

Innovations in Gaming Computing

The Widest Range of Solutions for the Gaming Industry

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



Intel® & AMD
Core Platforms

4K
ULTRAHD

4k Monitors
Supported



GLI, NVGCB, etc
Regulatory compliance



PCI Express
Graphics

ADVANTECH INNOCORE

Innovations in Gaming Computing

AMD
EMBEDDED
SOLUTIONS

Partner Program
ELITE

Intel
partner
Titanium

www.advantech-innocore.com

About Advantech-Innocode

Advantech-Innocode is the leading global gaming supplier. The company 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-Innocode 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 Elite 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 15+ years 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. We also hold global certifications of ISO 13485, TL 9000, ISO 14001, OHSAS 18001 and IECQ QC 080000

Global Company, Local Services



Excellence in Design, Manufacture and Service

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

Key drivers when designing a DPX[®] motherboard 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

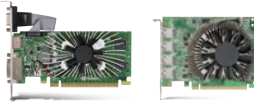
With a global footprint covering all the major regions, Advantech-Innocore's organization is unique in its ability to put technical support, configuration and repair services close to its customers.

- | | |
|---|--|
| <ul style="list-style-type: none">• 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 | <ul style="list-style-type: none">• 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. We provide our 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
- Nvidia and AMD
- PCIe Express



Gaming Monitors

- All sizes with touch 4-43" Curved touch with customizable radius
- C, J and other profiles available



Industrial Storage

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



DPX® LED Controller

- Robust Metal Cover
- Industrial grade product
- Custom Vibrance FX application for easy detailed content creation



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



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



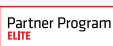
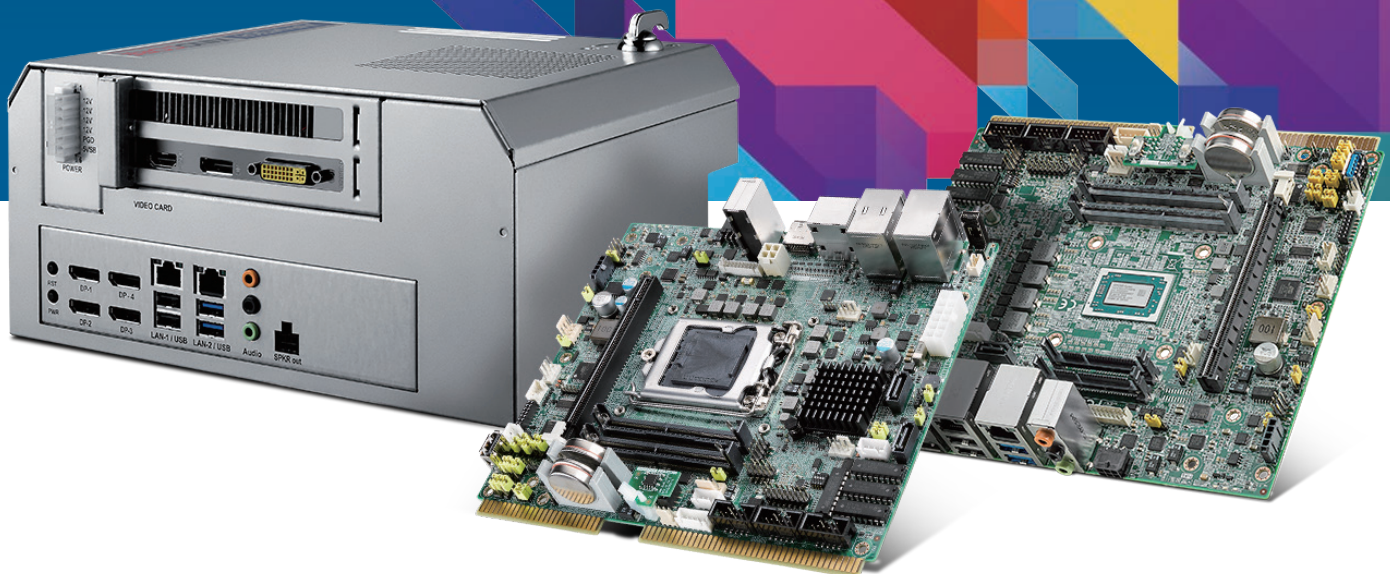
Scalability of CPU and graphics



Full feature set of I/Os
COMs, security



Intel[®] & AMD
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, PCI3 x 16 and
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 Micro Controller
PuC

DPX[®]-S450

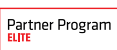
AMD Ryzen[™] Embedded V1000/R1000 Gaming Platform

- 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
- 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 and 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 Micro Controller
PuC

DPX[®]-S445

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

- Very high performance Intel[®] platform
- Dual and Quad Core CPUs from Celeron to Core i7
- Comprehensive gaming features
- High performance integrated or PCI-Express graphics
- Easy integration for gaming applications
- 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 and 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 Micro Controller
PuC

