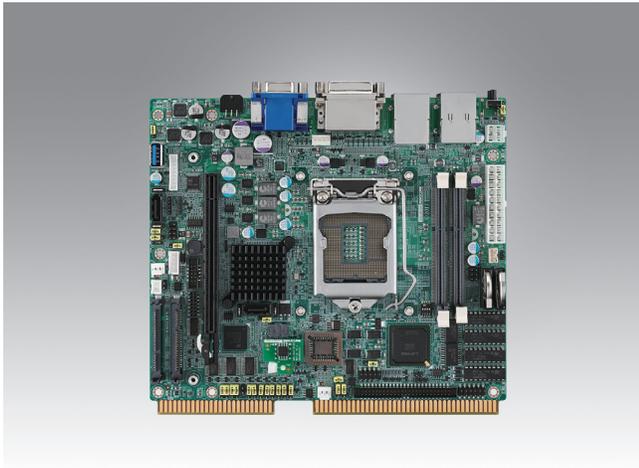# DPX®-S435

4th Generation Intel® Core™ Gaming platform

Features

- Very high performance Intel platform
- Dual and Quad Core CPUs from Celeron to Xeon®
- 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®-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 todays 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®-S435 an ideal integrated platform for many high end gaming, amusement and kiosk applications.

Specifications

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

Category	Specification
Memory	2 x SODIMM sockets
	Up to 16GB DDR3 -1600 MT/s SDRAM
BIOS	AMI APTIO UEFI BIOS
	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 1 GB VRAM maximum shared memory (with 2 GB or more system memory installed)
	Video Ports:
	2 x DVI-D (MicroCross™)
	1 x Analog VGA (15 pin D-Sub)
	1 x DisplayPort v1.2 with 5.4Gb/s link speed and daisy chaining
LAN	2 x Ethernet Gigabit LAN
	Full duplex operation
	Wake-On-LAN capability
Storage	2 x C-Fast™ socket
	2 x SATA 3.0 for HDD, SSD or SATA DOM
Ports	5 x RS232 Serial, 16550 compatible
	2 x CCTalk/RS232
	2 x RS232/TTL
	1 x RS232/485
	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)
	2 x I2C on board header
	Audio out - SPKR (left, right and LF), SPDIF, line out 5.1 channels
Discrete I/O	32 ESD protected inputs
	32 OC Outputs (500mA, 50V)
	(of which 6 I/O ports can be configured as meter outputs with disconnect detect)

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Innovations in Gaming Computing

Specifications Cont.

Sound	HD Audio 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 Battery state software readable
TPM	TCPA/TPM 1.2 compliant security device on board.
Watchdog Timer	Programmable time-out "Always on" design (default 700 seconds)
EEPROM	32kB user EEPROM (option for larger)
Intrusion Detection	Eight Intrusion detection input lines Operates with and without mains power Logs date/time of last 254 events Logs system resets/brownouts as events EEPROM backup for 10 years retention

System Health Monitoring	Measurement of CPU core temp. with thermal trip. 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 2) PCI-Express x16 graphics card
Power	ATX or AT mode
Environment	Operating Temperature: 0 ~ 50° C TBC Storage Temperature: -20 ~ 85° C
Approvals	EMC: CE, FCC Class A RoHS, WEEE
Dimensions	170 x 200 mm (6.7" x 7.9")

All product specifications are subject to change without notice .

Optional Accessories

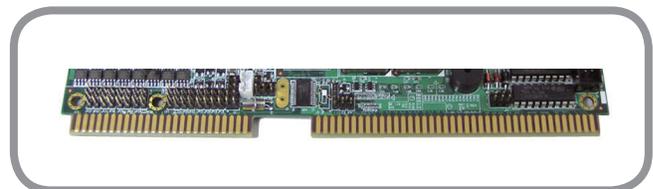| |
|---|
| Full system chassis |
| Range of PCI-E graphics cards |
| I/O connector breakout board |
| Edge card connector set |
| CFast cards, SATA DOM, SSD storage devices |

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

OEM Customization and Product Development

- Advantech-Innocore is part or 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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Front I/O

Rear I/O

DPX-S1435 Integrated Gaming System

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