

Innovations in Gaming Computing

The Widest Range of Solutions for the Gaming Industry

- / Lottery / Casino Machines
- / Sports Betting
- / AWP
- / VLTs / Class II
- / Multiplayer Games
- / Arcade
- / Pachislot



Intel® & AMD
Core Platforms



4k Monitors
Supported



GLI, NVGCB, etc
Regulatory compliance



PCI Express
Graphics

ADVANTECH **INNOCORE**

Innovations in Gaming Computing

AMD
Embedded
Solutions

Intel
partner
Titanium
for
Solutions

www.advantech-innocore.com

About Advantech

Advantech is a \$2Bn leading technology business that specializes in designing and manufacturing industrial grade hardware and dedicated software tailored to the exact needs of the gaming industry. As the gaming-focused business unit of Advantech, Advantech-Innocore stands alone among hardware suppliers in its capabilities to support customers large and small in all regions of the world. Advantech is a premier member of Intel Internet of Things (IoT) Solutions Alliance, bringing the first-to-the-market IoT solutions to the world. Advantech is also a member of AMD Partner Program presenting a wide range of AMD-based high performance computing platforms. Advantech is an Elite Partner of Nvidia for high performance and long lifecycle graphics solutions.



Gaming team with extensive knowledge and experience

- Experienced management and sales network with over 150 years of combined gaming experience
- Expert engineering, project management and design capabilities for efficient project execution
- Multi-discipline teams - hardware, firmware, FPGA, BIOS, OS, manufacturing and QC engineers
- Software drivers and libraries available to support the majority of gaming peripherals (including bill acceptors, etc)
- On-time design and build of custom hardware and software projects
- Comprehensive package - prototype validation, driver testing, manuals, drawings, design files, manufacturing test procedures, diagnostics
- Worldwide regulatory approvals for all products



International quality standard from design to delivery

The Group Quality system is audited and compliant with ISO 9001. The Quality system covers all aspects of product design, component selection, design verification, manufacturing, quality control and customer satisfaction. Advantech also holds global certifications of ISO 13485, TL 9000, ISO 14001, OHSAS 18001 and IECQ QC 080000.

Advantech - Global Company, Local Services



Excellence in Design, Manufacture and Service

Advantech-Innocore's products are designed and manufactured using high quality components, and apply the most up-to-date design and production methodologies. In contrast to mass produced commercial grade motherboards, Advantech-Innocore carefully source and choose components for the best results.

Key drivers when designing DPX[®] motherboards and sourcing components are:



- | | | | |
|-------------|------------------------------|-----------------------|--------------------------------------|
| ✓ Longevity | ✓ Robust, Reliable Operation | ✓ Power Supply Design | ✓ Quality (UL, CE, FCC, ISO) |
| ✓ Usability | ✓ Regulatory Constraints | ✓ Cabinet Integration | ✓ Thermal Management and Reliability |
| ✓ EMC | ✓ Signal Termination | ✓ Signal Integrity | ✓ 24/7 365 Operational Requirements. |

Excellence in Manufacturing & Service

With a global footprint covering all major regions, Advantech-Innocore's organization is unique in its ability to put technical support, configuration and repair services close to its customers, offering:

- Wholly owned manufacturing facilities (>130,000m²)
- State-of-the-art production equipment
- Highest yield rates
- Best quality
- BGA X-Ray inspection
- Automated test routines
- Elevated temperature burn-in
- Local support, service and repair/RMA
- Local inventory and fulfillment capabilities
- Advantech Care Service Packages: advanced replacements, extended warranty, guaranteed turnaround time

ADVANTECH

Complete Portfolio of Gaming Solutions

Advantech-Innocore offers the widest range of industrial grade computer products designed specifically for the regulated gaming industry. Providing customers with excellent standard products, customized products and services, employing up-to-date technologies for gaming solutions to meet the requirements for Casino Machines, AWP's, VLT's, Multiplayer Games, Arcade Games, Pachislots, and Sports Betting.



Graphic Cards

- Long lifecycle
- Intel, Nvidia and AMD
- PCIe Graphics



Industrial Storage

- SSD, HDD, CF, CFAST, M.2
- DDR1-DDR4 SODIMM
- Custom provisioning
- Lifecycle controlled
- Power fail protection
- Comprehensive security features



Gaming Platforms & Systems

- Gaming I/O, multiple COM
- Onboard NVRAM
- Security
- Worldwide regulatory approvals



Software

- Microsoft embedded authorized distributor
- BSP for Windows, Linux and more
- Custom, lockable image development
- Custom BIOS



Gaming Monitors

- All sizes with touch 4-55" curved touch with customizable radius
- C, J and other profiles available



DPX® LED Controller

- Robust metal cover
- Industrial grade product
- Custom Vibrance FX application for easy detailed content creation



Embedded Platforms & Digital Signage

- Mini-ITX, single board computers, computer on modules RISC computing platforms
- Full ranges of signage

DPX[®]-S Series

• Regulated Gaming Machines

• Slot Machines

• VLTs

• GLI Compliant

The DPX-S Series products provide highly integrated industrial single board computers and systems with an unrivaled performance range, scalability, long lifecycle and low power. Both AMD and Intel platforms are offered and each one features a full set of I/O, COMs, and security, developed specifically to meet the requirements of the regulated gaming industry.

Feature Highlights



Chassis options available



Scalability of CPU and graphics



Full feature set of I/Os
COMs, security



AMD and Intel
CPU based



DPX[®]-S451

AMD R2000 Gaming Platform

- High-performance AMD Embedded R2000 SOC APUs
- Quad and dual core APUs up to 3.35 (3.7) GHz
- Radeon VEGA GPU with up to 8 x compute units
- Four independent 4K monitors supported
- Comprehensive gaming features
- 12V DC single input or ATX power
- Full featured driver API for I/O and security

View More



SCAN ME for more information!



Features



Digital I/O
32/32



Expansion I²C, PCIe x 16 &
Golden Fingers



DPX Security Suite: Media Validation
Toolkit, TPM Chip Support. DPX Security
Features & BIOS Customization



Battery Backed
SRAM 8MB



8 x USB2.0
3 x USB3.0



DPX Software: Embedded OS,
DPX Diagnostics, DPX-Connector
& DPX- SAS



Displays 4 x DP++ 1.2



10 x COMs: ccTalk, RS232, ID003,
RS485, TTL, & 3 x DP++ 1.2



Enclosure
S2000



Graphics Cards
PCIe x 16 Format



M.2, SATA DOM, HDD,
SSD, Cfast, & USB



On-board Microcontroller
PuC

DPX[®]-S450

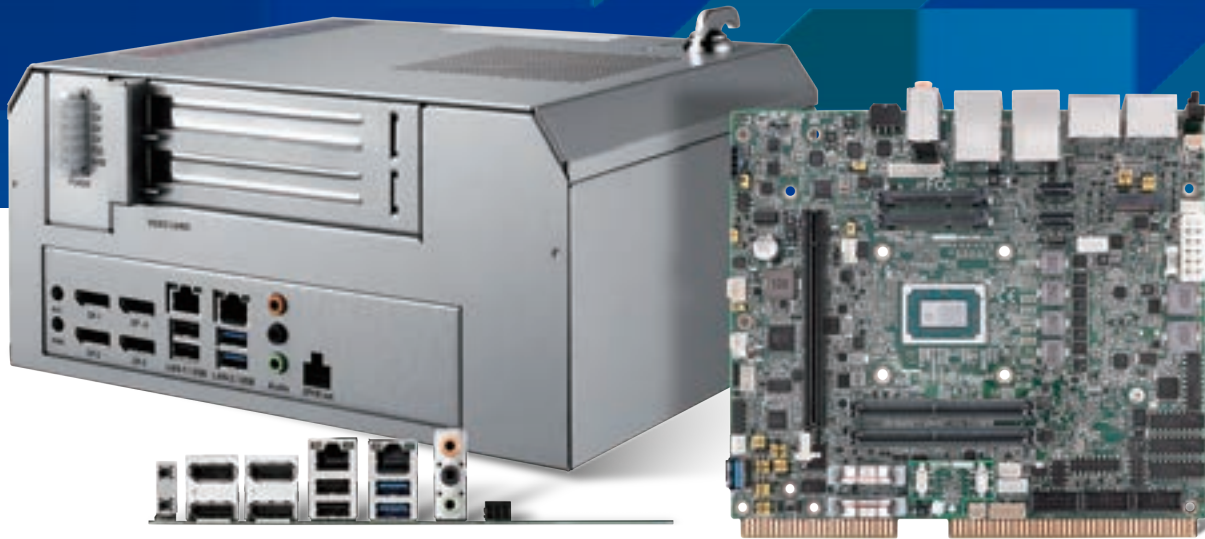
AMD Ryzen™ Embedded V1000/R1000 Gaming Platform

