

Innovations in Gaming Computing

The Widest Range of Solutions for the Gaming Industry

- / Lottery / Casino Machines
- / Sports Betting
- / AWP's
- / VLT's / Class II
- / Multiplayer Games
- / Arcade
- / Pachislot



Intel® & AMD Core Platforms



4k Monitors Supported



GLI, NVGCB, etc Regulatory compliance



PCI Express Graphics



Enabling an Intelligent Planet



Gaming Platform Solutions

About Advantech

Advantech's gaming division 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 the \$2Bn Advantech Group, Advantech's gaming division 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® Partner Alliance, bringing the first-to-the-market IoT solutions to the world.

Advantech is also a member of AMD Elite Partner Program presenting a wide range of AMD-based high performance computing platforms. Advantech is also an Elite Partner of Nvidia for high performance and long life-cycle graphics solutions.



Gaming team with extensive knowledge and experience

- **Leading the Gaming Industry Since 1997:** Delivering innovative solutions and unmatched insights that drive success.
- **Join a Team of Experts:** Our experienced team ensures top-tier gaming solutions.
- **Cutting-Edge Project Execution:** Expert engineering and project management for efficient delivery.
- **Multi-Disciplinary Teams:** Comprehensive support from hardware to firmware and quality control.
- **Comprehensive Software Support:** Robust drivers and libraries for a wide range of gaming peripherals.
- **Timely Custom Projects:** On-time delivery tailored to your needs, reducing time to market.
- **End-to-End Solutions:** Full package, from validation to diagnostics and design files.
- **Global Compliance:** Worldwide regulatory approvals for smooth market entry.



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



- D** Design Centers
- M** Manufacturing Centers
- C** Configure To Order Service Centers
- L** Logistics Centers
- R2** System Repair Centers
- R3** System & Board Repair Centers
- O** Onsite Service
- SI** System Integration
- LS** Leasing Service

Americas

Brazil **Itajuba** | **C L R3 O**
 Mexico **Monterrey** | **R2**
 United States **Cincinnati** | **D**
 United States **Irvine** | **D**
 United States **Milpitas** | **C L R3**
 United States **Ottawa** | **D C L R3**

Middle East & Africa

Turkey **Istanbul** | **C L R2**

Europe

Czech Republic **Usti nad Orlici** | **D L R3**
 Germany **Amberg** | **D**
 Germany **Munich** | **D C L**
 Netherlands **Eindhoven** | **C L**
 Poland **Warsaw** | **C L R3 O**
 England **Newcastle** | **D**

Asia Pacific

Australia **Melbourne** | **C L R2** Russia **Moscow** | **C L R3**
 China **Beijing** | **L D O SI LS** Singapore **Singapore** | **C L R2**
 China **Kunshan** | **D M C L R3** Taiwan **Taipei** | **D M C L R3 O SI LS**
 China **Xi'an** | **D** Thailand **Bangkok** | **C L**
 India **Bangalore** | **C L R3** Vietnam **Hanoi** | **L R2**
 Japan **Nohgata** | **D M C L R3**
 Japan **Tokyo** | **SI**
 Korea **Seoul** | **C L R3**
 Malaysia **Penang** | **C L R3**

Excellence in Design, Manufacture and Service

Advantech's gaming solutions products are crafted with high-quality components and utilize the latest design and production methodologies. While mass-produced commercial-grade motherboards also use top-tier components, our gaming division takes an extra step by meticulously selecting and sourcing components to optimize performance for gaming applications.

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'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 gaming solutions 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, VLTs, Multiplayer Games, Arcade Games, Pachislots, and Sports Betting.



Gaming Platforms & Systems

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



Industrial Storage

- SSD, HDD, CF, CFast, M.2
- DDR1-DDR5 SODIMM
- Custom provisioning
- Lifecycle controlled
- Power fail protection
- Comprehensive security features



Graphics Cards

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



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 life-cycle 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. The S Series is proven format product, which boasts consistent API, forwards and backwards compatibility between generations, and has successfully achieved GLI certification in numerous global jurisdictions

Feature Highlights



Chassis options available



Scalability of CPU and graphics



Full feature set of I/Os
COMs, security



AMD and Intel
CPU based



DPX[®]-S455

12th/13th/14th Generation Intel[®] Core[™] Gaming Platform

- Very high-performance Intel Hybrid Multi-core CPUs
- CPUs up to i9 24 Core
- Three independent monitors
- PCIe x16 graphics card slot
- Comprehensive gaming features
- 12V DC single input or ATX power
- Full featured driver API for IO and security



SCAN ME for more information!