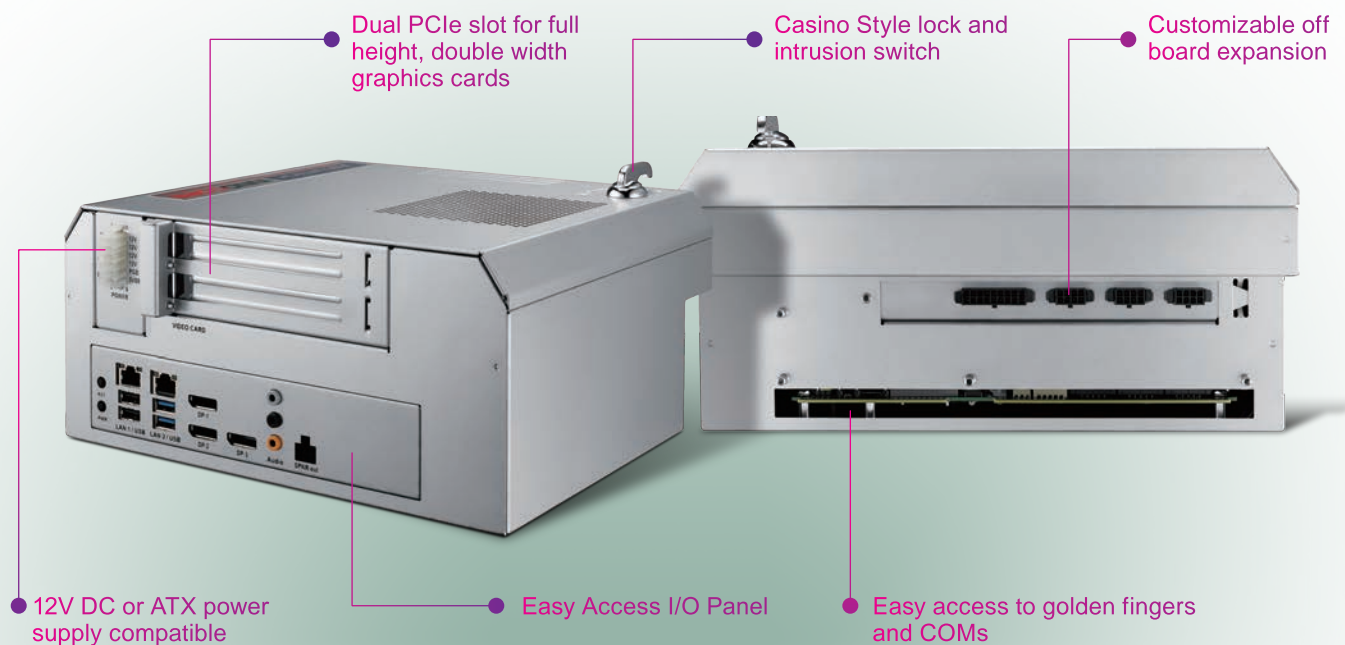
DPX[®]-S2000

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



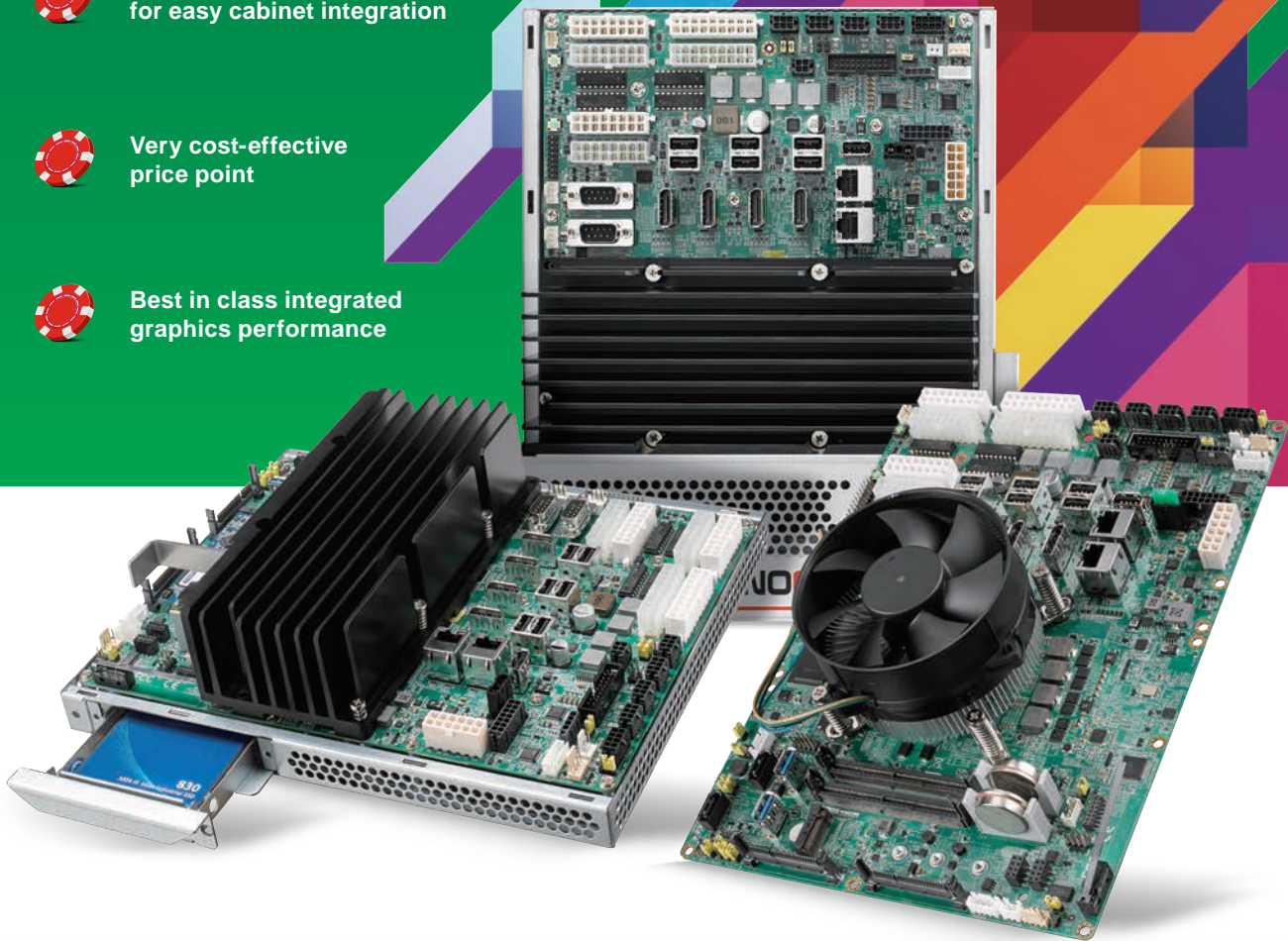
Industry standard connectors for easy cabinet integration



