

# DPX<sup>®</sup>-SC710

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



### Features

- AMD Embedded R-Series Dual and Quad core APUs
- 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 backplane. AMD's embedded R-Series 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             | <ul style="list-style-type: none"> <li>Rugged "logic box" system includes pluggable CPU cassette housed in a secure enclosure</li> <li>All cable connections are made through the backplane</li> <li>3rd Generation ConnectBus<sup>®</sup> architecture - Easily customized backplane</li> <li>Removable CPU cassette for easy install, service and maintenance</li> <li>AMD Embedded R-Series Dual and Quad Core APUs</li> <li>Long life cycle 5 years availability</li> <li>DDR3-1600, 2 SODIMMs up to 16GB</li> <li>2 x Gigabit Ethernet LAN</li> <li>HD Audio 7.1 channel</li> </ul> |
| Video (Integrated) | <ul style="list-style-type: none"> <li>Integrated – AMD Radeon 7000 series graphics engine</li> <li>Dual, triple and quad monitor support from APU</li> <li>DVI-D x2, DP v1.2 x1</li> <li>Incl. one DP v1.2 with MST (multi-monitor, daisy chain) support</li> <li>Direct X 11, OpenGL 4.2, OpenCL, DirectCompute support</li> <li>UVD3 Multimedia hardware decode and encode</li> </ul>   |
| Video (Discrete)   | <ul style="list-style-type: none"> <li>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>.</li> <li>Field or factory upgradeable</li> <li>DVI-D x2, DP x2, (depending on MXM card used)</li> </ul>   |
| Security           | <ul style="list-style-type: none"> <li>TPM security device on board</li> <li>Intrusion switch inputs (8 dedicated)</li> <li>BIOS customization</li> <li>1 x iButton<sup>®</sup> socket (option)</li> <li>1 x Security ROM socket</li> <li>Lockable logic box (accepts most casino specified locks)</li> </ul>  |

|             |   |
|-------------|---|
| Software    | <ul style="list-style-type: none"> <li>Edge-to-edge drivers and Software API/SDK.</li> <li>Code portability through consistent API with other Innocore boards</li> <li>Range of Advantech-Innocore software products for Gaming</li> </ul>  |
| CPU/Chipset | <ul style="list-style-type: none"> <li>AMD Embedded R-Series FS1r2 Accelerated Processing Unit (APU)</li> <li>Dual and Quad Core APUs up to 2.7GHz (3.2GHz Turbo)</li> <li>Up to 4MB L2 cache</li> <li>Low power (35W) APUs</li> <li>AMD A75 FCH</li> </ul>   |
| Memory      | <ul style="list-style-type: none"> <li>2 x SODIMM sockets</li> <li>Up to 16GB DDR3 1600 MT/s SDRAM system RAM</li> </ul>  |
| BIOS        | <ul style="list-style-type: none"> <li>AMI APTIO UEFI BIOS</li> <li>BIOS can be write protected</li> </ul>  |
| LAN         | <ul style="list-style-type: none"> <li>2 x Ethernet Gigabit LAN</li> <li>Full duplex operation</li> <li>Wake-On-LAN capability</li> </ul>   |
| Storage     | <ul style="list-style-type: none"> <li>2 x C-Fast<sup>™</sup> sockets</li> <li>Drive bay for 2.5" format HDD or SSD.</li> <li>2 x SATA 3 (up to 6Gb/s) headers for HDD, SSD or SATA DOM</li> <li>1 x eSATA front access</li> </ul>  |
| Ports       | <ul style="list-style-type: none"> <li>3 x RS232 Serial, 16550 compatible</li> <li>2 x CcTalk/RS232</li> <li>2 x RS232/TTL</li> <li>1 x RS232/485</li> <li>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)</li> <li>2 x I<sup>2</sup>C, 1x SPI interfaces through backplane</li> <li>24 channel LED drive output</li> </ul> |

## Specifications Cont.

|                     |  |
|---------------------|--|
| iButton/GPIO        | Bi-Directional, programmable GPIO header for iButton, special purpose device or security module  |
| Discrete I/O        | 32 ESD protected inputs<br>32 OC Outputs (500mA, 50V)<br>(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           | 8 channel LED Intelligent PWM output driver, 256 brightness levels, programmable group brightness, blinking, (8 ch. with 350mA)  |
| Sound               | HD 7.1 channel Audio   |
| SRAM (NVRAM)        | 4096kB fast SRAM (2 banks)<br>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 backplane  |
| Intrusion Detection | 8x Intrusion detection input lines<br>Operates with and without system active<br>Logs date/time of last 254 events<br>Logs system resets/brownouts as events<br>EEPROM backup for 10 years retention |

|                          |   |
|--------------------------|---|
| System Health Monitoring | Measurement of CPU core temp. with thermal trip.<br>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<br>2) PCI-Express x16 MXM format graphics card  |
| Power                    | 12V DC single input<br>Intelligent power control<br>Cassette/Backplane "insertion-sense" and protection for accidental cassette removal |
| Environment              | Operating Temperature: 0 ~ 50° C TBC<br>Storage Temperature: -20 ~ 85° C  |
| Approvals                | EMC: CE, FCC Class A<br>RoHS, WEEE  |
| Dimensions (D x W x H)   | 254 x 235 x 221 mm (10.0" x 9.25" x 8.70")  |

All product specifications are subject to change without notice .

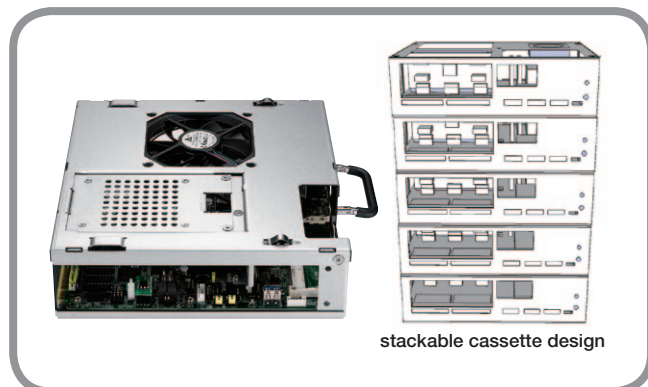
## Optional Hardware

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

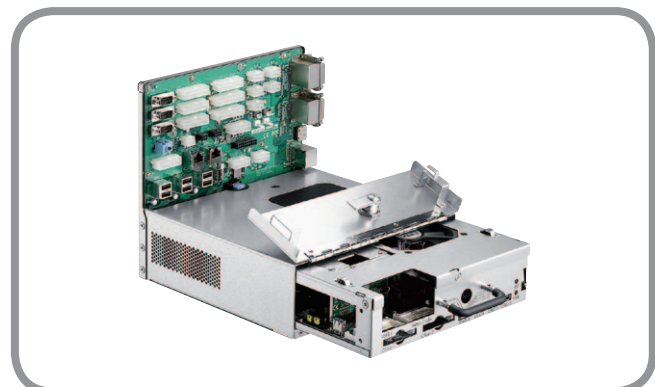
## Benefits

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

## CPU Cassette



## DPX-SC710 System



## 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.
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