Features



Digital I/O
32/32



6 x USB 2.0
3 x USB 3.0



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



NVRAM (MRAM) 8 -16 MB
(no battery required)



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



Enclosure Metalwork
Optional S2000



3 x DP++



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



On-board Microcontroller
PuC



i²C, PCIe x 16 &
Golden Fingers



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

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



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++



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



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 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++
(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



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 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++



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

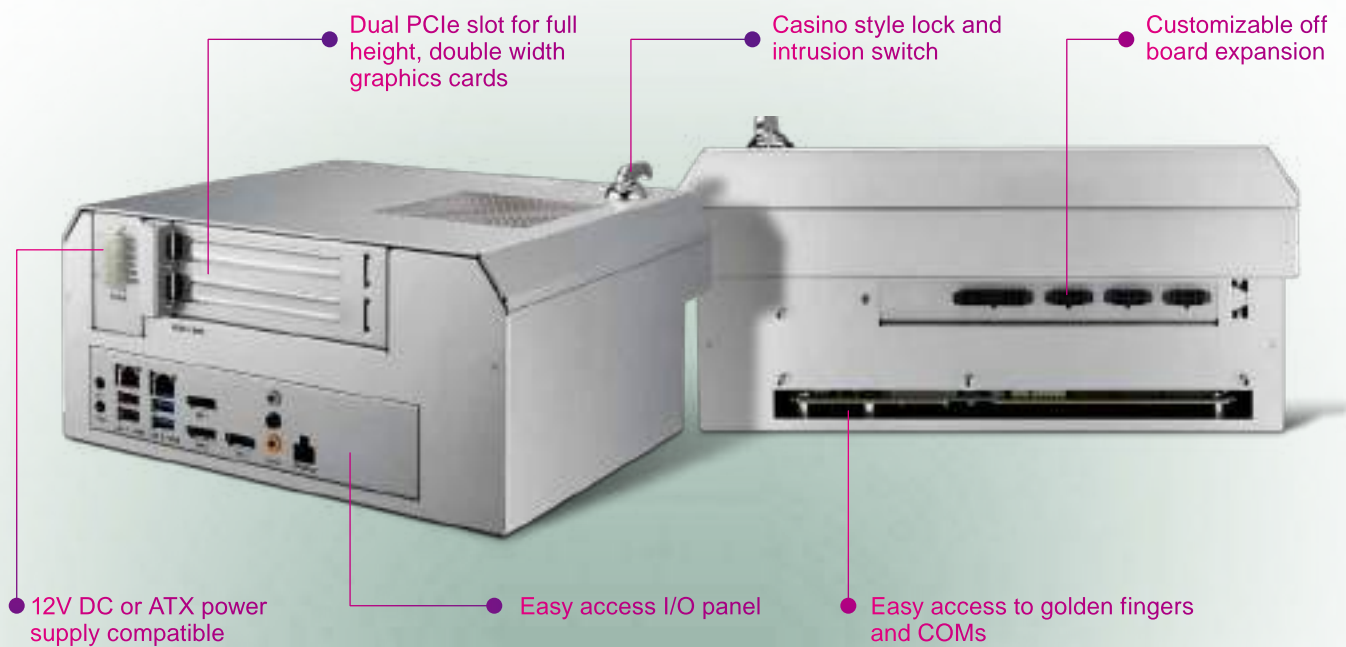
DPX[®]-S2000

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-S2445	214mm	260mm	124mm
DPX-S2450	214mm	260mm	124mm
DPX-S2451	214mm	260mm	124mm
DPX-S2455	214mm	260mm	124mm



DPX[®]-E Series

• Regulated Gaming • Slot Machines • VLT • GLI Compliant

The DPX[®]-E Series products provide highly integrated industrial single board computers and systems with an unrivaled performance range, long life-cycle and low power.

Both AMD and Intel[®] powered platforms are offered and each one features a full set of cabinet ready I/O, COMs, and security, developed specifically to meet the requirements of the regulated gaming industry.

Dedicated Logic area conveniently locates all game critical functions in one place, which can be safely secured and monitored by intrusion circuits.

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



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



SCAN ME for more information!



Features



Digital I/O
32/32



6 x USB 2.0
3 x USB 3.1



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++



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/R1000 Platform

- AMD Ryzen Embedded V1000/R1000 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

View More



SCAN ME for more information!



Features



Digital I/O
32/32



7 x USB 2.0
2 x USB 3.1



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++



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
- GLI Compliant

The DPX-M Series of products provide a high performance multi-media engine specific to the needs of gaming OEMs around the globe. The robust, low cost, high speed expansion bus allows a range of standard or proprietary modules to be added such as dedicated Gaming IO, Security, NVRAM, FGPA, NFC, RFID, Smart card, LEDs and many more.

For maximum versatility the boards feature mini-ITX mounting holes and are available with a range of secure logic boxes.

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 has a range of standard “add-on cards” for sports betting or gaming Sub system.



DPX[®]-M266

AMD Ryzen™ Embedded R2000

Multi-media Gaming Board



- High performance AMD Ryzen Embedded R2000 processors
- Quad and dual core APUs up to 3.35 (3.7) GHz
- Supports 4 display outputs (4 x DP v1.2)
- PCIe x16 graphics card slot
- Modular Expansion Port - Edge connector
- Storage 2 x SATA / CFAST, 1 x M.2
- Secureboot Media Validation support
- RS232, RS455, ccTalk, TTL, ID003, I²C, intrusion and DIs



Features

	Digital Inputs/Intrusion Inputs 6 (5 on side expansion connector)		6 x USB 2.0 3 x USB 3.1		DPX-Software: Embedded OS, DPX Diagnostics, DPX-Connector & DPX-SAS
	4 x DP++		6 x COMs: ccTalk, RS232, ID003, RS485, TTL		Enclosure Metalwork Optional
	Expansion I ² C		M.2, SATA DOM, HDD, SSD, CFAST, USB		On-board Microcontroller PuC
	DPX Security Suite: Media Validation Toolkit, TPM Support, DPX Security Features & BIOS Customization		PCIe x16, I2C, Modular side expansion bus for application specific I/O- extra COMs, I/O, NVRAM		

DPX[®]-M270

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















SCAN ME for more information!

