and fulfill a diverse range of automation projects.

Specifications

General

- Certification** CE, FCC
- Dimensions (W X H X D)** 117 x 148.5 x 106 mm
- Form Factor** Regular Size
- Enclosure** Aluminum Housing
- Mounting** DIN-Rail, Wall mount
- Weight (Net)** 1.8 kg (4.0 lbs)
- Power Requirement** 24 V_{DC} ± 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

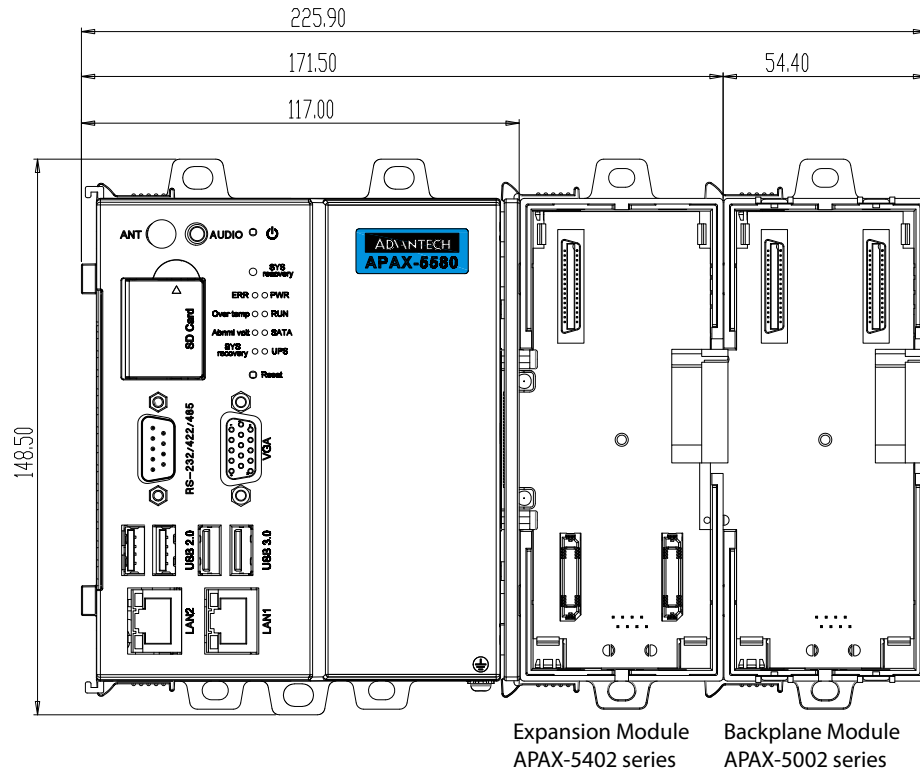
- Operating Temperature** -10 ~ 60°C (-4 ~ 140°F) @ 5 ~ 85% RH with 0.7m/s airflow
- Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- Relative Humidity** 10 ~ 95% RH @ 40°C, non-condensing
- Shock Protection** Operating, IEC 60068-2-27, 50G, half sine, 11 ms
- Vibration Protection** Operating, IEC 60068-2-64,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

Application Software

	Version:V3 CODESYS is the world lead PC-based control software which support IEC-61131-3 and real time fieldbus, such as EtherCAT, PROFINET, Ethernet/IP and Modbus. Also it integrates the local and remote visualization function within one software, it can help to short the time and cost.
	Version : V3.0 or above An innovative remote device management software, allowing efficient remote monitoring, quick recovery & backup, and real-time remote configuration, to create a more intelligent and interconnected embedded computing solution.
	Version : V7.1 or above 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.

Dimensions

Unit: mm



Expansion Module
APAX-5402 series

Backplane Module
APAX-5002 series

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-5580-474AE** Intel Core i7 1.7 GHz with 8 GB memory, no external expansion slot

Accessories

- **APAX-5343-AE** AC-to-DC APAX Power Supply
- **PWR-244-AE** 96W AC to DC power adapter
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1700000596** Power Cable China/Australia Plug 1.8
- **MSQF-SMSM4-XG-S8E** SQFlash 820 series mSATA MLC 16/32/64/128G (-40~85°C)

iDoor Modules by APAX-5435

- **PCM-24R2PE-AE** Intel i350, GbE, PoE IEEE 802.3af, PD, RJ45 x 2
- **PCM-2300MR-AE** MR4A16B, 2MByte
- **PCM-26D1PB-AE** Hilscher netX100 FieldBus, ProfiBus, DB9 x 1
- **PCM-26D2CA-AE** SJA1000 CANBus, CANOpen, DB9 x 1
- **PCM-24S2WF-AE** 802.11 a/b/g/n 2T2R w/ BT4.0, Atheros AR9462
- **PCM-24S33G-AE** 6-band HSPA Cellular Module, SIM holder+GPS
- **PCM-26R2PN-MAE** Hilscher netX100 FieldBus, PROFINET, RJ45 x2
- **PCM-26R2EC-MAE** Hilscher netX100 FieldBus, ETHERCAT, RJ45 x2

Expansion Modules

- **APAX-5402-E2A0AE** 2 expansion slots to support APAX-5490, APAX-5435, APAX-5430
- **APAX-5402-E2A1AE** 2 expansion slots with APAX bus
- **APAX-5490-IP4AE** 4x RS-232/422/485 Communication Module
- **APAX-5435** APAX iDoor expansion Module
- **APAX-5430** APAX SATA interface Module

Embedded OS & Automation Software

- **2070013551** WES7P X64 Eng. for 5580
- **2070013554** WES7P X64 MUI. for 5580
- **2070013654** WES7P X86 ENG. for 5580
- **2070013656** WES7P X86 MUI. for 5580
- **968LS3SS02** CODESYS V3 RTE
- **968LS3SS03** CODESYS V3 RTE + TV*
- **968LS3SS05** CODESYS V3 RTE + TV* and WV**

*TV: Target Visualization

**WV: Web Visualization