- Very high performance AMD Embedded V1000/R1000 SOC APUs
- Quad and dual core APUs up to 3.35 (3.8) GHz
- Radeon VEGA GPU with up to 11 compute units
- 4 x independent 4K monitors supported
- Comprehensive gaming features
- 12V DC single input or ATX power
- Full featured driver API for I/O and security

View More



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Features



Digital I/O
32/32



Expansion
I²C, PCIe x 16 & Golden Fingers



DPX Security Suite: Media Validation Toolkit, TPM Support, DPX Security Features & BIOS Customization



Battery Backed
SRAM 8MB



8 x USB 2.0
3 x USB 3.0



DPX-Software: Embedded OS, DPX-Diagnostics, DPX-Connector & DPX-SAS



Displays 4 x DP++ 1.2
(4 simultaneous)



10 x COMs:
ccTalk, RS232, ID003, RS485, TTL



Enclosure
S2000



Graphics Cards
PCIe x 16 Format



M.2, SATA DOM, HDD,
SSD, CFast, USB



On-board
Microcontroller PuC

DPX[®]-S445

6th & 7th Generation Intel[®] Core[™] Gaming Platform

- Very high performance Intel platform
- Powered by 6th & 7th Gen Intel Core processors (available
- with Intel Core i3/i5/i7, Intel Celeron & Intel Pentium)
- Comprehensive gaming features
- High performance integrated or PCIe graphics
- Easy integration for gaming applications
- Full featured driver API for I/O and security

View More



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Features



Digital I/O
32/32



Expansion
I²C, PCIe x 16 & Golden Fingers



DPX Security Suite: Media Validation Toolkit, TPM Support, DPX Security Features & BIOS Customization



Battery Backed SRAM
8MB



8 x USB 2.0
3 x USB 3.0



DPX-Software: Embedded OS, DPX Diagnostics, DPX-Connector & DPX-SAS



3 x DP++ 1.2



10 x Coms:
ccTalk, RS232, ID003, RS485, TTL



Enclosure
S2000



Graphics Cards
PCIe x 16 Format



SATA DOM, HDD, SSD, USB



On-board Microcontroller
PuC

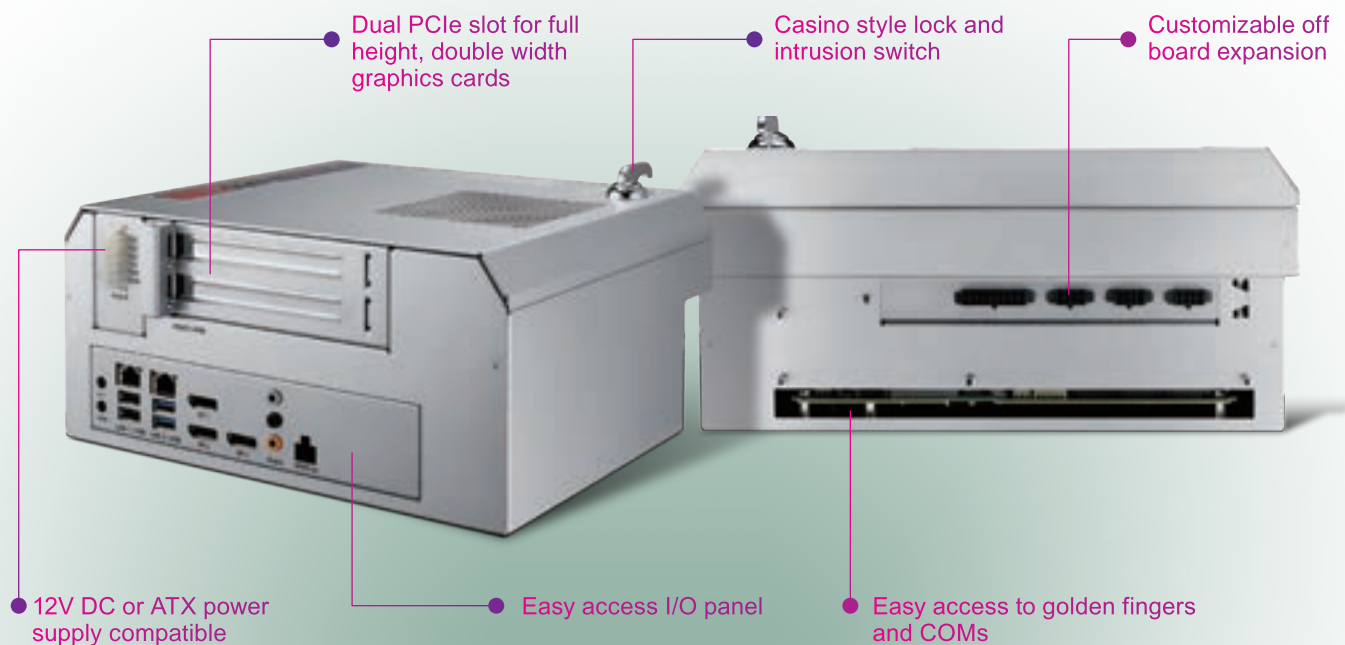
DPX[®]-S2000

The DPX-S2000 series products are gaming system logic boxes designed to accommodate any of Advantech's DPX-S series motherboards in style and with excellent access to the interior behind a casino grade key-locked lid. The system has a card slot bay for a PCIe graphics card that is wide enough for today's high powered double- width graphics cards.

- Full height, double width graphics card
- Compact design
- Tool free SSD/HDD access
- System fan
- Complete solution

Dimensions of Chassis

	Length	Width	Height
DPX-S2450	214mm	260mm	124mm
DPX-S2445	214mm	260mm	124mm



DPX[®]-E Series

• Regulated Gaming • Slot Machines • VLT • GLI Compliant

- Performance at a very cost-effective price point
- Full feature set of I/Os and COMs
- Ideal integrated platforms for many gaming, amusement, and kiosk applications
- Gaming functions share the same API as the other DPX series boards
- Easy to port application code and leverage the different price and performance points across Advantech-Innocode's full range of products

Feature Highlights



Full feature set of I/Os and COMs



Industry standard connectors for easy cabinet integration



Very cost-effective price point



Best in class integrated graphics performance



Microsoft

AMD
Embedded
Solutions



Linux

DPX[®]-E145

11th Generation Intel[®] Core[™] Processor Gaming Platform

- Powered by 11th Gen Intel Core i3/i5/i7 processors
- Also available with Intel Celeron processors
- CPUs up to Dual 3.0 (3.9) GHz, Quad core 2.8GHz (4.4) GHz
- Intel Iris Xe Graphics
- 4 x 4K monitor support
- Comprehensive gaming features
- Passive cooled system up to 28W

View More



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Features



Digital I/O
32/32



7 x USB 2.0
2 x USB 3.0



DPX-Software: Embedded OS,
DPX Diagnostics, DPX-Connector &
DPX-SAS



Battery Backed SRAM
8MB



9 x COMs:
ccTalk, RS232, ID003, RS485, TTL



Enclosure Metalwork
Optional



4 x DP++ 1.2



M.2, SATA DOM, HDD, SSD,
CFast, USB



On-board Microcontroller
PuC



Expansion
I²C



DPX Security Suite: Media Validation
Toolkit, TPM Support, DPX Security
Features & BIOS Customization

DPX[®]-E140

AMD Embedded Gaming System with V1000 Platform

- AMD Ryzen Embedded V1000 Processors
- High performance Radeon VEGA series graphics
- 4 x 4K monitor support
- Comprehensive gaming features
- Passive cooled system up to 25W, 54W with fan cooler
- 12V DC single input or ATX power
- AMD Ryzen Embedded V1000 Processors

View More



SCAN ME for more information!