- 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, RS455, ccTalk, TTL, ID003, I²C, intrusion and digital inputs
- Modular expansion port - Edge connector



Features

 <p>Displays 2 x DP++ 1 x HDMI (3 simultaneous for Q370, 2 simultaneous for H310)</p>	 <p>Onboard: 8 x USB 2.0 Via Golden Fingers: 4 x USB 3.1 2 x USB 2.0</p>	 <p>DPX Security Suite: Media Validation Toolkit, TPM Support, DPX Security Features & BIOS Customization</p>
 <p>Digital Inputs/ Intrusion inputs 6 (5 on side expansion connector)</p>	 <p>6 x COMs: ccTalk, RS232, ID003, TTL</p>	 <p>DPX-Software: Embedded OS , DPX Diagnostics, DPX-Connector & DPX-SAS</p>
 <p>Graphics Cards PCIe x 16 Format</p>	 <p>M.2, SATA DOM, HDD, SSD, USB</p>	 <p>Enclosure M1000 & M2000</p>
 <p>Expansion I²C, PCIe x 16 and Sidebus Modular Expansion</p>	 <p>PCIe x16, I2C, Modular side expansion bus for application specific I/O- extra COMs, I/O, NVRAM</p>	 <p>On-board Microcontroller PuLite</p>

DPX[®]-E265

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



SCAN ME for more information!

- Supports 4 x DP++
- 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



Features



Digital Inputs/ Intrusion inputs
6 (5 on side expansion connector)



Onboard:
4 x USB 2.0 Via Golden Fingers:
3 x USB 3.1 2 x USB 2.0



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



Displays
4x DP++
(4 simultaneous)



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



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



Graphics Cards
PCIe x 16 Format



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



Enclosure
M1000 & M2000



Expansion I²C, PCIe x 16 and Sidebus Modular Expansion



PCIe x16, I²C, Modular side expansion bus for application specific I/O- extra COMs, I/O, NVRAM



