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, UL
- **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
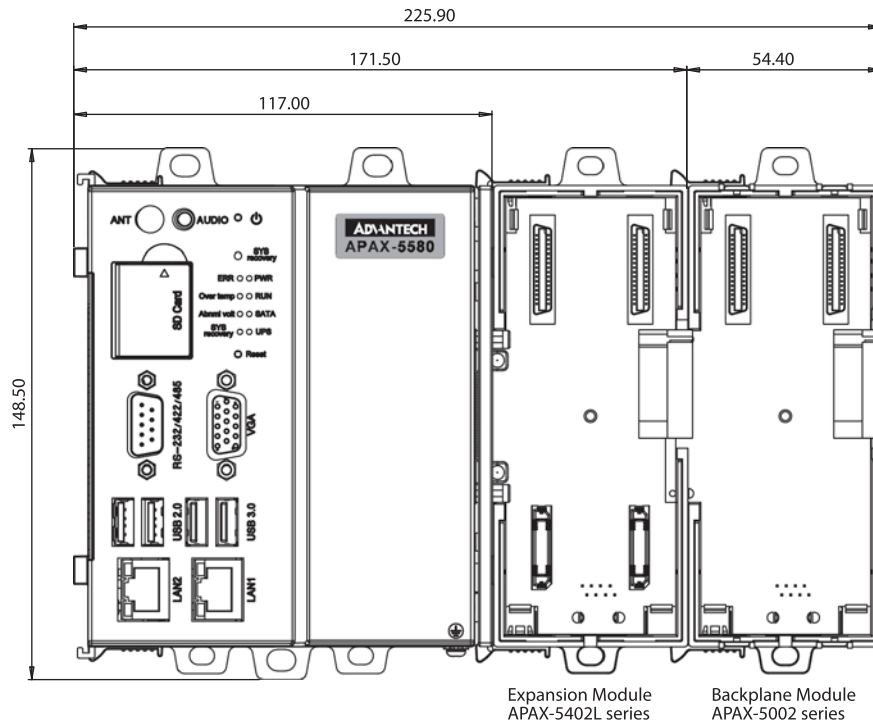
Environment

- **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

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.
WebAccess	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**

All product specifications are subject to change without notice.   Last updated: 27-Jun-2018

Dimensions

Unit: mm

225.90
171.50
54.40
117.00
148.50

ANT — AUDIO
SYS recovery
ERR — PWR
Over temp — RUN
Abnml volt — SATA
SYS recovery — UPS
Reset
SD Card
RS-232/422/485 — VGA
USB 2.0 — USB 3.0
LAN2 — LAN1

ADVANTECH
APAX-5580

Expansion Module
APAX-5402L 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** — 72W, 115/230 V_{AC} Power Supply for APAX-5580 (Support Dual Power)
- **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-S9E** — SQFlash 820 series mSATA MLC 16/32/64/128G (-40 ~ 85°C)

iDoor Modules for APAX-5435

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

- **2070015332** — WES7P X64 Eng. for 5580
- **2070015335** — 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**
- **968LS3SS12** — CODESYS V3 RTE SM
- **968LS3SS13** — CODESYS V3 RTE SM +TV
- **968LS3SS15** — CODESYS V3 RTE SM +TV and WV
- **968LS3SS08** — CODESYS V3 RTE SM CNC
- **968LS3SS09** — CODESYS V3 RTE SM CNC +TV
- **968LS3SS11** — CODESYS V3 RTE SM CNC +TV and WV

*TV: Target Visualization

**WV: Web Visualization