DPX®-S2440

Very High performance AMD multi-screen gaming platform

Features

- Rugged logic box design
- Security and access to meet therequirement of the gaming industry
- Dual and Quad Core R Series SOC APUs up to 2.8 (3.4) GHz
- Full gaming features set
- High performance integrated Radeon 10000 or PCI-Express graphics
- Support for up to 150W ¾ length double-width graphics cards
- 12VDC or ATX power supply compatible
- "Futureproof" removable I/O shield design allow upgrade to future DPX-S motherboards, Easy service SSD/HDD module

Introduction

The DPX-S2440 is a complete gaming system combining the unrivalled performance of Advantech-Innocore's DPX-S440 motherboard with the convenience of the new DPX-S2000 enclosure.The DPX-S2440 system has a card slot bay for a PCI-Express graphics card that is wide enough for today's high powered double-width graphics cards giving the customer the ability to upgrade from the integrated graphics or add more monitors (up to 7 or more). For mass storage the system includes a quick release carrier with shock mounting for solid state disk or hard drive.

Specifications

System	AMD Embedded R-Series Dual and Quad Core APUs
	High performance chipset graphics system (Radeon HD10000)
	DDR3-2133, 2 SODIMMs up to 16GB total RAM
	2 x Gigabit Ethernet LAN
	2 x CFast™ sockets (CFast 1.0 and 2.0 support)
	2 x SATADOM sockets(SATA3.0,6Gbps)
	Audio (on-board 3 channel amp)
	8192 kB SRAM (NVRAM), 1 MB ROM, 32 kB EEPROM
Video (integrated)	Integrated - Radeon HD10000 DirectX12, OpenGL 4.2,OCL1.2, Direct Compute Graphics core UVD v6, H.265, VCE v3.1 1GB VRAM maximum shared memory (with 2GB or more system memory installed)
	Triple monitor support from APU (GX-217 APU is dual output only)
	Video Ports: 3 x Display Port DP++ v1.2 with 5.4Gb/s link speed and daisy chaining
Video (expansion)	Full speed PCI-Express X16 (x8, x4 with GX-217 APU) Gen 3 slot (Optional)
Security	TPM security device onboard
	Intrusion switch inputs (8 dedicated)
	BIOS customization
	iButton® support
	Precision Real time clock device
	Protected I²C port
	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	AMD Embedded R series SOC (formerly named "Merlin Falcon") Dual and Quad Core APUs to 2.8 (3.4) GHz

Memory	2 x SODIMM sockets
	Up to 16GB DDR3-2133 MT/s SDRAM
BIOS	AMI APTIO UEFI BIOS
	BIOS can be write protected
	BIOS expansion ROM module
LAN	2 x Ethernet Gigabit LAN
	Full duplex operation
	Wake-On-LAN capability
Storage	2 x C-Fast™ socket
	2 x SATA3.0 for HDD, SSD or SATA DOM
	Quick release, shock mount tray for SSD/HDD
Ports	5 x RS232 Serial, 16550 compatible
	2 x CCTalk/RS232
	1 x RS232/TTL
	1 x ID003/TTL/RS232
	1 x RS232/485
	11 x USB (2 x USB3.0, 2 x USB2.0 on front panel
	6 x USB2.0, 1 x USB3.0 onboard headers)
	2 x I²C onboard header (one protected)
	Audio out-SPKR (left, right and LF), line out 5.1 channels
iButton/GPIO	Two Bi-Directional, programmable GPIO header for iButton, special purpose device or security module
Discretel/O	32 ESD protected inputs
	32 OC Outputs (500mA,50V)
	(of which 8 I/O ports can be configured as meter outputs with disconnect detect)
LED drive	2 x 4 channel LED driver, 256 brightness levels
Audio (line level)	HD 5.1 Audio (line level), SPDIF OUT x 2, SPDIF IN, MIC IN
Audio (amplified)	On board 15W + 15W + 15W (FL, FR, LF) Class D audio amps with bass boost
Security ROM	1 x Socket for ROM/OTPROM Module (PCI, Bootable)

See overleaf for continued specification
Last updated: 13-Feb-2019

Specifications Cont.

SRAM	8192 KB fast SRAM (2 banks) on PCI bus
	Battery state software readable
TPM	TCPA/TPM2.0/1.2 compliant security device on board
Watchdog Timer	Programmable time-out
EEPROM	32 kB user EEPROM (option for larger)
Asset Tag	Unique API readable serial number
Intrusion Detection	8 Intrusion detection input lines (one used for enclosure)
	Operates with and without system active
	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 system fan

Power Fail Detect	External sensor input for advanced warning of AC power fail
Expansion	I²C, PCI-Express x16 graphics card
Power	ATX or AT mode
	12 V_{DC}
Environment	Operating Temperature: 0 ~ 40 °C
	Storage Temperature: -20 ~ 85 °C
Approvals	EMC: CE, FCC Class A
	RoHS, WEEE
Dimensions	260(W) x 214(L) x 124(H) mm (10.2" x 8.4" x 4.9")

All product specifications are subject to change without notice.

Benefits

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

Optional Accessories

- Range of PCI-E graphics cards
- I/O connector breakout board
- Edge card connector set
- CFast cards, SATA DOM, SSD storage devices
- iButtons®, iButton reader

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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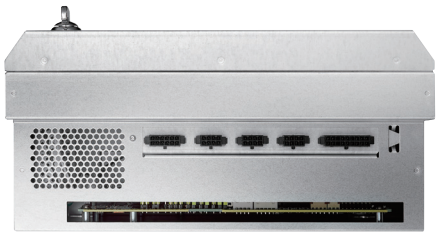
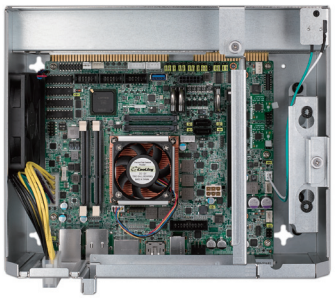
Front View

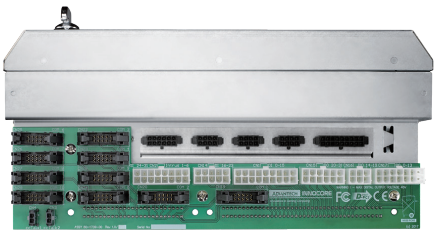
Rear View



Inside View



Rear View (optional vertical connector board installed)



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