Very cost-effective price point



Best in class integrated graphics performance



DPX[®]-E145

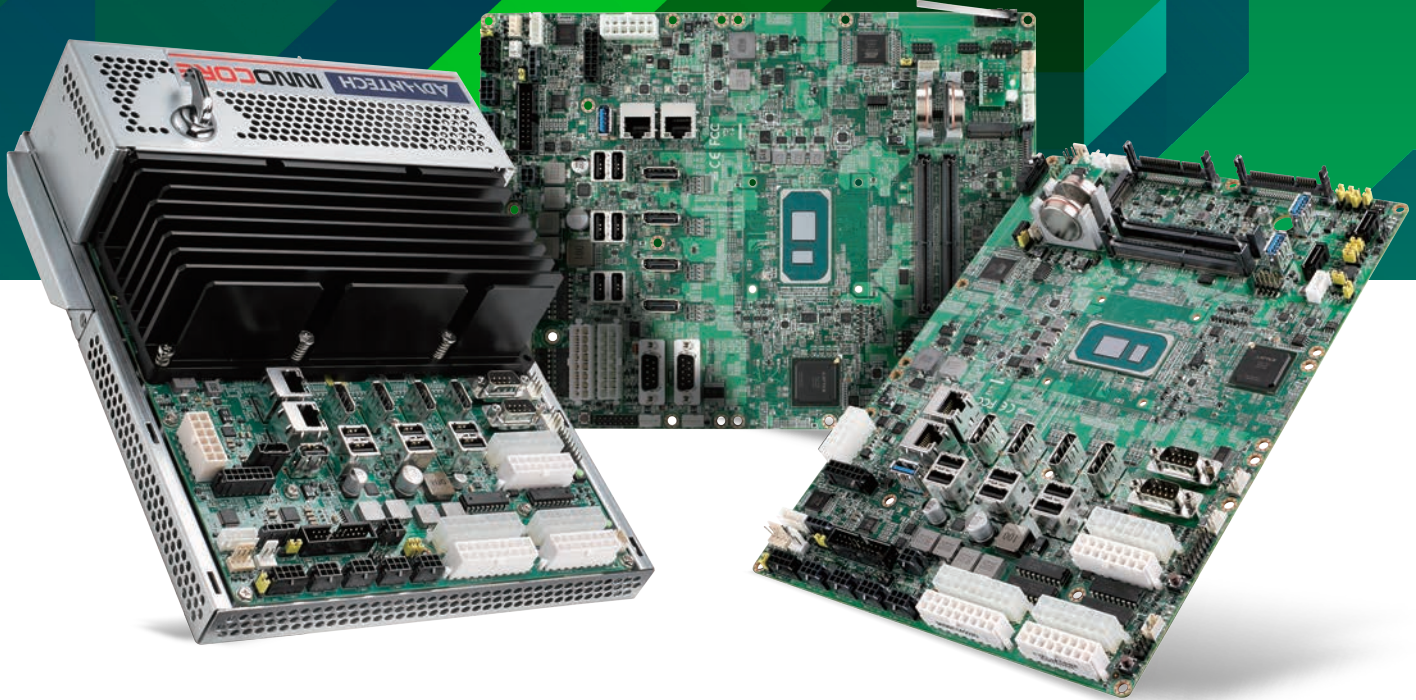
Intel 11th Generation Gaming Platform

- 11th Generation Intel[®] Core[™] SOC CPUs
- CPUs up to Dual 3.0 (3.9) GHz, Quad core 2.8GHz (4.4) GHz
- Intel[®] Iris Xe integrated graphics
- Four 4k monitor support
- Comprehensive gaming features
- Passive cooled system up to 28W

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 Micro Controller
PuC



Expansion
I²C



DPX[®] Security suite: Media Validation
Toolkit, TPM support, DPX[®] security
features, BIOS customization