Features



Digital I/O
32/32



7 x USB 2.0
2 x USB 3.0



DPX-Software: Embedded OS ,
DPX Diagnostics, DPX-Connector &
DPX-SAS



Battery Backed SRAM
8MB



9 x COMs:
ccTalk, RS232, ID003, RS485, TTL



Enclosure Metalwork
Optional



4 x DP++ 1.2



M.2, SATA DOM, HDD, SSD,
CFast, USB



On-board Microcontroller
PuC



Expansion
I²C



DPX Security Suite: Media Validation
Toolkit, TPM support, DPX Security
Features & BIOS Customization

DPX[®]-M Series

• Sports betting • Kiosk • Arcade • Gaming

- Based on 8th & 9th Gen Intel Core processors and AMD Ryzen V1000 series
- These products provide a high performance multi-media engine to the needs of gaming OEMs
- The modular expansion bus allows modules to be added such as I/O, COMs, security and specialized interfaces

Feature Highlights



AMD and Intel CPUs available, Mini ITX mounting holes, up to 4 x 4K screens and development kits.



M1000 (half height) and M2000 chassis options available, M-Series PSU units are available.



Modular Side expansion bus, Advantech-Innocore has a range of standard “add-on cards” for sports betting or gaming Sub system.



Microsoft



DPX[®]-M270

8th & 9th Generation Intel[®] Core[™] Processor Embedded Multi-Media Gaming Board



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- Powered by 8th & 9th Gen Intel Core processors (available with Intel Core i3/i5/i7, Intel Pentium & Intel Celeron)
- Two 260-pin SO-DIMM up to 32GB DDR4 2666 MHz SDRAM
- Supports 3 x display outputs (2x DP++, HDMI)
- PCIe x16 Gen 3.0 graphics card slot
- Storage 2 x SATA with 1 x M.2
- Media Validation Toolkit support
- RS232, ccTalk, TTL, ID003, I²C, intrusion and digital inputs
- Modular expansion port - Edge connector



Features



Displays
2 x DP++ v1.2
1 x HDMI 1.4b
(3 simultaneous for Q370,
2 simultaneous for H310)



Onboard:
8 x USB 2.0
4 x USB 3.1

Via Golden Fingers:
2 x USB 2.0



DPX Security Suite: Media Validation Toolkit, TPM Support, DPX Security Features & BIOS Customization



DPX-Software: Embedded OS , DPX Diagnostics, DPX-Connector & DPX-SAS



Graphics Cards
PCIe x 16 Format



6 x COMs:
ccTalk, RS232, ID003, TTL



Enclosure
M1000 & M2000



Expansion I²C, PCIe x 16 and Sidebus Modular Expansion



M.2, SATA DOM, HDD, SSD, USB



On-board Microcontroller
PucLite

DPX[®]-E265

AMD Ryzen™ Embedded V1000 mITX with Four DP++, ECC, PCIe Expansion



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- Supports 4 x DP++ 1.2
- Supports PCIe x8 (PCIe x16 connector, Gen 3.0)
- Two 260-pin SO-DIMM up to 32 GB DDR4 3200 MHz ECC/Non-ECC SDRAM
- Removable gaming BIOS module for field verification
- Side expansion port for application specific expansion modules
- Supports 2 x SATA / 2 x CFast / 1 x M.2
- AMD Ryzen Embedded V1000 processors
- Media Validation Toolkit support



AMD
Embedded
Solutions



CE FCC

Features



Digital I/O
2 x DI



Onboard:
4 x USB 2.0
3 x USB 3.1



DPX Security Suite: Media Validation Toolkit, TPM Support, DPX Security Features & BIOS Customization



Displays
4x DP++ v1.2
(4 simultaneous)

Via Golden Fingers:
2 x USB 2.0



DPX-Software: Embedded OS , DPX Diagnostics, DPX-Connector & DPX-SAS



Graphics Cards
PCIe x 16 Format



6 x COMs:
ccTalk, RS232, ID003, RS485, TTL



Enclosure
M1000 & M2000



Expansion I²C, PCIe x 16 and Sidebus Modular Expansion



M.2, SATA DOM, HDD, SSD, CFast, USB



On-board Microcontroller PuCLite

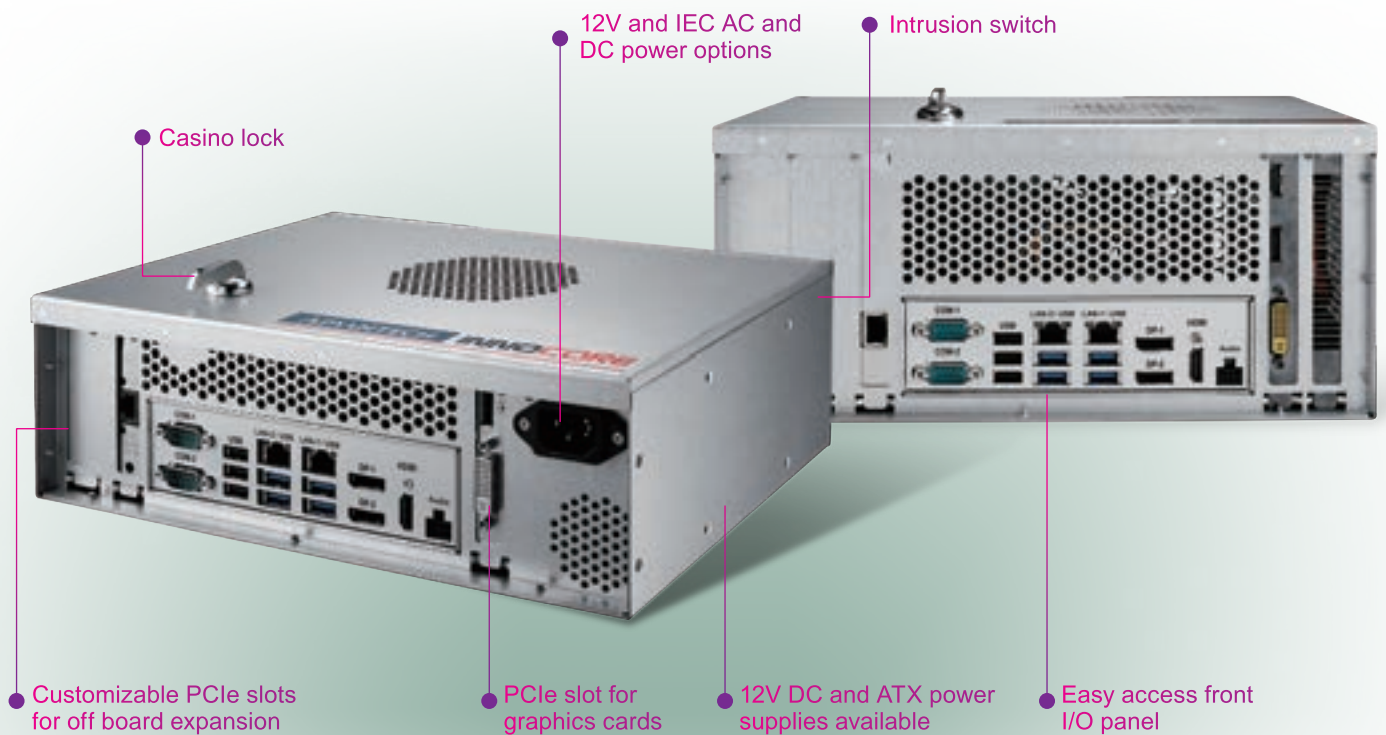
DPX[®]-M1000 and DPX[®]-M2000

The DPX-M Series of chassis are available in half height and full height options, to accommodate both standard height graphics cards and other 3rd party PCIe expansion cards.

