APAX-5580

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



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 mPCle
- 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, UL **Dimensions (W X H X D)** 117 x 148.5 x 106 mm Form Factor Regular size **Enclosure** Aluminum housing DIN-rail, Wall mount Mounting Weight (Net) 1.8 kg (4.0 lbs) Power Requirement $24 V_{DC} \pm 20\%$

28 W (Typical), 72 W (Max) Power Consumption

Microsoft® Windows 7/8, Linux Kernel 3.X OS Support

System Hardware

RIOS AMI UEFI 128Mbit Flash BIOS

Watchdog Timer Programmable 256 levels timer interval, from 1 to 255

Intel® Core™ i7-4650U ULT 1.7GHz Haswell Dual Core. Processor

Intel® Core™ i3-4010U ULT 1.7GHz Haswell Dual Core,

Intel® Celeron 2980U ULT 1.6GHz Haswell Dual Core,

2MB L2

System Chip Integrated Intel 8 series chipset Memory On-board 4GB (8GB optional) Intel® HD graphics 5000/4400 **Graphics Engine**

Intel® i210-IT GbE, 802.1Qav, IEEE1588/802.1AS, **Fthernet**

Intel® i218-LM GbE, Intel® AMT, IEEE1588/802.1AS,

802.3az

 LED Indicators LEDs for power, battery, LAN (Active, Status), Tx/Rx and

Storage 1 x mSATA, 1 x SD, 1 x SD (for OS backup) Expansion 1 x Full-size mPCle slot, 1 x Half-size mPCle slot,

mPCle 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

Power Connector Dual power input and UPS support

Grounding Protection Chassis grounding

Environment

Audio

Operating Temperature $-10 \sim 60^{\circ}\text{C} (-4 \sim 140^{\circ}\text{F}) \otimes 5 \sim 85\% \text{ RH with } 0.7\text{m/s}$

Storage Temperature

-40 ~ 85°C (-40 ~ 185°F)

Relative Humidity

10 ~ 95% RH @ 40°C, non-condensing

Shock Protection Vibration Protection Operating, IEC 60068-2-27, 50G, half sine, 11 ms

Operating, IEC 60068-2-64, 2 Grms, random, 5 ~ 500 Hz,

Application Software



CODESYS

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.

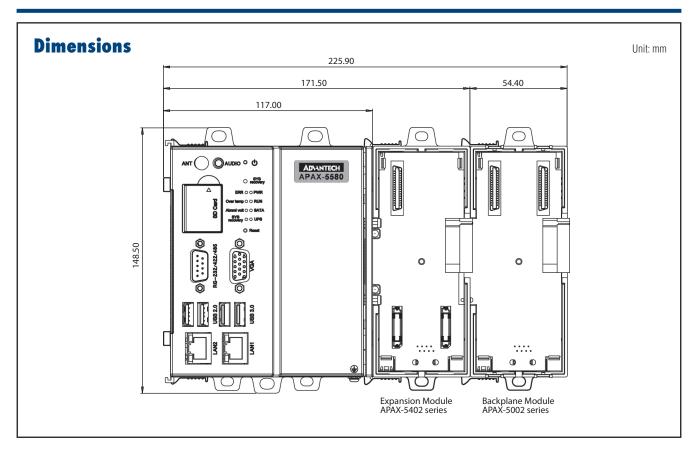
Version: V7.1 or above



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.

ADVANTECH

Control IPCs



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

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

Accessories

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 SQF-SMSM4-XG-S8E

SQFlash 820 series mSATA MLC 16/32/64/128G (-40 ~ 85°C)

iDoor Modules for APAX-5435

Intel i350. GbE. PoE IEEE 802.3af, PD. RJ45 x 2 ■ PCM-24R2PE-AE PCM-2300MR-AE MR4A16B, 2MByte

Hilscher netX100 FieldBus, ProfiBus, DB9 x 1 PCM-26D1PB-AE 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-5402L-E2A2AE 2 expansion slots with APAX bus (EtherIO) 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* CODESYS V3 RTE + TV* and WV** 968LS3SS05

*TV: Target Visualization **WV: Web Visualization