DPX[®]-E140

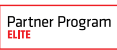
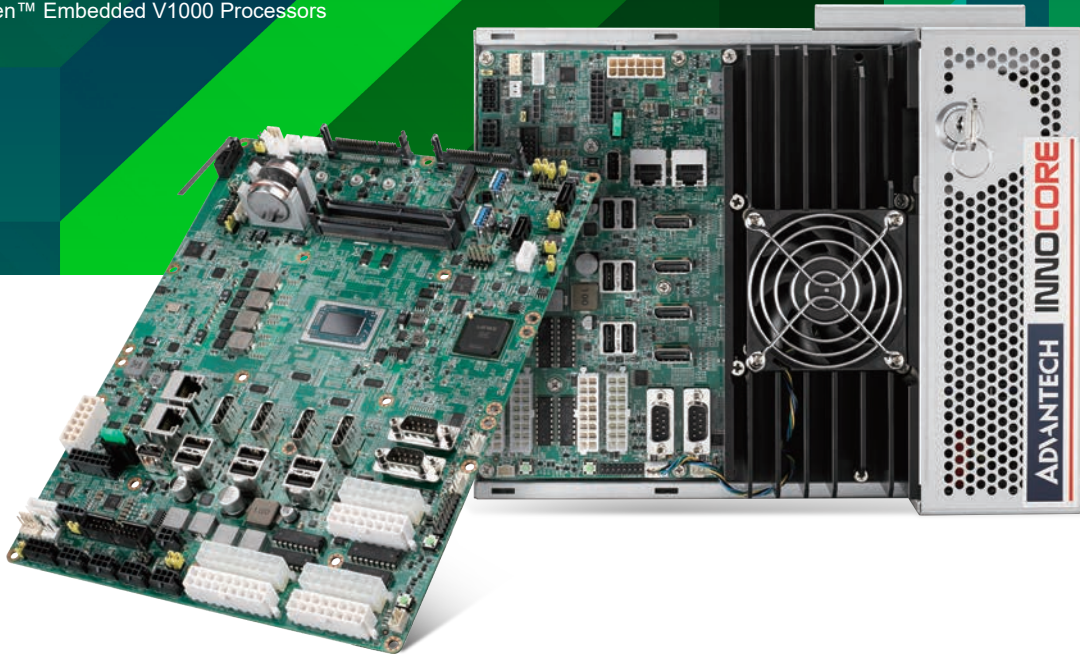
AMD Embedded Gaming System with V1000 Platform

- AMD Ryzen™ Embedded V1000 Processors
- High performance Radeon™ VEGA series graphics
- Four 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 Micro Controller
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 Intel[®] 8th and 9th generation Core i 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



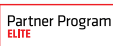
AMD and Intel[®] CPUs available, Mini ITX mounting holes, up to 4 x 4K screens and development kits.



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



Modular Side expansion bus, Advantech has a range of standard “add-on cards” for Sports Betting or Gaming Sub System.



DPX[®]-M270

Intel[®] 8th & 9th Generation Core[™]i7/i5/i3 Embedded Multi-media Gaming Board

- Intel[®] 8th/9th Generation Core[™]i7/i5/i3 CPUs 8,6,4,2 core
- Two 260-pin SO-DIMM up to 32GB DDR4 2666 MHz SDRAM
- Supports 3 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

View More



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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 Micro Controller
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



Features



Digital I/O
2 x DI



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



Graphics Cards
PCIe x 16 Format



Expansion I2C, PCIe x 16 and
Sidebus modular expansion



Onboard:
4 x USB 2.0
3 x USB 3.1

Via Golden Fingers:
2 x USB 2.0



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



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



DPX[®] Security suite: Media Validation
Toolkit, TPM support, DPX[®] security
features, BIOS customization



DPX[®] -Software: Embedded OS ,
DPX[®] Diagnostics, DPX[®] -Connector
DPX[®] -SAS



Enclosure
M1000/M2000



On-board Micro Controller
PucLite

DPX[®]-M1000 & 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.

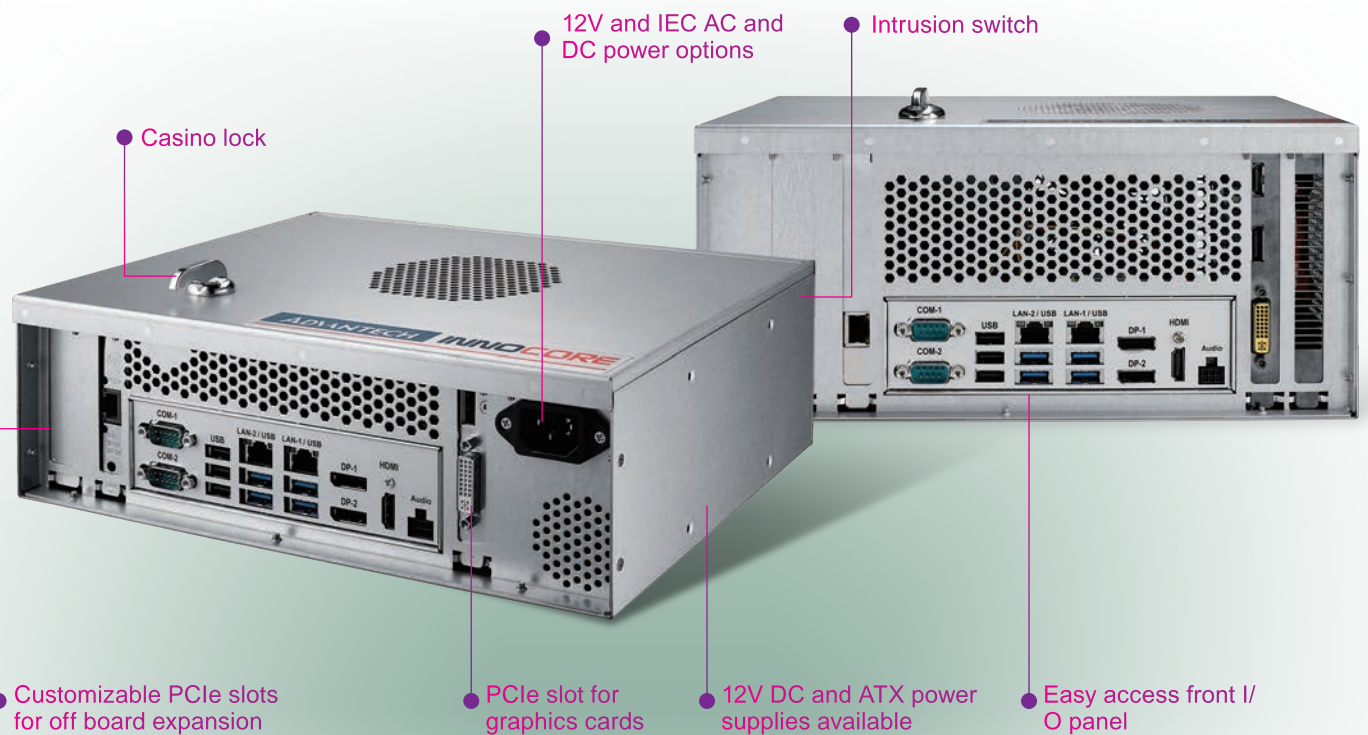
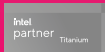
- Up to 200W power supply
- Compact design
- Tool Free SSD/HDD access
- System fan
- Complete solution