- Up to 200W Power Supply
- Compact Design
- Tool Free SSD/HDD Access
- System Fan
- Complete Solution

Dimensions of Chassis

	Length	Width	Height
DPX-M1000	232mm	295mm	104mm
DPX-M2000	242mm	295mm	134mm



DPX[®]-J Series

• Regulated Gaming • Street Gaming • Amusements • Kiosks

The DPX-J100 is the latest addition to the DPX family of integrated gaming platforms. Based on the revolutionary AMD R1000/V1000 Series embedded platform, the DPX-J100 uses AMD's latest cost effective dual and quad core SOC devices with "Discrete-level Graphics" from the best-in-class integrated VEGA graphics core. Three independent monitors can be supported. A full set of I/O, COMs and security features designed specifically for gaming devices is also included, making the DPX-J100 an ideal platform at an economical price point for many gaming, amusement and kiosk applications. Passive cooling for the lower APUs allows for robust, maintenance free operation in the harshest gaming environments.

Feature Highlights



JAMMA Connectors



Passively Cooled
(some APUs)



Chassis Available



Full set of I/O's, COMs
and Security Features



DPX[®]-J100

AMD Ryzen™ Embedded V & R Series Gaming Platform

- High performance AMD Embedded V&R SOC APUs
- Quad and dual core APUs
- Radeon VEGA GPU with up to 8 compute units
- Up to 3 independent monitors supported
- Comprehensive gaming features
- 72 + 20 Pin JAMMA harness connectors
- Optional enclosure



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Features



Digital I/O
24/29



Expansion
I²C, Mini PCI



DPX Security Suite (as below)
+iButton



Up to 2MB of Battery
Backed FRAM



6 x USB:
4 x 2.0 -
2 x 3.1/2.0



DPX-Software: Embedded OS ,
DPX Diagnostics, DPX-Connector &
DPX-SAS



1 x DP++, 1 x HDMI
and 1 x VGA



6 x Coms – RS232/485 Tx/Rx



Optional Enclosure



Onboard Audio Amplifier,
Line Out, Digital SPDIF Out



SATA DOM, SSD, HDD, M.2,
USB, CFast



On board Microcontroller

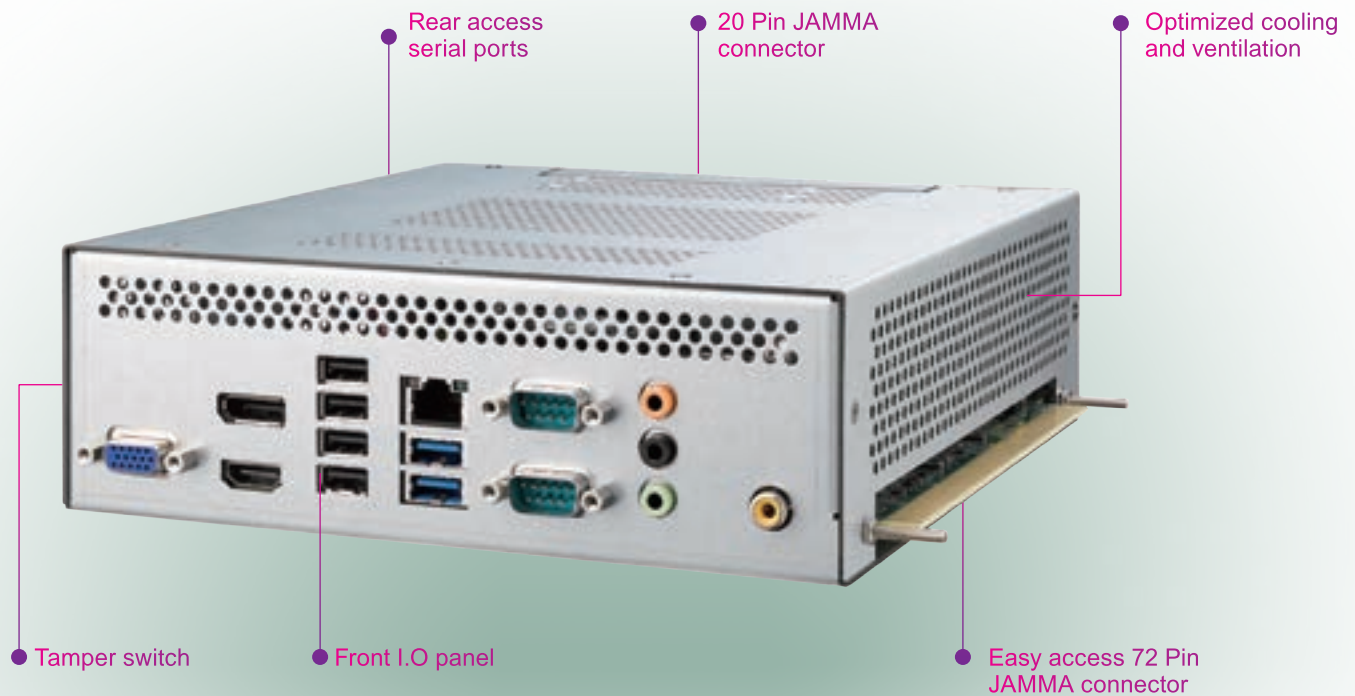
DPX[®]-J100 System

The DPX-J100 system is a gaming system logic box designed around Advantech's DPX-J Series motherboards.

Easy access to a full set of I/O, COMs and tamper proof switch. Security features designed specifically for gaming devices makes the J100 system ideal for many gaming, amusement and kiosk applications. Optimised cooling with fanless options for certain models, allows for robust, maintenance free operation in the harshest gaming environments.

Dimensions of Chassis

	Length	Width	Height
DPX-J100 system	200mm	200mm	65mm



DPX[®]-Development Kits

All inclusive packages for quick development

With development times becoming shorter in the gaming industry, the range of DPX Developer's kits provides a fast, simple way to get up and running with any of the DPX Series products. It also provides the best possible "out of the box" experience, with everything you need to begin developing on DPX hardware platforms, delivered to you, fully tested and ready to go (with up to date drivers) in one handy box:

- All inclusive kits for each DPX mainboard
- Fast and simple setup to evaluate and start development
- Includes pre-configured operating systems, drivers and utilities
- Demo and reference source code
- I/O development board, power supply and full documentation



The kits are based on a DPX[®] mainboard, and includes all the other necessary items to set up an evaluation and development station:

- Source code
- DPX chassis
- Demo utilities
- PSU / Dongles
- 128GB Advantech storage
- Demo OS / Linux Image
- Full cable sets
- Motherboard + CPU
- 8GB Advantech RAM
- Complete documentation



SCAN ME for more information!

