

# DPX<sup>®</sup>-SC710

Preliminary

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



### 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>-SC710 is a complete integrated gaming platform consisting of an easily serviceable CPU cassette housed in a rugged logic box with a fully passive backplane and I/O expansion module. AMD's latest embedded chipset provides a choice of 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-SC710 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-SC710 an ideal integrated platform for many high end gaming, amusement and kiosk applications.

### Feature Summary

System	Rugged "logic box" system includes pluggable CPU cassette housed in a secure enclosure	Security	TPM security device on board
	All cable connections are made through the passive backplane		Intrusion switch inputs (8 dedicated)
	3rd Generation ConnectBus <sup>®</sup> architecture - Easily customized passive backplane (and backplane I/O expansion module, "BSM")		BIOS customization
	Removable CPU cassette for easy install, service and maintenance		1 x iButton <sup>®</sup> socket (option)
Video (Integrated)	AMD Embedded R-Series Dual and Quad Core APUs	Software	1 x Security ROM socket
	Long life cycle 5 years availability		Lockable logic box (accepts most casino specified locks)
	DDR3-1600, 2 SODIMMs up to 16GB		Edge-to-edge drivers and Software API/SDK.
	2 x Gigabit Ethernet LAN		Code portability through consistent API with other Innocore boards
Video (Discrete)	HD Audio 7.1 channel	CPU/Chipset	Range of Advantech-Innocore software products for Gaming
	Integrated – AMD Radeon 7000 series graphics engine		AMD Embedded R-Series FS1r2 Accelerated Processing Unit (APU)
	Dual, triple and quad monitor support from APU		Dual and Quad Core APUs up to 2.7GHz (3.2GHz Turbo)
	Three DP++ interfaces support DisplayPort, DVI, HDMI and VGA		Up to 4MB L2 cache
Storage	Incl. one DP v1.2 with MST (multi-monitor, daisy chain) support	Memory	Low power (35W) APUs
	Direct X 11, OpenGL 4.2, OpenCL, DirectCompute support		AMD A75 FCH
	UVD3 Multimedia hardware decode and encode		2 x SODIMM sockets
	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> .		Up to 16GB DDR3 1600 MT/s SDRAM system RAM
BIOS	Field or factory upgradeable	LAN	AMI APTIO UEFI BIOS
			BIOS can be write protected
			2 x Ethernet Gigabit LAN
			Full duplex operation
BIOS		Storage	Wake-On-LAN capability
			2 x C-Fast <sup>™</sup> sockets
			Drive bay for 2.5" format HDD or SSD.
			2 x SATA 3 (up to 6Gb/s) headers for HDD, SSD or SATA DOM
			1 x eSATA front access

Ports	3 x RS232 Serial, 16550 compatible 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) 2 x I <sup>2</sup> C, 1x SPI interfaces through backplane 24 channel LED drive output
iButton/GPIO	Bi-Directional, programmable GPIO header for iButton, special purpose device or security module 32 ESD protected inputs 32 OC Outputs (500mA, 50V)
Discrete I/O	(of which 6 I/O ports can be configured as meter outputs with disconnect detect, 1 port 24V DC high current drive for solenoid drive)
LED drive	24 channel LED Intelligent PWM output driver, 256 brightness levels, programmable group brightness, blinking, (8 ch. with 350mA, 16 ch. 100mA)
Sound	HD 7.1 channel Audio
SRAM (NVRAM)	4096kB fast SRAM (2 banks) Battery state software readable
TPM	TCPA/TPM 1.2 compliant security device on board.
Watchdog Timer	Programmable time-out
EEPROM	32kB user EEPROM (option for larger)
Asset Tag	Unique serial number devices on motherboard and main chassis (BSM)

Intrusion Detection	8x Intrusion detection input lines 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. PWM fan control for APU, MXM, system fans, and 2 other fans through backplane.
Diagnostic LED display	Dual 7- segment LED display for POST and diagnostic codes
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 3) Backplane I/O Expansion module (BSM) provides customizable expansion (e.g LED PWM drive, custom high current output, eeprom etc)
Power	12V DC single input Intelligent power control Cassette/Backplane "insertion-sense" and protection for accidental cassette removal
Environment	Operating Temperature: 0 ~ 50° C TBC Storage Temperature: -20 ~ 85° C
Approvals	EMC: CE, FCC Class A RoHS, WEEE
Dimensions (D x W x H)	254 x 235 x 191 mm (10.0" x 9.25" x 7.5")

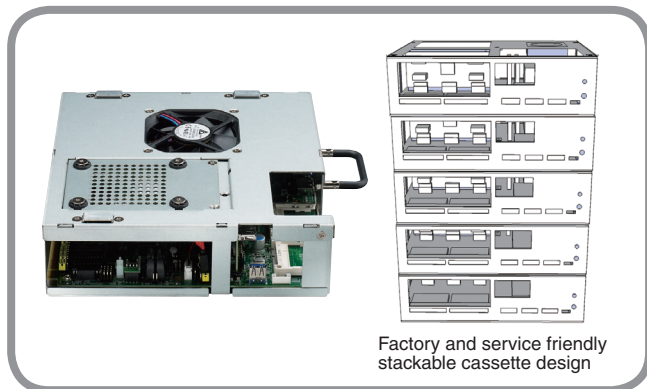
## Optional Hardware

Range of PCI-E MXM graphics cards  
Compact Flash cards, SATA DOM, SSD storage devices  
iButtons®, iButton carrier

## Benefits

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

## CPU Cassette



## OEM Customization and Product Development

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## DPX-SC710 System