Dimensions of Chassis

| | Length | Width | Height |
|-------------------------|--------|-------|--------|
| DPX [®] -M1000 | 232mm | 295mm | 104mm |
| DPX [®] -M2000 | 242mm | 295mm | 134mm |



Partner Program
ELITE



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 are 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



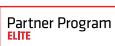
Passively Cooled
(some APUs)



Chassis Available



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



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
24/29



Expansion
I2C, Mini PCI



DPX[®] Security suite (as below)
+iButton



Up to 2MB of battery
backed FRAM



6 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 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 Micro Controller.

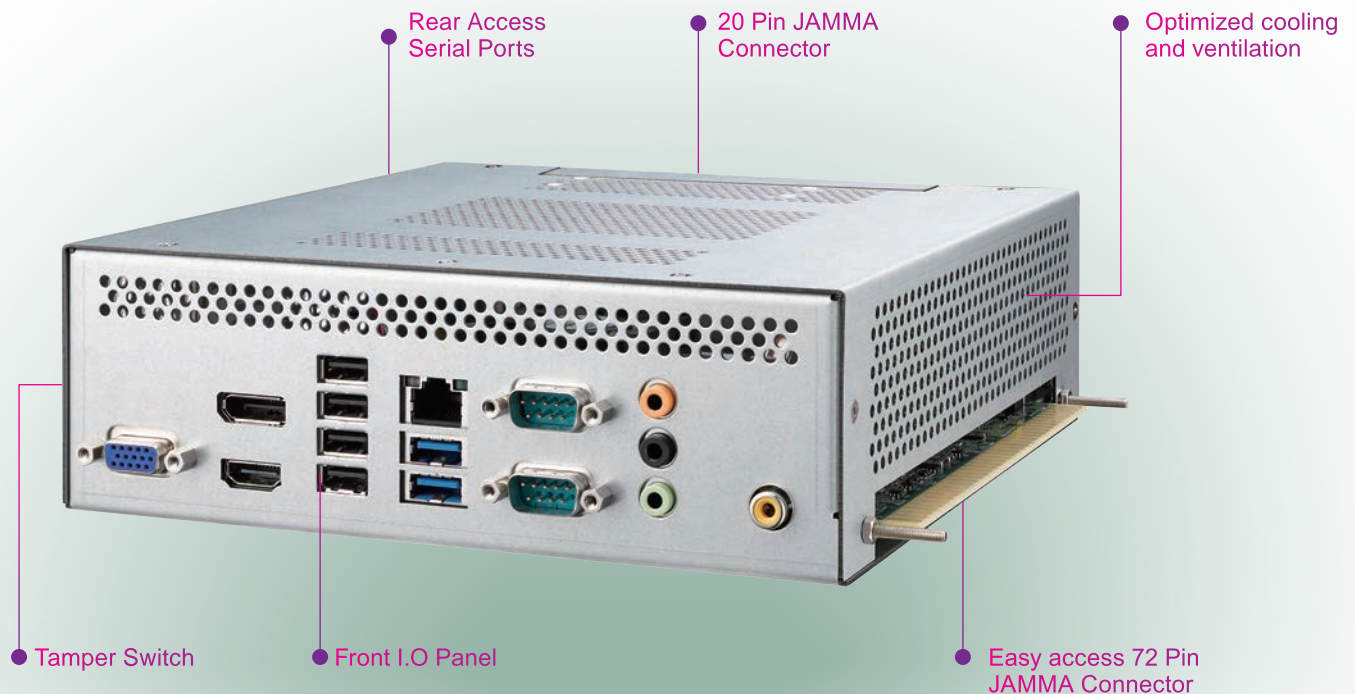
DPX[®]-J100 System

The DPX[®]-J100 systems are gaming system logic boxes 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 |

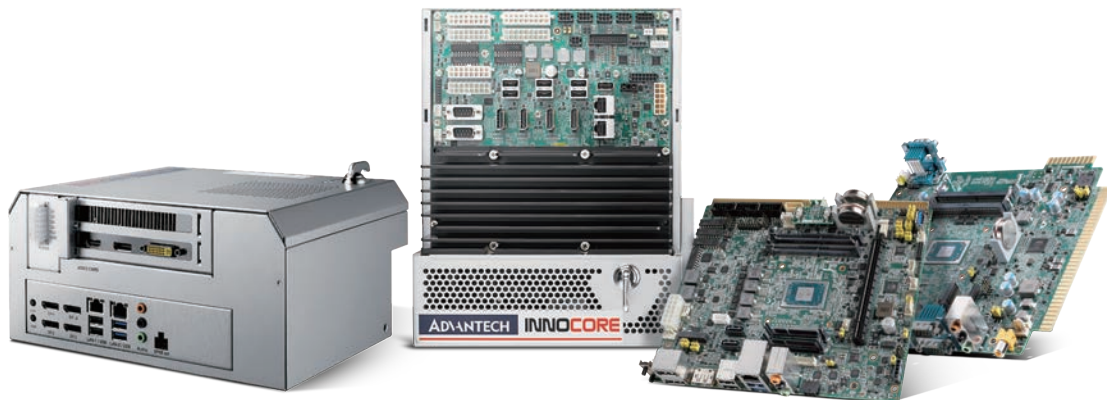


DPX®-Development Kits

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, everything you need to begin developing on the DPX®-Hardware platforms, delivered to you, fully tested, up to date drivers etc 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, 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