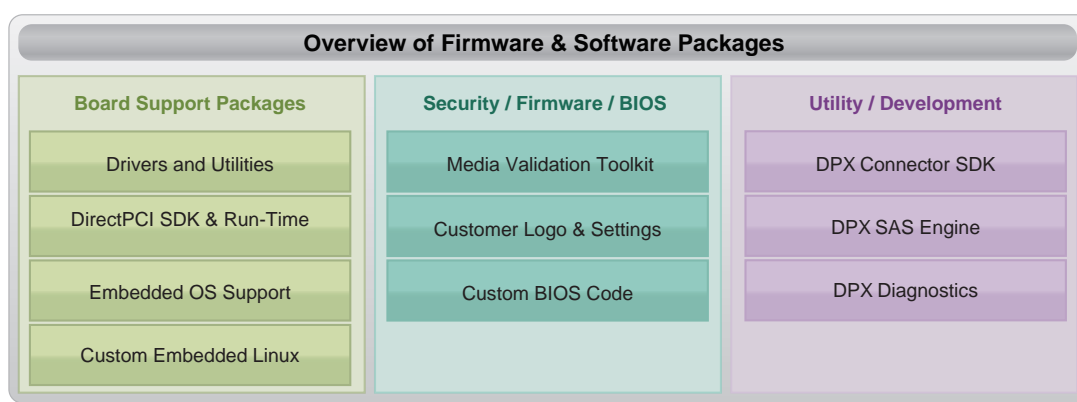
Gaming Software, Firmware, Integration and Security Support



SCAN ME for more information!

Software Overview

Advantech-Innocode supplies a wide range of software packages and support to accelerate the customer's development cycle. As well as board support packages with highly robust drivers and edge-to-edge coverage for the hardware platforms, other software products are available including peripheral protocol libraries, security suites, diagnostic and test software designed to help develop the best-balanced gaming solutions.



Board Support Package

Board support packages provide software support for Microsoft Windows embedded OS and embedded Linux OS. A full set of drivers and APIs are provided to all standard PC functions as well as all gaming specific hardware features. Direct PCI Software Development Kits are integrated into DPX- Series motherboards to handle gaming critical functions such as SRAM, Digital Inputs Outputs (DIO) Watchdog, as well as intrusion monitoring and other functions. The API is optimized for Embedded Windows and Linux distributions and is common across all DPX- Gaming motherboards.

Security

Advantech-Innocode understands that the protection of gameplay data and machine state are critical considerations. Software and hardware tampering detection, as well as media validation are key requirements set by gaming regulators. The aim is 'Player' and 'Operator' protection, fair games and correct pay-outs.

As such the DPX range of gaming motherboards come with the following security features as standard:

- TPM Chip
- Random Number Generator (FIPS)
- Password protected i2c port
- 88 Bit Unique ID
- EWF/UWF support
- BitLocker support
- Software authentication
- TCG Opal 2.0 SQFlash products available
- Intrusion detection logging processor (IDLDP)

OEM Intellectual Property

Encryption of data and applications, strong password, key storage and platform authentication are all key considerations when choosing a gaming platform; as well as prevention of copying or cloning of game data, stopping unauthorized content from being loaded in order to maintain competitive advantage and protection of investment and IP. Advantech-Innocode's software solutions combined with hardware features gives you multiple methods to protect your game content.

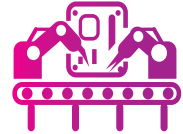
Featured Gaming Software

Media Validation Toolkit

The Media Validation Toolkit provides a toolkit for the developer to produce low-cost, low-overhead security mechanisms for gaming machines. The mechanisms security features cover various aspects of security control and ensure:

- 1) Customers' software applications can only run on designated hardware.
- 2) Designated systems only run designated software.
- 3) Compliance with U.S. and international gaming regulations for media validation.

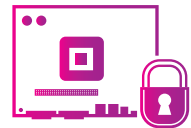
- SDK for customizable pre boot BIOS media validation
- Meets GLI-11 and other regulatory requirements
- SHA-1 Hash and BIOS self-test
- Supports encrypted digest and multiple hash tables
- Comprehensive user manual



The Trusted Platform Module (TPM)

The TPM chip included on Advantech-Innocode DPX Series main boards is an advanced security co-processor offering a high level of hardware-based security for application development and deployment.

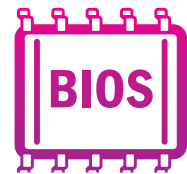
- Unique per-board RSA key generates, stores and protects RSA keys: keys never leave the TPM chip un-protected
- RSA asymmetric encryption and signing SHA-1 hashing
- Generates random numbers to 1-million bit random-ness (as tested by US NSA)
- Chip is physically secure from physical tampering



BIOS

Advantech-Innocode provides gaming-specific firmware and software customization services including BIOS and TPM support that deliver superior performance, compatibility and functionality, and also provide information encryption, which is expected by manufacturers of gaming platforms.

- Secure AMI APTIO UEFI BIOS
- Customization
- Field verifiable BIOS
- Field and Laboratory approved
- Immutable BIOS and development versions
- Customization and write protection for security
- Support for security ROM extensions



DPX[®]-Connector SDK

DPX- Connector SDK is a software package developed to address customers' needs to connect third-party hardware peripherals to Advantech-Innocode computer boards. A unified event handler provides an efficient method to handle communications. The SDK supplies a range of hardware and protocol-oriented modules to allow connection of a range of peripherals including:

- Coin Hoppers
- Bill Validators
- Ticket Printers

The DPX-Connector SDK supports ccTalk and JCM ID003 devices, as well as Windows and Linux OS.



Slot Accounting System (SAS)

The DPX-SAS Engine is a complete, ready to use driver and API environment that enables implementation of the SAS protocol with the DPX range of products. Field proven and lab-certified the SAS Engine handles all SAS messaging, register structures and timing protocols.

- Fully featured SAS protocol library
- Mature field-proven product
- Approved in all major jurisdictions
- Supports latest versions
- Multi-game support
- Windows and Linux OS
- Ticket In / Ticket Out (TITO)
- Advanced funds transfer facilities
- Real-time events
- Supports different currencies
- Progressives and tournament support.



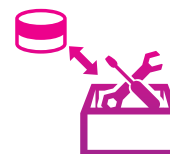
DPX[®] Diagnostics SDK

The DPX Diagnostics SDK is the perfect pre-deployment hardware verification tool, allowing gaming features and software testing. USB and CD bootable, and comprehensive Windows and Linux OS support. Source code is available.



1-Wire / iButton[®] SDK

The 1-Wire / iButton SDK provides support for all 1-Wire and iButton devices, comprehensive Windows and Linux OS support. Source code is available.



PuC Microcontroller

The PuC embedded Microcontroller (IOC, PuC, MPuc and PuC-Lite depending on the DPX-Model) is an integrated subsystem used across the range of Advantech-Innocore motherboard products and provides a range of user functions suited to the gaming industry.

What is it?

On-board, low cost, low power, 8 bit Microcontroller.

What does it do?

Provides system maintenance, diagnostics, configuration, reliability, security, event logging and manageability functions.

Customer Benefits

Improved system reliability, remote manageability, remote updates, simplified factory set up (jumper-less design, single firmware image), quieter operation, improved security and logging.



Gaming Monitors

Designed exclusively for gaming applications, Advantech's gaming display solutions provide a wide range of gaming monitors to meet the special requirements of applications such as slot machines and casinos. Solutions include both open frame monitors and ultra widescreen displays. These display solutions feature widescreens, reliable touch screens and flexible mechanical designs that can be integrated with Advantech-Innocore gaming platforms for a total gaming solution. Applications include slot machine, lottery terminals, jackpot systems, sports betting terminals, kiosks etc.