On-board Microcontroller
PucLite

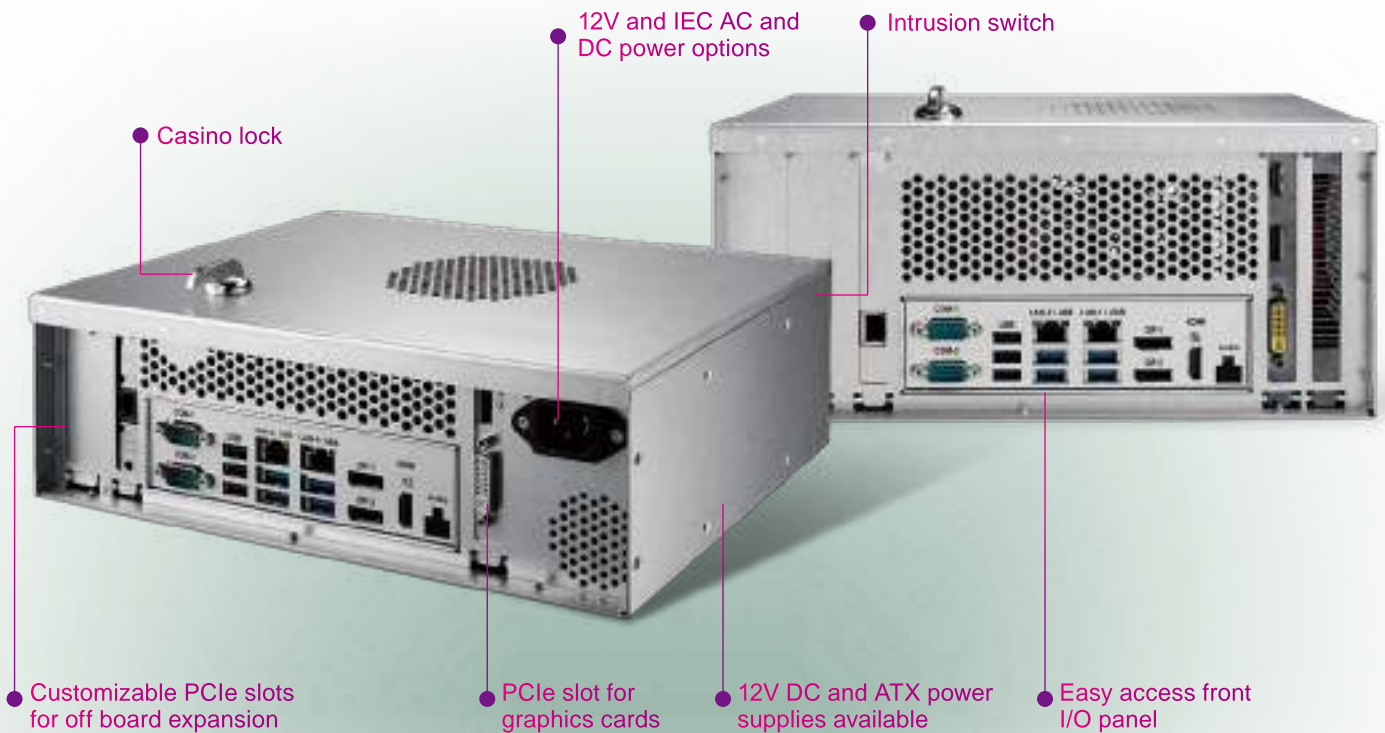
DPX[®]-M1000 and DPX[®]-M2000

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-M1265/1266/1270	232mm	295mm	104mm
DPX-M2265/2266/2270	242mm	295mm	134mm



DPX[®]-J Series

- Regulated Gaming
- Street Gaming
- Amusements
- Kiosks
- GLI Compliant

Designed specifically for gaming devices, the DPX-J Series offers a comprehensive set of I/O, COMs, and security features. This makes it an ideal platform for gaming, amusement, and kiosk applications, all at an economical price point.

Furthermore, the DPX-J Series adheres to the Japan Amusement Machine and Marketing Association (JAMMA) connector standard, ensuring compatibility with arcade games.

For added flexibility, a configurable pinout for the JAMMA connector, accommodating any variations in harnessing for specific applications is available with the DPX-J100S1 product.

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



SCAN ME for more information!



Features



Digital I/O
24/24



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
RS232, ccTalk, RS485



Board (DPX-J100B) or System level
with enclosure (DPX-J100S) and
configurable IO (DPX-J100S1)



Onboard Audio Amplifier,
Line Out, Digital SPDIF Out



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



PuC On board Microcontroller

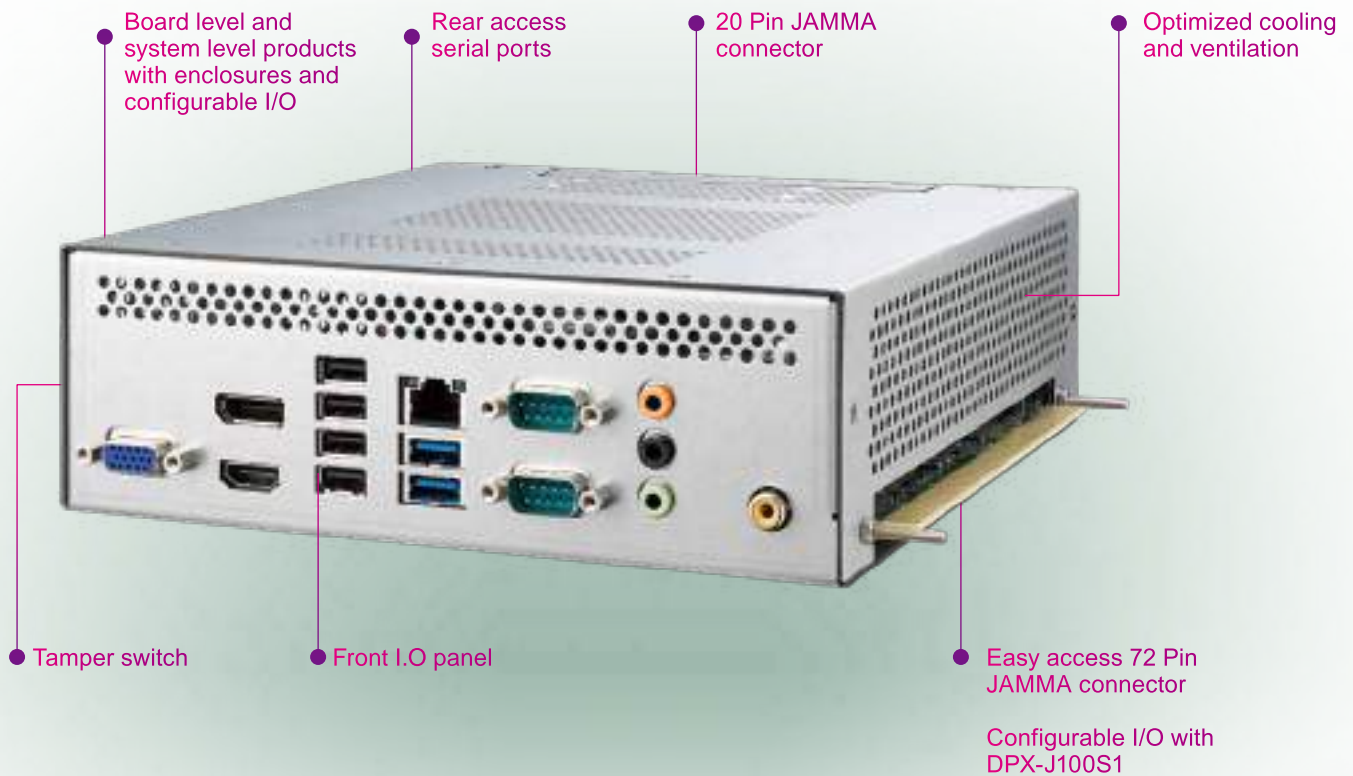
DPX[®]-J100 System

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-J100S1 system	266mm	232mm	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!