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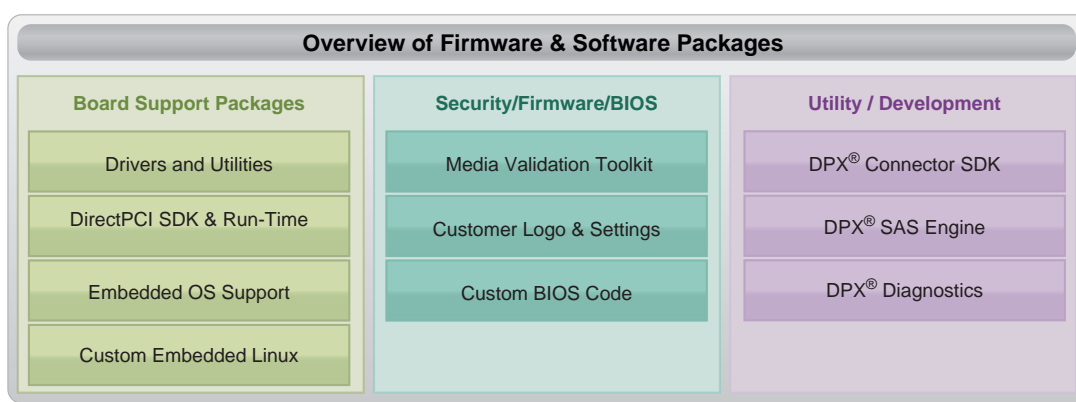
Gaming Software, Firmware, Integration and Security Support



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, we offer a variety of other software products including peripheral protocol libraries, security suites, and diagnostic and test software that help develop the best-balanced gaming solutions.



Board Support Package

Board support packages provide software support such as Microsoft Windows embedded OS and range of embedded Linux. 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 Kit are integrated into the DPX® - Series motherboards and handles 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 understand that the protection of gameplay data and machine state are critical considerations, software / hardware tampering detection, as well as media validation are key requirements by the gaming regulators. The aim is Players and Operators protection, and fair games and correct payouts. As such the DPX® range of gaming motherboards come as standard with the following security features:

- 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 (IDLP)

OEM Intellectual Property

Encryption of data and applications, strong password and key storage, platform authentication are all key considerations when choosing a gaming platform, as well as prevention of copying / cloning of game data, stopping unauthorized content from being loaded in order to maintain competitive advantage and protect investment and IP. Our software solutions combined with hardware features give the developer multiple methods to protect their game content.

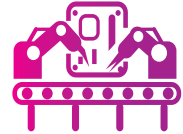
Featured Gaming Software

Media Validation Toolkit

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.

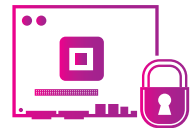
- SDK for customizable pre boot BIOS media validation
- Meets GLI-11 and other regulatory requirements
- SHA-1 Hash and BIOS self-test
- Supports encrypted digest and multiple hash tables
- Comprehensive user manual



The Trusted Platform Module (TPM)

The trusted platform module (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.

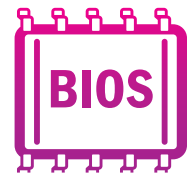
- Unique per-board RSA key Generates, stores and protects RSA keys: keys never leave the TPM chip un-protected
- RSA asymmetric encryption and signing SHA-1 hashing
- Generates random numbers to 1-million bit random-ness (as tested by US NSA)
- Chip is physically secure from physical tampering



BIOS

Advantech 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.



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
- 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, allows gaming features and software testing. USB and CD bootable, and comprehensive Windows and Linux 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 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), improved security and logging, quieter operation.



Gaming Monitors

Designed exclusively for gaming applications, our gaming display solutions provide a wide range of gaming monitors to meet the special requirements of applications such as slot machines and casinos. Our solutions include 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 gaming platforms for a total gaming solution. Applications include slot machine, lottery terminals, jackpot systems, Sports Betting terminals, lottery terminals etc.

