# DPX®-S415
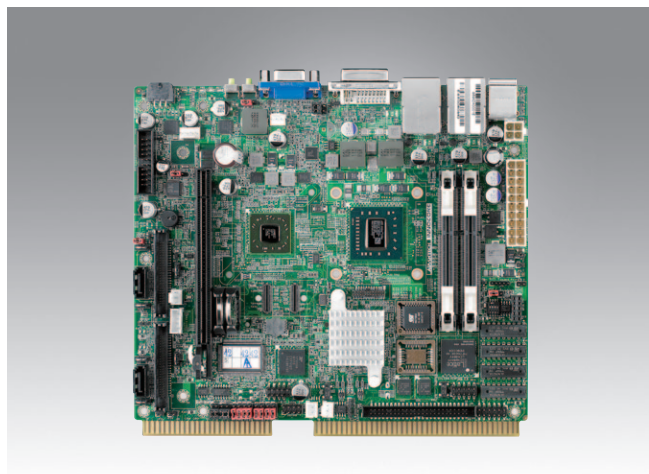
## AMD® Athlon™ II Neo, Turion™ II Neo Gaming Platform



## Features

- Very high performance AMD® platform
- Comprehensive gaming features
- High performance integrated or PCI-Express graphics
- Low power consumption
- Small format



## Introduction

The DPX®-S415 is the latest, highly integrated industrial single board computer from Advantech-Innocore. The DPX®-S415 offers unrivalled performance, long lifecycle and low power with AMD's Athlon X2 and Turion Neo processors and includes lightning fast chipset graphics (Radeon HD4270). A full feature set of I/O and COMs designed specifically for gaming devices is also included on the board and it is backward compatible both mechanically and in the software API with the DPX®-S410 series.

## Specifications

| | |
|---|---|
| System | Mobile AMD Athlon II X2, Turion II X2 Neo performance |
| | AMD 785E Embedded chipset |
| | High performance chipset graphics Radeon HD4270 |
| | Max. 8 GB DDR3 SDRAM |
| | 2 x Gigabit Ethernet LAN |
| | 2 x Compact Flash |
| | 2 x SATA DOM sockets |
| | 2 x CFast™ (Option) |
| | Sound (on-board 3 channel amp) |
| | 2 MB SRAM, 1 MB ROM, EEPROM |
| I/O | 5 x RS232 |
| | 2 x CCTalk/RS232 |
| | 2 x RS232/TTL |
| | 1 x RS232/485 |
| | 12 x USB 2.0 |
| | GPIO |
| | 32 inputs and 32 outputs |
| Video | Embedded Chipset Radeon HD4270 |
| | Dual independent monitor support (on-board) |
| | Full speed PCI-Express X16 v2.0 slot to support a range of PCI-Express graphics cards; ATi®, Nvidia®, S3 Graphics |
| | Dual, triple and quad independent monitor |
| Security | TPM security device on board |
| | iButton® option |
| | Intrusion switch inputs |
| | BIOS customisation |
| Software | Edge-to-edge drivers and API/SDK |
| | Range of Advantech-Innocore software products for Gaming |

| | |
|---|---|
| CPU/Chipset | Mobile AMD Athlon X2 Neo, Turion X2 Neo performance |
| | Up to 2.2 GHz HT3 CPUs |
| | Very low power operation (CPU 8 to 25W) |
| | AMD 785E chipset. Embedded/long lifecycle chipset and CPUs |
| | Highest performance chipset graphics – Radeon HD4270 |
| Memory | 2 x SO-DIMM socket, 8 GB Max |
| | DDR3 up to 800 MHz (1600 MT/s) |
| | 64 bit OS and RAM in excess of 4 GB |
| BIOS | AMI PCI/ PnP/ ACPI BIOS |
| | BIOS Flash can be write protected |
| | Fast boot option. "No user menu" option |
| Video | Integrated (Chipset) Embedded Radeon HD4270 DirectX® 10.1-compliant, Shader Model 4.1,Open GL 2.0 Dedicated UVD (Unified Video Decoder) 2.0 hardware for H.264,VC-1, and MPEG-2 decode |
| | PCI-Express x16 v2.0 slot A range of PCI-Express graphics cards from ATi, Nvidia, S3 Graphics |
| | multiple displays with ATI Crossfire |
| Video Ports | Primary: Analog VGA (15 pin D-Sub) |
| | Secondary: Analog VGA or Digital DVI (DVI-I) |
| | PCI-E graphics card installed. Dependent on PCI-E adapter card |
| LAN 1,2 | Gigabit Ethernet |
| | Full duplex operation |
| | Wake-On-LAN capability |
| SATA Controller | 2 x SATA 6Gbps ports |
| | Power header for SATA DOM support |
| Compact Flash | 2 x CompactFlash Type I/II headers (Flash/MicroDrive) |