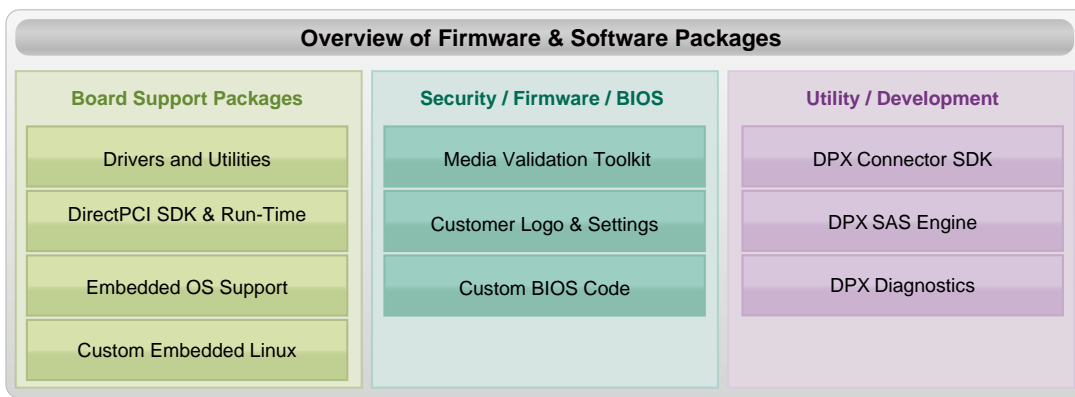
Gaming Software, Firmware, Integration and Security Support



SCAN ME for more information!

Software Overview

Advantech 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's gaming division 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
- 88 Bit Unique ID
- Software authentication
- Random Number Generator (FIPS)
- EWF/UWF support
- TCG Opal 2.0 SQFlash products available
- Password protected i2c port
- BitLocker support
- 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's gaming specific software solutions combined with hardware features gives you multiple methods to protect your game content.

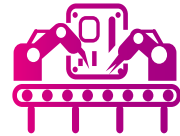
Featured Gaming Software

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.

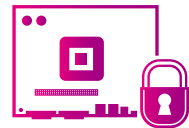
- SDK for customizable pre boot BIOS media validation
- Meets GLI-11 and other regulatory requirements
- SHA-1 Hash and BIOS self-test
- Supports encrypted digest and multiple hash tables
- Comprehensive user manual



The Trusted Platform Module (TPM)

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

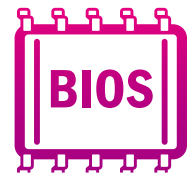
- Unique per-board RSA key generates, stores and protects RSA keys: keys never leave the TPM chip un-protected
- RSA asymmetric encryption and signing SHA-1 hashing
- Generates random numbers to 1-million bit random-ness (as tested by US NSA)
- Chip is physically secure from physical tampering



BIOS

Advantech 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.

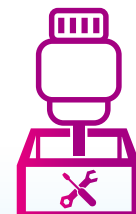
- Secure AMI APTIO UEFI BIOS
- Customization
- Field verifiable BIOS
- Field and Laboratory approved
- Immutable BIOS and development versions
- Customization and write protection for security
- Support for security ROM extensions



DPX[®]-Connector SDK

DPX-Connector SDK is a software package developed to address customers' needs to connect third-party hardware peripherals to Advantech's gaming 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's 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's gaming platforms for a total gaming solution. Applications include slot machine, lottery terminals, jackpot systems, sports betting terminals, kiosks etc.

IDP31 LED 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

IDK and IDP31 EDGE Open frames

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



SCAN ME for more information!

CRV 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)

IDP31 EDGE Closed frame Bezeless Touch Monitor



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, Graphic Cards, OS License



SCAN ME for more information!

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

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

Graphics 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, 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 10/11 IoT is a family of Windows OS editions targeted towards a wide range of intelligent devices, from small industrial gateways to larger, more complex devices like point of sales terminals, ATMs and gaming machines. Furthermore with Azure IoT services, partners can gather, store and process data, creating actionable business intelligence. Gaming customers can realize expanded opportunities when they harness the full breadth of Microsoft technologies to offer end-to-end solutions.

DPX[®]-LED Controller

Advantech's gaming division 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.