HALO Series

Standard, Front LED and Edge LED



Panel Size: 21.5"

Resolution: 1920x1080@60Hz
Brightness: 250 nits
Viewing Angles: 89/89/89/89 LRUD
Video Inputs: HDMI/DP

Panel Size: 23.8"

Resolution: 1920x1080@60Hz
Brightness: 250 nits
Viewing Angles: 89/89/89/89 LRUD
Video Inputs: VGA, DVI, DP

Panel Size: 27"

Resolution: 1920x1080@60Hz
Brightness: 300 nits
Viewing Angles: 89/89/89/89 LRUD
Video Inputs: VGA, DVI, DP

Panel Size: 32"

Resolution: 1920 x 1080@60Hz
Brightness: 400 nits
Viewing Angles: 89/89/89/89 LRUD
Video Inputs: VGA/DP/HDMI

Open Frame / Button Deck Touch



Panel Size: 10.1"

Resolution: 1280 x 800
Brightness: 500
Viewing Angles: 85/85/85/85 LRUD
Video Inputs: VGA, DVI
P-cap Touch
Customizable Buttons

Optional:
Glass Artwork
Integrated Wireless Charger

Panel Size: 12.1"

Resolution: 1280 x 800
Brightness: 400
Viewing Angles: 85/85/85/85 LRUD
Video Inputs: HDMI, USB
P-cap Touch
Customizable Buttons

Optional:
Glass Artwork
Integrated Wireless Charger



CURVED Series

For C and J curved

Panel Size: 32" C Curved/43" in C & J Curved (Non-LED)

Resolution: 2560 x 1440@144Hz(32") / 3840 x 2160@60Hz (43")
Brightness: 250nits(32")/500nits(43")
Viewing Angles: 89/89/89/89
Video Inputs: HDMI/DVI/DP/USB (Type B)

Panel Size: 43" in C & J Curved

Resolution: 3840 x 2160@60Hz
Brightness: 500nits
Viewing Angles: 89/89/89/89
Video Inputs: HDMI/DVI/DP/USB (Type B)



EDGE Series

Zero Bezel

Panel Size: 10.1"

Resolution: 1280 x 800@60Hz
Brightness: 500nits
Viewing Angles: 85/85/85/85
Video Inputs: VGA/DVI/USB (Type B)

Panel Size: 15"

Resolution: 1024 x 768@60Hz
Brightness: 350nits
Viewing Angles: 80/80/80/80
Video Inputs: VGA/DVI/USB (Type B)

Panel Size: 17"

Resolution: 1280 x 1024@60Hz
Brightness: 250nits
Viewing Angles: 85/85/80/80
Video Inputs: HDMI/VGA/USB (Type B)

Panel Size: 19"

Resolution: 1280 x 1024@60Hz
Brightness: 250nits
Viewing Angles: 85/85/80/80
Video Inputs: HDMI/VGA/DVI/DP/USB (Type B)

Panel Size: 21.5"

Resolution: 1920 x 1080@60Hz
Brightness: 250nits
Viewing Angles: 89/89/89/89
Video Inputs: HDMI/VGA/USB (Type B)

Panel Size: 27"

Resolution: 1920 x 1080@60Hz
Brightness: 300nits
Viewing Angles: 89/89/89/89
Video Inputs: HDMI/VGA/DVI/USB (Type B)



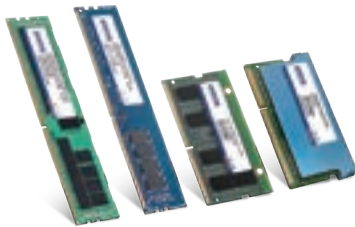
Industrial Memory & Storage, Microsoft OS, PCIe Graphics Cards

Advantech gaming peripherals offer specialized, quality components with long lifecycle support for our gaming platforms. All peripherals are fully compatible with Advantech-Innocore gaming boards and systems. We provide:

- Long lifecycle graphic cards
- Storage devices - HDD, CFast, SSD, M.2
- Embedded operating system licenses
- Long lifecycle, reliable RAM modules
- Backplanes and connector boards
- iButtons
- Enclosures

SQFlash Industrial Storage Solutions

SQFlash series supports various interfaces such as SATA, PCIe/ NVMe and PATA/IDE with multiple form factors including 2.5" SSD, mSATA, M.2, DOM, CFast, half-slim SSD and more.

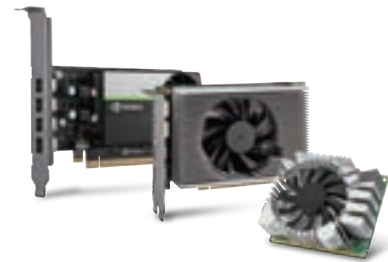


SGRAM Industrial Memory Solutions

SGRAM series offers a comprehensive range of product lines including Unbuffered DIMM ECC DIMM, server DIMM and rugged DIMM with speed of DDR5, DDR4, DDR3, DDR2 and DDR1.

Graphic Cards

Increasingly in embedded systems, more and more demands are made for rich, vibrant graphics and enhanced parallel computing capabilities. Advantech offers a comprehensive product line of graphic card solutions specifically designed for diverse industrial applications needing high processing and imaging technology. Graphics cards feature high performance, rich I/O interface, wide temperature operation, and low power consumption. Advantech supports long lifecycles from 3 to 5 years.



Microsoft OS License



Advantech is a gold worldwide partner and licensed distributor of Microsoft OS and Cloud solutions. Windows 10 IoT is a family of Windows 10 editions targeted towards a wide range of intelligent devices, from small industrial gateways to larger, more complex devices like point of sales terminals and ATMs. Combined with the latest Microsoft development tools and Azure IoT services, partners can gather, store and process data, creating actionable business intelligence that affects business outcomes. Partners building solutions based on Windows 10 IoT will realize expanded opportunities when they harness the full breadth of Microsoft technologies to offer end-to-end solutions.

DPX[®]-LED Controller

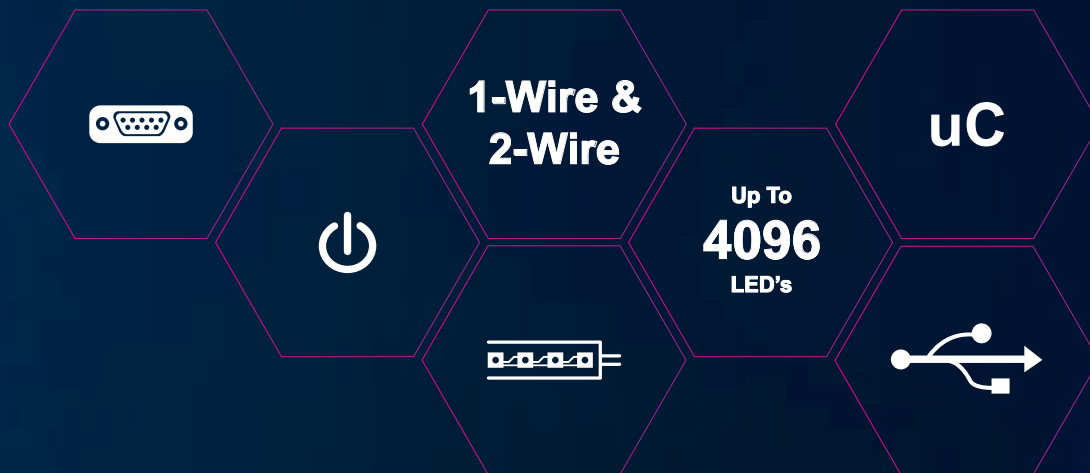
Advantech-Innocore understand that game developers and cabinet makers need to make their product stand out in the crowded casino floor, as well as thinking about the end user and their experience.

The DPX-LED Controller is an key component in the developer's tool box allowing ideas and visions to be transferred from sketch pad to the big screens of the casino floor. With the capability to drive up to 4000 individual LED's, and complimented by an easy to use GUI, (Graphical User Interface) the DPX-LED Controller is the perfect tool to develop, test and control your gaming cabinet lighting.



