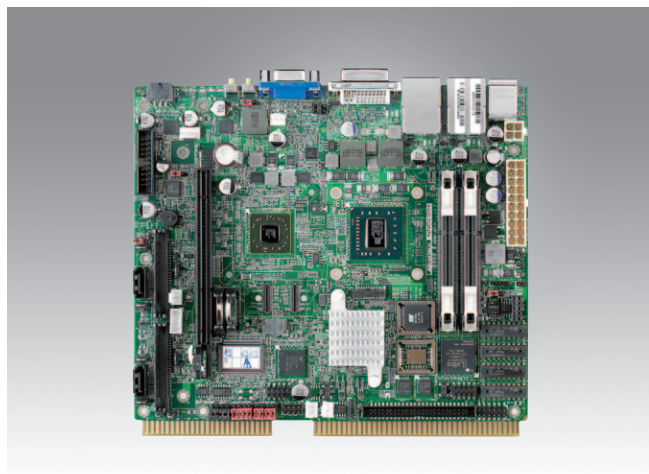# DPX®-S415

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	CPU/Chipset	Mobile AMD Athlon X2 Neo, Turion X2 Neo performance	
	AMD 785E Embedded chipset		Up to 2.2 GHz HT3 CPUs	
	High performance chipset graphics Radeon HD4270		Very low power operation (CPU 8 to 25W)	
	Max. 8 GB DDR3 SDRAM		AMD 785E chipset. Embedded/long lifecycle chipset and CPUs	
	2 x Gigabit Ethernet LAN		Highest performance chipset graphics – Radeon HD4270	
	2 x Compact Flash 2 x SATA DOM sockets	Memory	2 x SO-DIMM socket, 8 GB Max	
	2 x CFast™ (Option)		DDR3 up to 800 MHz (1600 MT/s)	
	Sound (on-board 3 channel amp)		64 bit OS and RAM in excess of 4 GB	
	2 MB SRAM, 1 MB ROM, EEPROM	BIOS	AMI PCI/ PnP/ ACPI BIOS	
I/O	5 x RS232		BIOS Flash can be write protected	
	2 x CCTalk/RS232		Fast boot option. "No user menu" option	
	2 x RS232/TTL	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	
	1 x RS232/485			
	12 x USB 2.0			
	GPIO			
	32 inputs and 32 outputs		PCI-Express x16 v2.0 slot A range of PCI-Express graphics cards from ATi, Nvidia, S3 Graphics	
Video	Embedded Chipset Radeon HD4270			
	Dual independent monitor support (on-board)		multiple displays with ATI Crossfire	
	Full speed PCI-Express X16 v2.0 slot to support a range of PCI-Express graphics cards; ATi®, Nvidia®, S3 Graphics	Video Ports	Primary: Analog VGA (15 pin D-Sub)	
			Secondary: Analog VGA or Digital DVI (DVI-I)	
	Dual, triple and quad independent monitor		PCI-E graphics card installed. Dependent on PCI-E adapter card	
Security	TPM security device on board	LAN 1,2	Gigabit Ethernet	
	iButton® option		Full duplex operation	
	Intrusion switch inputs		Wake-On-LAN capability	
	BIOS customisation	SATA Controller	2 x SATA 6Gbps ports	
Software	Edge-to-edge drivers and API/SDK		Power header for SATA DOM support	
	Range of Advantech-Innocore software products for Gaming	Compact Flash	2 x CompactFlash Type I/II headers (Flash/MicroDrive)	

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 .
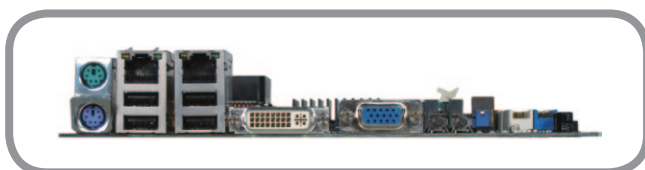
Optional Accessories

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

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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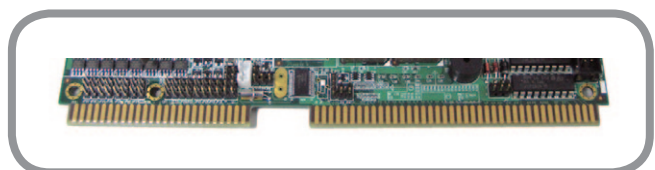- All other trademarks are acknowledged and respected.

Benefits

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

Front I/O

Rear I/O

ADVANTECH INNOCORE
Innovations in Gaming Computing