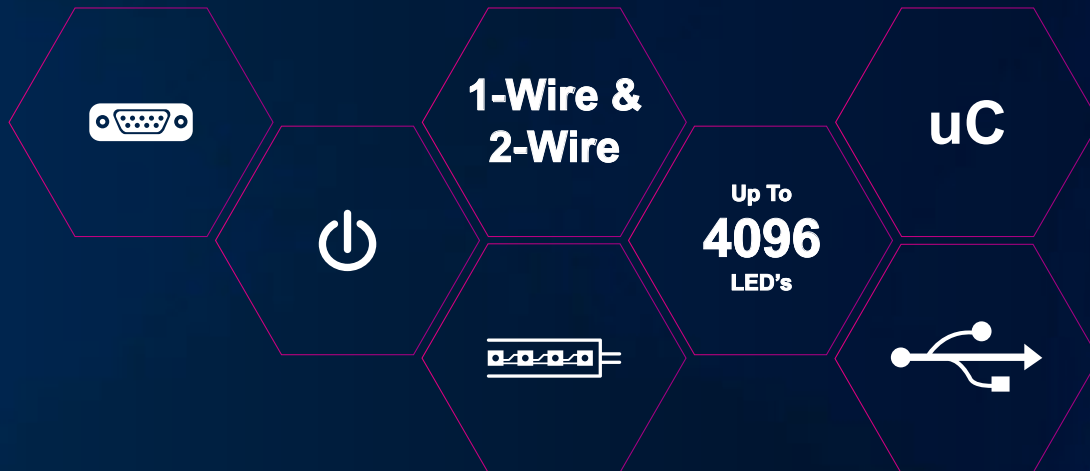


Features and Functions

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



SCAN ME for more information!



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
- Drop-in Fadecandy replacement

Gaming Platform and Customization Services

Service Overview

Advantech's gaming solutions offer reliable computing capabilities beyond their extensive range of standard products. Custom design requests are welcomed, whether it's minor modifications to existing DPX products or entirely new product designs, including new motherboards, chassis, carrier boards, custom firmware, and microcontroller designs.

- 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



Model Name		DPX-S455	DPX-S2455	DPX-S450	DPX-S2450	DPX-S445	DPX-S2445	DPX-S451	DPX-S2451
Form Factor		DPX Gaming Board	DPX Gaming System	DPX Gaming Board	DPX Gaming System	DPX Gaming Board	DPX Gaming System	DPX Gaming Board	DPX Gaming System
Processor System	CPU	Intel 12 th /13 th /14 th Generation Core		AMD Ryzen Embedded V1000/R1000 APU		Intel 6 th /7 th Generation Core		AMD Ryzen Embedded R2000 APU	
	Socket	LGA1700		BGA		LGA 1151		BGA	
	Max. Speed	2.5 (4.2) GHz		3.35 (3.8) GHz		2.9 (3.8) GHz		3.35 (3.7) GHz	
	TDP	35W		54W		54W		54W	
	Chipset	H610E		SoC		Q170		SoC	
BIOS		AMI APTIO UEFI (gaming optimized)		AMI APTIO UEFI (gaming optimized)		AMI APTIO UEFI (gaming optimized)		AMI APTIO UEFI (gaming optimized)	
Expansion Slot	Mini PCIe / mSATA	-		-		-		-	
	PCIe	PCIe x16		PCIe x16 (x8 signal)		PCIe x16		PCIe x16 (x8 signal)	
	Side Port	-		-		-		-	
Memory	Technology	Single Channel DDR5 5600MHz		Dual Channel DDR4 3200MHz		Dual Channel DDR4 2400MHz		Dual Channel DDR4 3200MHz	
	Max. Capacity	up to 48GB		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 graphics engine)		in CPU (Intel GT2-530)		in APU (AMD Radeon VEGA graphics engine)	
	VGA	-		-		-		-	
	DVI	-		-		-		-	
	DP	3		4		3		4	
	HDMI	-		-		-		-	
Ethernet	LAN1	GbE		GbE		GbE		GbE	
	LAN2	GbE		GbE		GbE		GbE	
Storage	SATA	1		2		2		2	
	Cfast	-		2		-		2	
	M.2	1		1		-		1	
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		8		8	
	USB 3.1	3		3		3		3	
	Audio	5.1 Surround, SPDIF		5.1 Surround, SPDIF, 2.1 Amplified		5.1 Surround, SPDIF, 2.1 Amplified		5.1 Surround, SPDIF, 2.1 Amplified	
	Serial Ports	10x Configurable (10x RS232, 2x Cctalk, 1x RS485, 1x TTL/ID003)		10x Configurable (10x RS232, 2x Cctalk, 1x RS485, 1x TTL/ID003)		10x Configurable (10x RS232, 2x Cctalk, 1x RS485, 1x TTL/ID003)		10x Configurable (10x RS232, 2x Cctalk, 1x RS485, 1x TTL/ID003)	
Gaming Hardware	SRAM	8MB (up to 16MB)		8MB		8MB		8MB	
	OpROM	Functionality via BIOS IC		Functionality via BIOS IC		Functionality via BIOS IC		Functionality via BIOS IC	
	TPM	TPM 2.0		TPM 2.0		TPM 2.0/1.2		TPM 2.0	
	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 47V)		32 (OC 500mA 47V)		32 (OC 500mA 47V)		32 (OC 500mA 47V)	