Features and Functions

- Industrial grade product
- Robust metal cover
- Watchdog timer
- Long term availability
- Custom Vibrance FX application for easy detailed content creation



Power

- Supports 12V or 5V LED's
- Can be powered by a single 5V or 12V discrete PSU

4096 LEDs

- Up to 4000 LED's can be PWM driven Supports 'tri' or 'quad' colour addressable LEDs

USB Connectivity

- USB connectivity to DPX motherboard or standalone

LED Compatibility

- 16x 1-Wire channels or 8x 2-Wire LED channels – user configurable
- 1-Wire and 2-Wire type supported

Other Features

- Up to 64 discrete pattern sequences
- Up to 4 x layer FX creating depth
- 16 Clock domains
- Pattern sequence position updates

Gaming Platform and Customization Services

Service Overview

Advantech-Innocore's capability to provide customers with reliable computing solutions is not limited to the wide range of standard products. Custom designs requirements are welcome ranging from small modifications of one of the existing DPX products, to completely new product designs; incorporating new motherboard, chassis, carrier boards, custom firmware and microcontroller design.

- Huge portfolio of reference designs
- 900+ R&D engineers
- In-house CAD design and simulation services
- Intel and AMD select partner
- In-house design validation (EMC, signal integrity, thermal, vibration and HALT)
- Worldwide base of installed hardware and field proven software



Hardware Design Services	Firmware and OS Design Services	System Design Services
• Custom CPU board designs	• Embedded OS support	• Custom enclosures
• Intel, AMD, and RISC platforms	• OS image development	• Thermal simulation
• GPU design and integration	• FPGA, microcontroller custom firmware	• Peripheral integration
• Custom I/O	• BIOS customization	• System validation (thermal, vibration, EMC, HALT etc)
• Various security solutions	• BIOS Security extension code	• Integration of customer's hardware

Gaming Computing Platforms

Standalone Series

Available in 2023 Q4



Model Name		DPX-S455	DPX-S2450	DPX-S450	DPX-S2445	DPX-S445	DPX-S2451	DPX-S451
Form Factor		DPX Gaming Board	DPX Gaming System	DPX Gaming Board	DPX Gaming System	DPX Gaming Board	DPX Gaming System	DPX Gaming Board
Processor System	CPU	Intel 12/13 th Generation Core	AMD Ryzen Embedded V1000/R1000 APU		Intel 6 th / 7 th Generation Core-i7/i5/i3		AMD Ryzen Embedded R2000 APU	
	Socket	LGA1700	BGA		LGA 1151		BGA	
	max. speed	1.10 (4.80) GHz	3.35 (3.8) GHz		2.9 GHz (3.8) GHz		3.35 (3.7) GHz	
	TDP	35W	45W		54W		45W	
	Chipset	H610E	SoC		Q170		SoC	
	BIOS	AMI APTIO UEFI (Gaming optimised)	AMI APTIO UEFI (Gaming optimised)		AMI APTIO UEFI (Gaming optimised)		AMI APTIO UEFI (Gaming optimised)	
Expansion Slot	PCI	-	-		-		-	
	MINI PCIe/ mSATA	-	-		-		-	
	PCIe	PCIe x 16	PCIe x 16 (x8 signal)		PCIe x 16		PCIe x 16 (x8 signal)	
	MXM	-	-		-		-	
Memory	Technology	Single Channel DDR5 4800MHz	Dual Channel DDR4 3200MHz		Dual Channel DDR4 2400MHz		Dual Channel DDR4 3200MHz	
	Max. Capacity	32GB	32GB		32GB		32GB	
	Socket	1x SODIMM	2x SODIMM		2x SODIMM		2x SODIMM	
Graphics	Controller	in CPU (Intel UHD Graphics 770)	in APU (AMD Radeon VEGA series graphics engine)		in CPU (Intel GT2-530)		in APU (AMD Radeon VEGA graphics engine)	
	VGA	-	-		-		-	
	DVI	-	-		-		-	
	DP	3	4		3		4	
Ethernet	LAN1	GbE	GbE		GbE		GbE	
	LAN2	GbE	GbE		GbE		GbE	
Storage	SATA	1	2		2		2	
	CompactFlash	-	-		-		-	
	CfIast	-	2		-		2	
	M.2	1	1		-		1	
Rear I/O	VGA/ DVI/ HDMI/ DP	0/0/0/3	0/0/0/4		0/0/0/3		0/0/0/4	
	Ethernet	2	2		2		2	
	USB 2.0	6	8		9		8	
	USB 3.0	3	3		2		3	
	Audio	1 (ch5.1), SPDIF	1 (ch5.1), SPDIF		1 (ch5.1), SPDIF		1 (ch5.1), SPDIF	
	Serial Port	10	10		10		10	
	Serial Type RS232/ Cctalk/ TTL/485	10/2/2/1	9/2/2/1		10/2/2/1		9/2/2/1	
Gaming Hardware	SRAM	8MB	8MB		8MB		8MB	
	ROM Sockets	SPI ROM module	SPI ROM module		SPI ROM module		SPI ROM module	
	TPM	TPM 2.0	TPM 2.0/1.2		TPM 2.0/1.2		TPM 2.0/1.2	
	Audio Amplifier	-	15W+15W+15W (FL,FR, LFE)		15W+15W+15W (FL,FR, LFE)		15W+15W+15W (FL,FR, LFE)	
	Digital Inputs	32 (ESD protected)	32 (ESD protected)		32 (ESD protected)		32 (ESD protected)	
	Digital Outputs	32 (OC 500mA 50V)	32 (OC 500mA 50V)		32 (OC 500mA 50V)		32 (OC 500mA 50V)	
	Intrusion Inputs	8	8		8		8	
	iButton/ GPIO	2	2		2		2	
	DPCI Expansion	-	-		-		-	
	Watchdog Timer	1	1		1		1	
Gaming Software	Dual BIOS	-	-		-		-	
	DPCI Advanced Gaming API & Runtime	Standard	Standard		Standard		Standard	
	DPX Connector Peripherals Libraries	Standard	Standard		Standard		Standard	
	Embedded OS Support	Standard	Standard		Standard		Standard	
	BIOS Customization	Optional	Optional		Optional		Optional	
	DPX SAS Connector	Optional	Optional		Optional		Optional	
Other Features	Media Validation Toolkit	Optional	Optional		Optional		Optional	
		I2C, Precision RTC, ATX or 12VDC power	I2C, Precision RTC, ATX or 12VDC power		I2C, Precision RTC, ATX or 12VDC power		I2C, Precision RTC, ATX or 12VDC power	

Economy Series



Model Name		DPX-E145	DPX-E140
Form Factor		DPX Gaming System	DPX Gaming System
Processor System	CPU	11 th Generation Intel Core SOC CPU	AMD Ryzen Embedded V1000 APU
	Socket	BGA	BGA
	max. speed	2.8 (4.4) GHz	3.35 (3.8) GHz
	TDP	28W (passive cooled)	15-25W (passive cooled), 54W (fan)
	Chipset	SoC	SoC
	BIOS	AMI APTIO UEFI (Gaming optimised)	AMI APTIO UEFI (Gaming optimised)
Expansion Slot	PCI	-	-
	MINI PCIe/mSATA	-	-
	PCIe	-	-
	MXM	-	-
Memory	Technology	Dual Channel DDR4 3200MHz	Dual Channel DDR4 3200MHz
	Max. Capacity	32GB	32GB
	Socket	2x SODIMM	2x SODIMM
Graphics	Controller	in CPU (Intel Iris Xe integrated graphics engine)	in APU (AMD Radeon VEGA series graphics engine)
	VGA	-	-
	DVI	-	-
	DP	4	4
	HDMI	-	-
Ethernet	LAN1	GbE	GbE
	LAN2	GbE	GbE
Storage	SATA	2	2
	CompactFlash	-	-
	Cfast	2	2
	M.2	1	1
Rear I/O	VGA/DVI/HDMI/DP	0/0/0/4	0/0/0/4
	Ethernet	2	2
	USB 2.0	6	7
	USB 3.0	3	2
	Audio	1 (ch5.1), SPDIF	1 (ch5.1), SPDIF
	Serial Port	9	9
	Serial Type RS232/Ctaltk/TTL/485	4/2/1/1	4/2/1/1
Gaming Hardware	SRAM	8MB	8MB
	ROM Sockets Sockets	SPI ROM module	SPI ROM module
	TPM	TPM 2.0/1.2	TPM 2.0/1.2
	Audio Amplifier	20W+20W (FL, FR)	20W+20W (FL, FR)
	Digital Inputs	32 (ESD protected)	32 (ESD protected)
	Digital Outputs	32 (OC 500mA 50V)	32 (OC 500mA 50V)
	Intrusion Inputs	8	8
	iButton / GPIO	2	2
	DPCI Expansion	-	-
	Watchdog Timer	1	1
	Dual BIOS	-	-
Gaming Software	DPCI Advanced Gaming API & Runtime	Standard	Standard
	DPX Connector Peripherals Libraries	Standard	Standard
	Embedded OS Support	Standard	Standard
	BIOS Customization	Optional	Optional
	DPX SAS Connector	Optional	Optional
	Media Validation Toolkit	Optional	Optional
Other Features		ATX or 12VDC power	ATX or 12VDC power