HALO Series

Standard, Front LED and Edge LED



Panel Size: 21.5"

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

Panel Size: 23.8"

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

Panel Size: 27"

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

Panel Size: 32"

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

Open Frame / Button Deck Touch



Panel Size: 10.1"

Resolution: 1280x800
Brightness: 500 nits
Viewing Angle: 85/85/85/85 LRUD
Video Inputs: VGA, DVI

Panel Size: 13.3"

Resolution: 1920 x 1080
Brightness: 500 nits
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: VGA, DVI



CURVED Series

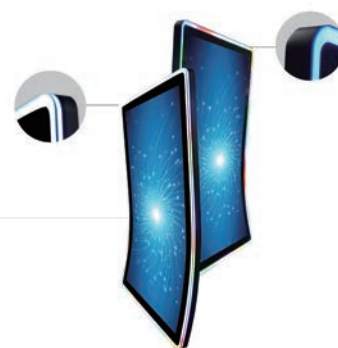
For C and J curved

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 Angle: 85/85/85/85
Video Inputs: VGA/DVI/USB (Type B)

Panel Size: 17"

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

Panel Size: 21.5"

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

Panel Size: 15"

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

Panel Size: 19"

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

Panel Size: 27"

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



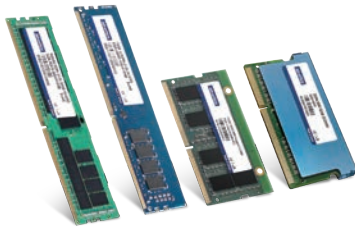
Industrial Memory & Storage, Microsoft OS, PCIe Graphics Cards

Advantech-Innocode gaming peripherals offer specialized, quality components with long lifecycle support for our gaming platforms. All peripherals are fully compatible with Advantech-Innocode 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.

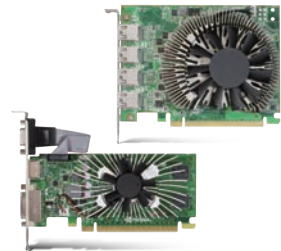


SQRAM Industrial Memory Solutions

SQRAM 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 recently introduced a comprehensive product line of graphics solutions specifically designed for diverse industrial applications needing high processing and imaging technology requirements. 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

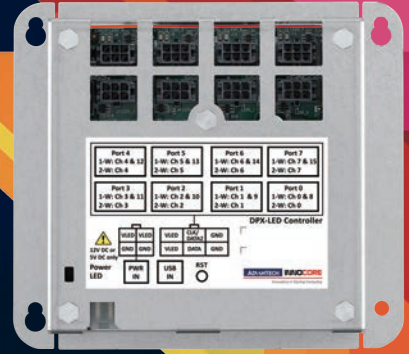


Advantech is a gold worldwide partner and licensed distributor of Microsoft OS and Cloud solutions. Windows 10 IoT is a family of Windows 10 editions targeted towards a wide range of intelligent devices, from small industrial gateways to larger, more complex devices like point of sales terminals and 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

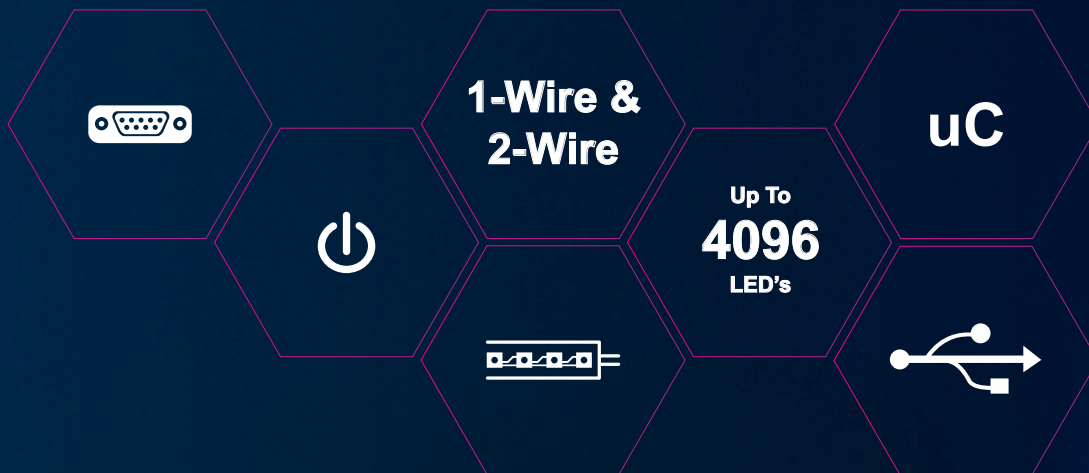
Advantech understand that game developers and cabinet makers need to make their product stand out in the crowded casino floor, as well as thinking about the end user and their experience.