	Intrusion Inputs	8		8		8		8	
	iButton / GPIO	2		2		2		2	
	DPCI Expansion	Standard		Standard		Standard		Standard	
Watchdog Timer	1		1		1		1		
Gaming Software	DPCIe 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	
Media Validation Toolkit	Optional		Optional		Optional		Optional		
Other Features		iPC, Precision RTC, ATX or 12VDC Power		iPC, Precision RTC, ATX or 12VDC Power		iPC, Precision RTC, ATX or 12VDC Power		iPC, 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/R1000 APU	
	Socket	BGA	BGA	
	Max. Speed	3.35 (3.8) GHz	2.2 (3.9) GHz	
	TDP	up to 28W (passive cooled)	15-25W (passive cooled), 54W (fan)	
	Chipset	SoC	SoC	
	BIOS	AMI APTIO UEFI (gaming optimized)	AMI APTIO UEFI (gaming optimized)	
Expansion Slot	Mini PCIe / mSATA	-	-	
	PCIe	-	-	
	Side Port	-	-	
Memory	Technology	Dual Channel DDR4 3200MHz	Dual Channel DDR4 3200MHz	
	Max. Capacity	64GB	32GB	
	Socket	2x SODIMM	2x SODIMM	
Graphics	Controller	in CPU (Intel Iris Xe integrated graphics engine)	in APU (AMD Radeon VEGA graphics engine)	
	VGA	-	-	
	DVI	-	-	
	DP	4	4	
	HDMI	-	-	
Ethernet	LAN1	GbE	GbE	
	LAN2	GbE	GbE	
Storage	SATA	2	2	
	Cfast	2	2	
	M.2	1	1	
	VGA / DVI / HDMI / DP	0/0/0/4	0/0/0/4	
I/O	Ethernet	2	2	
	USB 2.0	6	7	
	USB 3.1	3	2	
	Audio	5.1 Surround, SPDIF, Stereo Amplified	5.1 Surround, SPDIF, Stereo Amplified	
	Serial Ports	9 (4/2/1/1/1)	9 (4/2/1/1/1)	
	SRAM	8MB	8MB	
	OpROM	Functionality via BIOS IC	Functionality via BIOS IC	
Gaming Hardware	TPM	TPM 2.0	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 47V)	32 (OC 500mA 47V)	
	Intrusion Inputs	8	8	
	iButton / GPIO	2	2	
	DPCI Expansion	Standard	Standard	
	Watchdog Timer	1	1	
	Gaming Software	DPCIe 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	DPX-J100S1
Form Factor		Extended Mini-ITX	
Processor System	CPU	AMD Ryzen Embedded V1000/R1000 APU	
	Socket	BGA	
	Max. Speed	2.6 (3.5) GHz	
	TDP	Up to 25W	
	Chipset	SoC	
	BIOS	AMI APTIO UEFI BIOS	
Expansion Slot	Mini PCIe / mSATA	-	
	PCIe	Half Mini-PCI	
	Side Port	-	
Memory	Technology	Dual Channel DDR4 2400MHz	
	Max. Capacity	32GB	
	Socket	2x SODIMM	
Graphics	Controller	in APU (AMD Radeon VEGA graphics engine)	
	VGA	1	
	DVI	-	
	DP	1	
	HDMI	1	
Ethernet	LAN1	GbE	
	LAN2	GbE	
Storage	SATA	1	
	Cfast	1	
	M.2	1	
I/O	VGA / DVI / HDMI / DP	1/0/1/1	
	Ethernet	2	
	USB 2.0	4	
	USB 3.1	2	
	Audio	Line Level 5.1, SPDIF, Stereo Amplified (6W/Ch)	
	Serial Ports	6 (3/2/0/1/0)	
	Gaming Hardware	SRAM	Option for 2 banks up to 2MB total (zero FRAM default)
OpROM		Functionality via BIOS IC	
TPM		TPM 2.0 (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		Standard	
Watchdog Timer		1	
Gaming Software	DPCIe Gaming API & Runtime	Standard	
	DPX Connector Peripherals Libraries	Standard	
	Embedded OS Support	Standard	
	BIOS Customization	Optional	
	DPX SAS Connector	Optional	
	Media Validation Toolkit	Optional	
Other Features	12VDC for V1605, 5, 12V JAMMA Input for R series		

