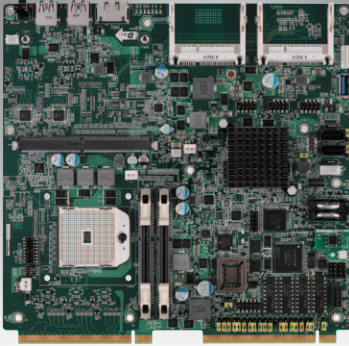


# DPX<sup>®</sup>-C710

## AMD<sup>®</sup> Embedded R-Series Gaming Platform

### Preliminary



### Features

- Very high performance AMD platform
- Versatile ConnectBus<sup>®</sup> backplane architecture
- Comprehensive gaming features
- High performance integrated graphics and PCI-Express graphics module (MXM)
- Up to 10 monitors supported



### Introduction

The DPX<sup>®</sup>-C710 is a completely integrated motherboard for gaming applications. Based on the 3<sup>rd</sup> generation of Advantech-Innocode's ConnectBus<sup>®</sup> backplane architecture, the DPX-C710 offers un-paralleled ease of installation and field service. The board uses AMD's high performance dual and quad core APUs with "Discrete-level Graphics". The chipset graphics (AMD Radeon HD7000 series) can output to 4 independent monitors and supports DisplayPort 1.2. In addition, the MXM graphics card slot allows the DPX-C710 to be fitted with a selection of discrete high performance graphics modules. The MXM slot ensures the system is "future proof", ready for the next generation of graphics technology. A full feature set of I/O and COMs designed specifically for gaming devices is also included making the DPX-C710 an ideal integrated platform for many high end gaming, amusement and kiosk applications.

### Specifications

System	3rd Generation ConnectBus <sup>®</sup> architecture - "Pluggable" CPU board and robust backplane
	All cable connections are made through the backplane
	Standard backplane available
	Easily customized backplane for specific applications and retrofit projects
Video (Integrated)	Removable CPU board for easy install, service and maintenance
	AMD Embedded R-Series Dual and Quad Core APUs
	Long life cycle 5 years availability
	DDR3-1600, 2 SODIMMs up to 16GB
Video (Discrete)	2 x Gigabit Ethernet LAN
	HD Audio 7.1 channel
	Integrated – AMD Radeon 7000 series graphics engine
	Dual, triple and Quad monitor support from APU
Security	Three DP++ interfaces support DisplayPort, DVI, HDMI and VGA (customizable on backplane)
	Incl. one DP v1.2 with MST (multi-monitor, daisy chain) support
	Direct X 11, OpenGL 4.2, OpenCL, DirectCompute support
	UVD3 Multimedia hardware decode and encode.
Software	Full speed PCI-Express x16 MXM v3.0 slot to support optional high performance graphics cards; AMD Radeon E6000 series, Radeon E8000 series, Nvidia <sup>®</sup>
	Field or factory upgradeable
	TPM security device on board
	Intrusion switch inputs (8 dedicated)
iButton/GPIO	BIOS customization
	1 x iButton <sup>®</sup> socket (option)
	1 x Security ROM socket
	Edge-to-edge drivers and Software API/SDK.
Discrete I/O	Code portability through consistent API with other Innocode boards.
	Range of Advantech-Innocode software products for Gaming
	32 ESD protected inputs
	32 OC Outputs (500mA, 50V)
Sound	Of which 6 I/O ports can be configured as meter outputs with disconnect detect
	HD 7.1 channel Audio
	4096 KB fast SRAM (2 banks) on PCI bus
	Battery state software readable
SRAM (NVRAM)	TCPA/TPM 1.2 compliant security device on board.
	3 x RS232 Serial, 16550 compatible
	2 x CCTalk/RS232
	2 x RS232/TTL
TPM	1 x RS232/485
	14 x USB (2x USB 3.0 on front panel, 1x USB 3.0 + 4x USB 2.0 on board headers, 7x USB 2.0 on backplane)
	2 x i2C, 1x SPI interfaces through backplane
	24 channel LED drive output

