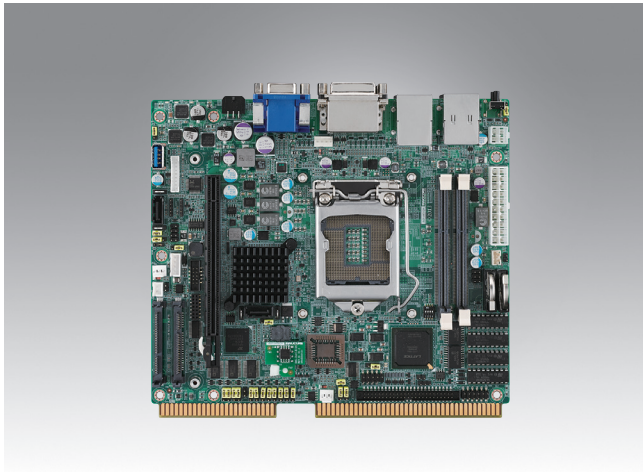


# DPX<sup>®</sup>-S435

4th Generation Intel<sup>®</sup> Core<sup>™</sup> Gaming platform



## Features

- Very high performance Intel platform
- Dual and Quad Core CPUs from Celeron to Xeon<sup>®</sup>
- Comprehensive gaming features
- High performance integrated and PCI-Express graphics
- Easy integration for gaming applications
- Full featured Driver API for IO and security



## Introduction

The DPX<sup>®</sup>-S435 is the latest single board computer in the proven DPX-S series of integrated gaming platforms. Intel's latest embedded chipset provides an unrivalled range of price and performance choices from dual core Celeron up to Quad Core Xeon and Core i7 CPUs. The DPX-S435 is the highest performance gaming platform available and suitable for the most demanding applications. The integrated graphics core (Intel HD4600) represents a significant step up in chipset graphics performance and the standard PCI-Express x16 graphics card slot allows the S435 to support today's latest discrete graphics cards for stunning gaming graphics. A full feature set of I/O and COMs designed specifically for gaming devices is also included making the DPX<sup>®</sup>-S435 an ideal integrated platform for many high end gaming, amusement and kiosk applications.

## Specifications

|             |   |
|-------------|---|
| System      | 4th Generation Intel <sup>®</sup> Core <sup>™</sup> Low Power Dual and Quad Core CPUs<br>High performance chipset graphics system (HD4600)<br>DDR3-1600, 2 SODIMMs up to 16GB total RAM<br>2 x Gigabit Ethernet LAN<br>2 x CFast <sup>™</sup> sockets (CFast 1.0 and 2.0 support),<br>3 x SATA DOM sockets (SATA 3.0, 6Gbps)<br>Audio (on-board 3 channel amp)<br>8192 kB SRAM (NVRAM), 1MB ROM, EEPROM |
| I/O         | 10 x Serial Ports (RS232/TTL/CCTalk/RS485 )<br>3 x USB 3.0/2.0, 8 x USB 2.0<br>2 x GPIO/iButton<br>32 inputs and 32 outputs<br>(6 Meter outputs with disconnect detect)   |
| Video       | Integrated – Intel next generation HD4600 Direct X 11.1 Graphics core<br>Dual, triple monitor support from integrated CPU graphics<br>Full speed PCI-Express X16 v3.0 slot<br>Simultaneous operation of integrated and PCI-E card graphics  |
| Security    | TPM security device on board<br>Intrusion switch inputs (8 dedicated)<br>BIOS customization<br>1 x Security ROM socket  |
| Software    | Edge-to-edge drivers and API/SDK<br>Code portability through consistent API with other Advantech-Innocore boards.<br>Range of Innocore software products for Gaming   |
| CPU/Chipset | Intel Q87 PCH for 4th Generation Core Dual and Quad Core CPUs:<br>Core i5, i7 up to 2.7 (3.3) GHz<br>Xeon, Core i3, Pentium and Celeron options<br>Intel PCH  |