Modular Series



Model Name		DPX-M266	DPX-M1266	DPX-M270	DPX-M1270	DPX-E265	DPX-E1265
Form Factor		Extended Mini-ITX	DPX Multimedia Gaming System	Extended Mini-ITX	DPX Multimedia Gaming System	Extended Mini-ITX	DPX Multimedia Gaming System
Processor System	CPU	AMD Ryzen Embedded R2000 APU		Intel 8 th & 9 th Gen. Core-i3/i5/i7		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 Media Validation/OPROM Support		AMI UEFI SPI with Media Validation/OPROM Support	
Expansion Slot	Mini PCIe / mSATA	-		-		-	
	PCIe	PCIe x16 Slot, Gen 3 (x8 signal, x4 with R2312 APU)		PCIe x16 Gen3		PCIe x16 (x8 signal)	
	Side Port	2x PCIe x1, 2x USB2.0 Ports, 5x Intrusion/DI Inputs (R2312 APU supports 1x PCIe, 2 USB)		2x PCIe x1, 2x USB, I ² C, Control, 5x Intrusion/DI Inputs		2x PCIe x1, 2x USB, I ² C, Control, 5x Intrusion/DI Inputs	
Memory	Technology	2x SODIMM		2x SODIMM		2x SODIMM	
	Max. Capacity	32GB		32GB		32GB	
	Socket	2x 260 PIN DDR4 SO-DIMM		2 x 260 PIN DDR4 SO-DIMM		2x 260 PIN DDR4 SO-DIMM	
Graphics	Controller	AMD Radeon VEGA GPU with up to 8 Compute Units		Intel UHD Graphics 630 / Intel HD Graphics 615		AMD Radeon VEGA GPU with up to 8 Compute Units	
	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	
	Cfast	2		-		2	
	M.2	1		1		1	
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	6		10		6	
	USB 3.1	3		4		3	
	Audio	Line Level, SPDIF		Line Level, SPDIF		Line Level, SPDIF	
	Serial Ports	6x Configurable (3x RS232, 1x Cctalk., 1x RS455, 1x TTL/ID003)		6x Configurable (3x RS232, 1x Cctalk., 1x RS455, 1x TTL/ID003)		6x Configurable (3x RS232, 1x Cctalk., 1x RS455, 1x TTL/ID003)	
Gaming Hardware	SRAM	Expansion Board		Expansion Board		Expansion Board	
	OpROM	Functionality via BIOS IC		Functionality via BIOS IC		Functionality via BIOS IC	
	TPM	TPM 2.0		TPM 2.0		TPM 2.0/1.2	
	Audio Amplifier	-		-		-	
	Digital Inputs	Expansion Board		Expansion Board		Expansion Board	
	Digital Outputs	6 (5 via side)		6 (5 via side)		6 (5 via side)	
	Intrusion Inputs	Expansion Board		Expansion Board		Expansion Board	
	iButton / GPIO	Standard		Standard		Standard	
	DPCI Expansion	1		1		1	
	Watchdog Timer	Standard		Standard		Standard	
Gaming Software	DPCIe Gaming API & Runtime	Standard		Standard		Standard	
	DPX Connector Peripherals Libraries	Standard		Standard		Standard	
	Embedded OS Support	Optional		Optional		Optional	
	BIOS Customization	Optional		Optional		Optional	
	DPX SAS Connector	Optional		Optional		Optional	
Media Validation Toolkit	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
--------------	-----------------------------	---------------	---------------------------	--------------------	-----------------------------	---------------	---------------------------	------------	--------------------------------

Worldwide Offices

Asia Pacific

Taiwan	
Toll Free	0800-777-111
Taipei & IoT Campus	886-2-7732-3399
Taichung	886-4-2372-5058
Kaohsiung	886-7-392-3600
China	
Toll Free	800-810-0345
Beijing	86-10-6298-4346
Shanghai	86-21-3632-1616
Shenzhen	86-755-8212-4222
Chengdu	86-28-8545-0198
Hong Kong	852-2720-5118

Asia Pacific

Japan	
Toll Free	0800-500-1055
Tokyo	81-3-6802-1021
Osaka	81-6-6267-1887
Nagoya	81-0800-500-1055
Nogata	81-949-22-2890
Korea	
Toll Free	080-363-9494/5
Seoul	82-2-3660-9255
Singapore	
Singapore	65-6442-1000
Malaysia	
Kuala Lumpur	60-3-7725-4188
Penang	60-4-537-9188
Thailand	
Bangkok	66-02-2488306-9
Vietnam	
Hanoi	84-24-3399-1155
Hochiminh	84-28-3836-5856
Indonesia	
Jakarta	62-21-751-1939
Australia	
Toll Free	1300-308-531
Melbourne	61-3-9797-0100
India	
Bangalore	91-94-4839-7300
Pune	91-94-2260-2349

Europe

Netherlands	
Eindhoven	31-40-267-7000
Breda	31-76-523-3100
Germany	
Toll Free	00800-2426-8080/81
Munich	49-89-12599-0
Düsseldorf	49-2103-97-855-0
France	
Paris	33-1-4119-4666
Italy	
Milan	39-02-9544-961
UK	
Newcastle	44-0-191-262-4844
London	44-0-870-493-1433
Spain	
Madrid	34-91-668-86-76
Sweden	
Stockholm	46-0-864-60-500
Poland	
Warsaw	48-22-31-51-100
Russia	
Moscow	8-800-555-01-50
St. Petersburg	8-812-332-57-27
	8-921-575-13-59
Czech Republic	
Ústí nad Orlicí	420-465-524-421
Ireland	
Galway	353-91-792444

Americas

North America	
Toll Free	1-888-576-9668
Cincinnati	1-513-742-8895
Milpitas	1-408-519-3898
Irvine	1-949-420-2500
Ottawa	1-815-433-5100
Chicago	1-888-576-9668
Boston	1-800-866-6008
Brazil	
Toll Free	0800-770-5355
São Paulo	55-11-5592-5367
Mexico	
Toll Free	1-800-467-2415
Mexico City	52-55-6275-2777
Guadalajara	52-33-3169-7670
Middle East and Africa	
Israel	072-2410527
Turkey-Istanbul	90-212-222-0422
Turkey-Bursa	90-224-413-3134



Enabling an Intelligent Planet

www.advantech.com

Please verify specifications before ordering. This guide is intended for reference purposes only. All product specifications are subject to change without notice. No part of this publication may be reproduced in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission of the publisher. All brand and product names are trademarks or registered trademarks of their respective companies. © Advantech Co., Ltd. 2024