Jamma Series



Model Name		DPX-J100
Form Factor		Extended Mini-ITX
Processor System	CPU	AMD Ryzen Embedded V1000/R1000 APU
	Socket	BGA
	max. speed	2.6 (3.5) GHz
	TDP	15W
	Chipset	SoC
	BIOS	AMI APTIO UEFI BIOS
Expansion Slot	PCI	-
	MINI PCIe/mSATA	half mini-PCI
	PCIe	-
Memory	MXM	-
	Technology	Dual Channel DDR4 2400MHz
	Max. Capacity	32GB
Graphics	Socket	2x SODIMM
	Controller	in APU (AMD Radeon VEGA series graphics engine)
	VGA	1
	DVI	-
	DP	1
Ethernet	HDMI	1
	LAN1	GbE
Storage	LAN2	GbE
	SATA	1
	CompactFlash	-
	Cfast	1
Rear I/O	M.2	1
	VGA/DVI/HDMI/DP	1/0/1/1
	Ethernet	2
	USB 2.0	4
	USB 3.1	2
	Audio	1 (ch5.1), SPDIF (Option)
	Serial Port	6
	Serial Type RS232/Ctaltk/TTL/485	3/2/0/1
Gaming Hardware	FRAM (NVRAM)	Option for FRAM (2 banks) up to 2MB total. (Default is zero FRAM)
	ROM Sockets Sockets	-
	TPM	TPM2.0 (Option)
	Audio Amplifier	6W+6W (FL, FR)
	Digital Inputs	24 (ESD protected)
	Digital Outputs	24 (500mA), 5 (2A)
	Intrusion Inputs	8
	iButton / GPIO	iButton/ one-wire (Option)
	DPCI Expansion	-
	Watchdog Timer	-
Gaming Software	Dual BIOS	-
	DPCI Advanced Gaming API & Runtime	N/A
	DPX Connector Peripherals Libraries	Standard
	Embedded OS Support	Standard
	BIOS Customization	Optional
	DPX SAS Connector	Optional
Other Features		12VDC for V1605, 5, 12V JAMMA input for R series

Modular Series

Available in 2023 Q4



Model Name		DPX-M266	DPX-M270	DPX-M1270	DPX-E265	DPX-E1265
Form Factor		Extended Mini-ITX	Extended Mini-ITX	DPX Multimedia Gaming System	Extended Mini-ITX	DPX Gaming System
Processor System	CPU	AMD Ryzen Embedded R2000 APU	Intel 8th & 9th Gen. Core-i7/i5/i3		AMD Ryzen Embedded V1000 APU	
	Socket	BGA	LGA1151		BGA	
	max. speed	3.35 (3.7) GHz	3.2(4.6) GHz		3.35 (3.8) GHz	
	TDP	Up to 54W	65W		54W	
	Chipset	SoC	Q370/H310		SoC	
	BIOS	AMI UEFI SPI with Media validation/OPROM support	AMI UEFI SPI with Secureboot support		AMI APTIO UEFI (Gaming optimised)	
Expansion Slot	PCI	-	-		-	
	MINI PCIe/ mSATA	-	-		-	
	PCIe x 16	PCIe x16 slot, Gen 3 (x8 electrical, x4 with R2312 APU)	PCIe x16 Gen3		PCIe x16 (x8 signal)	
	Side Expansion Port	2x PCIe x1, 2x USB2.0 ports, 5x intrusion/DI inputs. (R2312 APU supports 1x PCIe, 2 USB)	2 PCIe x1, 2(1) USB, I2C, Control		2 PCI-e x1 (via side expansion)	
	MXM	-	-		-	
Memory	Technology	32GB	Dual Channel DDR4 2666 MHz SDRAM (Non-ECC)		Dual Channel DDR4 3200MHz	
	Max. Capacity	2x SODIMM	32 GB/ 16 GB per SO-DIMM		32GB	
	Socket	2x 260 PIN DDR4 SO-DIMM	2 x 260 PIN DDR4 SO-DIMM		2x SODIMM	
Graphics	Controller	Radeon VEGA GPU with up to 8 compute units	Intel UHD Graphics 630 / Intel HD Graphics 615		in APU (AMD Radeon VEGA series graphics engine)	
	VGA	-	-		-	
	DVI	-	-		-	
	DP	4x DP++ (3 with R2312)	2		4	
	HDMI	-	1		-	
Ethernet	LAN1	GbE	GbE		GbE	
	LAN2	GbE	GbE		GbE	
Storage	SATA	2	2		2	
	CompactFlash	-	-		-	
	Cfast	2	-		2	
	M.2	1	1		1	
Rear I/O	VGA/ DVI/ HDMI/ DP	0/0/0/4	0/0/1/2		0/0/0/4	
	Ethernet	2	2		2	
	USB 2.0	2	10 (Q370. 2 via side expansion) / 6 (H310. 1 via side expansion)		6 (2 via side expansion)	
	USB 3.0	3	4		3	
	Audio	6	6-Way header (Line-out (FL, FR, LFE), SPDIF_Out)		1 (ch2.1)	
	Serial Port	2 x (RS-232 full signal, supports 9 bit data) COM1 & COM2	2 x DB-9 RS-232 full signal, supports 9 bit data)		6	
	Serial Type RS232/ Ctalk/ TTL/485	6/1/1/1	6/1/1/0		6/1/1/1	
	SRAM	-	-		-	
Gaming Hardware	ROM Sockets	SPI ROM module	-		SPI ROM module	
	TPM	TCG TPM 2.0 device (soldered).	TPM2.0		TPM 2.0/1.2	
	Audio Amplifier	-	-		-	
	Digital Inputs	-	-		-	
	Digital Outputs	-	-		-	
	Intrusion Inputs	5 (4 via side expansion)	5 (4 via side expansion)		1	
	iButton/ GPIO	-	-		-	
	DPCI Expansion	-	-		-	
	Watchdog Timer	1	1		1	
	Dual BIOS	-	-		-	
Gaming Software	DPCI Advanced Gaming API & Runtime	N/A	N/A		N/A	
	DPX Connector Peripherals Libraries	Standard	Standard		Standard	
	Embedded OS Support	Standard	Standard		Standard	
	BIOS Customization	Optional	Optional		Optional	
	DPX SAS Connector	Optional	Optional		Optional	
Other Features	Media Validation Toolkit	Optional	Optional		Optional	
	ATX or 12VDC power	ATX or 12VDC power	12VDC power		ATX or 12VDC power	



Regional Service & Customization Centers

China	Kunshan 86-512-5777-5666	Taiwan	Taipei 886-2-7732-3399	Netherlands	Eindhoven 31-40-267-7000	Poland	Warsaw 00800-2426-8080	USA	Milpitas, CA 1-408-519-3898
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