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Innovations in Gaming Computing

## Specifications Cont.

| | |
|---|---|
| CFast™ (Option) | 2x CFast connectors on underside |
| Ports | 5 x RS232 |
| | 2 x CCTalk/RS232 |
| | 2 x RS232/TTL |
| | 1 x RS232/485 |
| | 12 x USB 2.0 (4 with over-current detect) |
| | Keyboard/Mouse on-board |
| | 2 x I2C ports on board headers |
| iButton/GPIO | Bi-Directional, programmable GPIO header for iButton, special purpose device or security module |
| I/O | 32 ESD protected inputs |
| | 32 OC Outputs (500 mA, 50 V) |
| | Meter Connect Sensing up to 6 meters |
| Sound | Onboard 13 W+13 W+13 W class D audio amp with FL + FR + LF speaker connectors |
| | 6 channel line level outputs |
| | Stereo line in,  SPDIF (Digital) audio in/out |
| ROM | 1MB EPROM/OTPROM PLCC32 socket (PCI, Bootable) |
| SRAM On-Board | 2048 KB fast SRAM (2 banks) on PCI bus |
| | Battery state software readable (Option 4 MB) |
| Security | TCPA/TPM 1.2 compliant security device |

| | |
|---|---|
| Watchdog Timer | Programmable time-out of 1-255 seconds |
| | "Always on" design (default 255 seconds) |
| EEPROM | Serial EEPROM for storage of serial numbers, data, security keys.  32 KB (option for larger) |
| Intrusion Detection | Six Intrusion detection input lines |
| | Operates with and without system active |
| | Logs date/time of last 48 events |
| | Logs system resets/ brownouts as events |
| | EEPROM backup for 10 years retention |
| System Health Monitoring | Measurement of CPU core temp. With thermal trip. PWM fan for CPU.  Monitoring up to 3 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, typical 45-65W |
| Environment | Operating Temperature: 0 – 50 °C |
| | Storage Temperature:  -20 – 85 °C |
| Approvals | EMC:  CE, FCC Class A RoHS, WEEE |
| Dimensions | 170 x 200mm (6.7 x 7.9") |

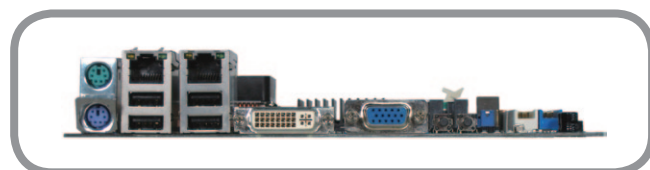All product specifications are subject to change without notice .

## Optional Accessories

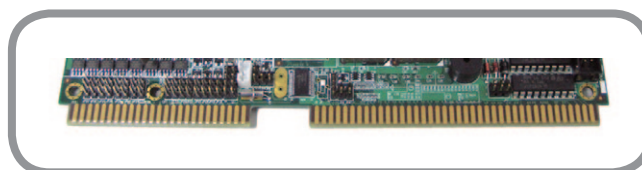| |
|---|
| Full System chassis |
| Range of PCI-E graphics cards |
| I/O Connector breakout board |
| iButton Carrier |
| Compact Flash, SATA DOM, SSD storage devices |

## Benefits

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|---|
| High performance integrated and expandable graphics capabilities |
| Low Power (CPU power between 8 W and 25 W) |
| Single board solution |
| Edge connector for I/O |
| Small size – 170 x 200 mm (6.7 x 7.9") |
| Long Life Cycle |
| Designed for the Gaming Industry |
| Meets GLI and other regulatory standards |
| Backward compatible with DPX-S410, 112 |
| Low Cost |

## OEM Customization and Product Development

- 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.

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- Specifications subject to change. E&OE.

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## Front I/O



## Rear I/O

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