CPU/Chipset	AMD Embedded R-Series FS1r2 Accelerated Processing Unit (APU)
	Dual and Quad Core APUs up to 2.7GHz (3.2GHz Turbo)
	Up to 4MB L2 cache
	Low power (35W) APUs
Memory	AMD A75 FCH
	2 x SODIMM sockets
	Up to 16GB DDR3 1600 MT/s SDRAM system RAM
	AMI APTIO UEFI BIOS
BIOS	BIOS can be write protected
	2 x Ethernet Gigabit LAN
	Full duplex operation
	Wake-On-LAN capability
LAN	2 x C-Fast <sup>™</sup> sockets
	2 x SATA 3 (up to 6Gb/s) headers for HDD, SSD or SATA DOM
	1 x eSATA front access
	3 x RS232 Serial, 16550 compatible
Storage	2 x CCTalk/RS232
	2 x RS232/TTL
	1 x RS232/485
	14 x USB (2x USB 3.0 on front panel, 1x USB 3.0 + 4x USB 2.0 on board headers, 7x USB 2.0 on backplane)
Ports	2 x i2C, 1x SPI interfaces through backplane
	24 channel LED drive output
	Bi-Directional, programmable GPIO header for iButton, special purpose device or security module
	32 ESD protected inputs
Discrete I/O	32 OC Outputs (500mA, 50V)
	Of which 6 I/O ports can be configured as meter outputs with disconnect detect
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	32 ESD protected inputs
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## Specifications Cont.

Watchdog Timer	Programmable time-out
EEPROM	32kB user EEPROM (option for larger)
Asset Tag	Unique serial number devices on motherboard
Intrusion Detection	7+1 Intrusion detection input lines
	Operates with and without system active
	Logs date/time of last 254 events
	Logs system resets/brownouts as events
System Health Monitoring	EEPROM backup for 10 years retention
	Measurement of CPU core temp. With thermal trip PWM fan control for APU, MXM, system fans, and 2 other fans through backplane
Diagnostic LED display	Optional riser board provides : Dual 7- segment LED display for POST and diagnostic codes And 4 USB 2.0 Type A ports

Power Fail Detect	External sensor input for advanced warning of AC power fail
Expansion	1) 2 x I2C, SPI
	2) PCI-Express x16 MXM format graphics card
Power	12V DC single input Intelligent power control CPU board Backplane "insertion-sense" and protection for accidental removal
Environment	Operating Temperature: 0 ~ 45° C
	Storage Temperature: -10 ~ 70° C
Approvals	EMC: CE, FCC Class A
	RoHS, WEEE
Dimensions (D x W)	Motherboard: 221 x 214 mm (8.7" x 8.4")

All product specifications are subject to change without notice .

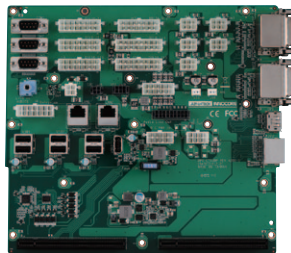
## Optional Accessories

- DPX C-series backplane
- Range of PCI-E MXM graphics cards
- POST Diagnostic LED display and USB riser board
- Compact Flash cards, SATA DOM, SSD storage devices
- iButtons®, iButton carrier
- System level enclosure and CPU cassette

## Benefits

- Best in class integrated and expandable graphics
- Single integrated solution
- Designed for the Gaming Industry
- Serviceable CPU board and backplane
- Small size
- Low power
- Long Lifecycle

## DPX C-series backplane board



## DPX C-series POST Diagnostic and USB Riser board



## OEM Customization and Product Development

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## System Level DPX-SC710 Product

The DPX-C710 is also available as a system level product with logic box and CPU cassette enclosures. See separate datasheet and product information