|              |  |
|--------------|--|
| Memory       | 2 x SODIMM sockets<br>Up to 16GB DDR3 -1600 MT/s SDRAM   |
| BIOS         | AMI APTIO UEFI BIOS<br>BIOS can be write protected, support for legacy ROM extensions  |
| Video        | Integrated – Intel next generation HD4600 Direct X 11, Open GL 3.2, OCL 1.2 Graphics core<br>1 GB VRAM maximum shared memory (with 2 GB or more system memory installed)<br>Video Ports:<br>2 x DVI-D (MicroCross <sup>™</sup> )<br>1 x Analog VGA (15 pin D-Sub)<br>1 x DisplayPort v1.2 with 5.4Gb/s link speed and daisy chaining |
| LAN          | 2 x Ethernet Gigabit LAN<br>Full duplex operation<br>Wake-On-LAN capability  |
| Storage      | 2 x C-Fast <sup>™</sup> socket<br>2 x SATA 3.0 for HDD, SSD or SATA DOM  |
| Ports        | 5 x RS232 Serial, 16550 compatible<br>2 x CCTalk/RS232<br>2 x RS232/TTL<br>1 x RS232/485<br>11 x USB (2 x USB 3.0, 2 x USB 2.0 on front panel, 6 x USB 2.0, 1 x USB 3.0 on board headers)<br>2 x I2C on board header<br>Audio out - SPKR (left, right and LF), SPDIF, line out<br>5.1 channels                                       |
| Discrete I/O | 32 ESD protected inputs<br>32 OC Outputs (500mA, 50V)<br>(of which 6 I/O ports can be configured as meter outputs with disconnect detect)  |

## Specifications Cont.

|                     |   |
|---------------------|---|
| Sound               | HD Audio<br>On board 13W + 13W + 13W Class D audio amps with FL, FR, LF speaker connections   |
| Security ROM        | 1 x Socket for 1MB EPROM/OTPROM PLCC32 (PCI, Bootable)  |
| SRAM                | 8192 KB fast SRAM (2 banks) on PCI bus<br>Battery state software readable   |
| TPM                 | TCPA/TPM 1.2 compliant security device on board.  |
| Watchdog Timer      | Programmable time-out<br>"Always on" design (default 700 seconds)   |
| EEPROM              | 32kB user EEPROM (option for larger)  |
| Intrusion Detection | Eight Intrusion detection input lines<br>Operates with and without mains power<br>Logs date/time of last 254 events<br>Logs system resets/brownouts as events<br>EEPROM backup for 10 years retention |

|                          |   |
|--------------------------|---|
| System Health Monitoring | Measurement of CPU core temp. with thermal trip.<br>Configurable smart fan control for CPU and 2x System fans                             |
| Power Fail Detect        | External sensor input for advanced warning of AC power fail   |
| Expansion                | 1) Up to 240 Bytes of PCI-based I/O expansion available through DirectPCI + interface on board header<br>2) PCI-Express x16 graphics card |
| Power                    | ATX or AT mode  |
| Environment              | Operating Temperature: 0 ~ 50° C TBC<br>Storage Temperature: -20 ~ 85° C  |
| Approvals                | EMC: CE, FCC Class A<br>RoHS, WEEE  |
| Dimensions               | 170 x 200 mm (6.7" x 7.9")  |

All product specifications are subject to change without notice .

## Optional Accessories

Full system chassis  
Range of PCI-E graphics cards  
I/O connector breakout board  
Edge card connector set  
CFast cards, SATA DOM, SSD storage devices

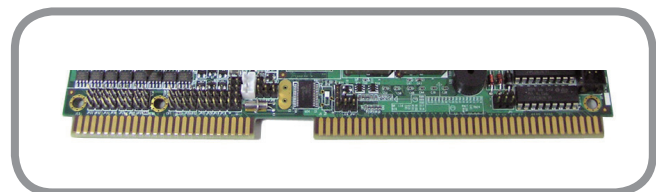
## Benefits

Best in class CPU performance  
Single integrated solution  
Designed for the Gaming Industry  
Backwards compatible with DPX-S series boards  
Small size  
Low power  
Long Lifecycle

## Front I/O



## Rear I/O



DPX-S1435 Integrated Gaming System

## OEM Customization and Product Development

- Advantech-Innocore is part of the Advantech Co., Ltd. Group of Companies.
- Advantech-Innocore specializes in the fields of PC-based hardware design and software development. Our in-depth knowledge and global resources make us your ideal partner.
- Specifications subject to change. E&OE.
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