The DPX-LED Controller is an key component in the developer's tool box allowing ideas and visions to 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 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 our wide range of standard products. We welcome custom designs ranging from small modifications of one of our existing products up to completely new product design 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® & AMD Select Partner
- In house design validation (EMC, signal integrity, thermal, vibration, 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®-S2450 | DPX®-S450 | DPX®-S2445 | DPX®-S445 | DPX®-S2451 | DPX®-S451 |
|------------------|-------------------------------------|--|-------------------|--|-------------------|---|-------------------|
| Form Factor | | DPX® Gaming System | DPX® Gaming Board | DPX® Gaming System | DPX® Gaming Board | DPX® Gaming System | DPX® Gaming Board |
| Processor System | CPU | AMD Ryzen™ Embedded V1000/R1000 APU | | Intel® 6th / 7th Generation Core™- i | | AMD Ryzen™ Embedded R2000 APU | |
| | Socket | BGA | | LGA 1151 | | BGA | |
| | max. speed | 3.35 (3.8) GHz | | 2.9 GHz (3.8) GHz | | 3.35 (3.7) GHz | |
| | TDP | 45W | | 54W | | 45W | |
| | Chipset | SoC | | Q170 | | SoC | |
| | BIOS | 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 (x8 signal) | | PCIe x 16 | | PCIe x 16 (x8 signal) | |
| | MXM | - | | - | | - | |
| Memory | Technology | Dual Channel DDR4 3200MHz | | Dual Channel DDR4 2400MHz | | Dual Channel DDR4 3200MHz | |
| | Max. Capacity | 32GB | | 32GB | | 32GB | |
| | Socket | 2x SODIMM | | 2x SODIMM | | 2x SODIMM | |
| Graphics | Controller | in APU (AMD Radeon™ VEGA series graphics engine) | | in CPU (Intel GT2-530) | | in APU (AMD Radeon™ VEGA graphics engine) | |
| | VGA | - | | - | | - | |
| | DVI | - | | - | | - | |
| | DP | 4 | | 3 | | 4 | |
| | HDMI | - | | - | | - | |
| Ethernet | LAN1 | GbE | | GbE | | GbE | |
| | LAN2 | GbE | | GbE | | GbE | |
| Storage | SATA | 2 | | 2 | | 2 | |
| | CompactFlash | - | | - | | - | |
| | Cfast | 2 | | - | | 2 | |
| | M.2 | 1 | | - | | 1 | |
| Rear I/O | VGA/DVI/HDMI/DP | 0/0/0/4 | | 0/0/0/3 | | 0/0/0/4 | |
| | Ethernet | 2 | | 2 | | 2 | |
| | USB 2.0 | 8 | | 9 | | 8 | |
| | USB 3.0 | 3 | | 2 | | 3 | |
| | Audio | 1 (ch5.1), SPDIF | | 1 (ch5.1), SPDIF | | 1 (ch5.1), SPDIF | |
| | Serial Port | 10 | | 10 | | 10 | |
| | Serial Type RS232/Ctalk/TTL/485 | 9/2/2/1 | | 10/2/2/1 | | 9/2/2/1 | |
| Gaming Hardware | SRAM | 8MB | | 8MB | | 8MB | |
| | ROM Sockets | SPI ROM module | | SPI ROM module | | SPI ROM module | |
| | TPM | 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) | |
| | Digital Outputs | 32 (OC 500mA 50V) | | 32 (OC 500mA 50V) | | 32 (OC 500mA 50V) | |
| | Intrusion Inputs | 8 | | 8 | | 8 | |
| | iButton® / GPIO | 2 | | 2 | | 2 | |
| | DPPI Expansion | - | | - | | - | |
| | Watchdog Timer | 1 | | 1 | | 1 | |
| Gaming Software | DPI Advanced Gaming API & Runtime | Standard | | Standard | | Standard | |
| | DPX Connector Peripherals Libraries | Standard | | Standard | | Standard | |
| | Embedded OS Support | Standard | | Standard | | Standard | |
| | BIOS Customization | Optional | | Optional | | Optional | |
| | TPM Suite | - | | - | | - | |
| | DPX SAS Connector | Optional | | Optional | | Optional | |
| | SecureBoot Media Validation Toolkit | Optional | | Optional | | Optional | |
| Other Features | | 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 | 11th 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/Ctalk/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 |
| Gaming Software | Dual BIOS | - | - |
| | DPCI Advanced Gaming API & Runtime | Standard | Standard |
| | DPX Connector Peripherals Libraries | Standard | Standard |
| | Embedded OS Support | Standard | Standard |
| | BIOS Customization | Optional | Optional |
| Other Features | DPX SAS Connector | Optional | Optional |
| | Media Validation Toolkit | Optional | Optional |
| Other Features | | ATX or 12VDC power | ATX or 12VDC power |

Modular Series



| Model Name | | DPX®-M270 | DPX-M1270 | DPX®-E265 | DPX®-E1265 |
|------------------|-------------------------------------|--|-------------------------------|---|--------------------|
| Form Factor | | Extended Mini-ITX | DPX® Multimedia Gaming System | Extended Mini-ITX | DPX® Gaming System |
| Processor System | CPU | Intel® 8th & 9th Gen. Core™-i7/i5/i3 | | AMD Ryzen™ Embedded V1000 APU | |
| | Socket | LGA1151 | | BGA | |
| | max. speed | 3.2(4.6) GHz | | 3.35 (3.8) GHz | |
| | TDP | 65W | | 54W | |
| | Chipset | Q370/H310 | | SoC | |
| | BIOS | AMI UEFI SPI with Secureboot support | | AMI APTIO UEFI (Gaming optimised) | |
| Expansion Slot | PCI | - | | - | |
| | MINI PCIe/mSATA | - | | - | |
| | PCIe x 16 | PCIe x16 Gen3 | | PCIe x16 (x8 signal), 2 PCI-e x1 (via side expansion) | |
| | Side Expansion Port | 2 PCIe x1, 2(1) USB, I2C, Control | | - | |
| Memory | MXM | - | | Dual Channel DDR4 3200MHz | |
| | Technology | Dual Channel DDR4 2666 MHz SDRAM (Non-ECC) | | 32GB | |
| | Max. Capacity | 32 GB/ 16 GB per SO-DIMM | | 2x SODIMM | |
| | Socket | 2 x 260 PIN DDR4 SO-DIMM | | in APU (AMD Radeon™ VEGA series graphics engine) | |
| Graphics | Controller | "Intel UHD Graphics 630 / Intel HD Graphics 615" | | - | |
| | VGA | - | | - | |
| | DVI | - | | 4 | |
| | DP | 2 | | - | |
| | HDMI | 1 | | GbE | |
| Ethernet | LAN1 | GbE | | GbE | |
| | LAN2 | GbE | | 2 | |
| Storage | SATA | 2 | | - | |
| | CompactFlash | - | | 2 | |
| | Cfast | - | | 1 | |
| | M.2 | 1 | | 0/0/0/4 | |
| Rear I/O | VGA/DVI/HDMI/DP | 0/0/1/2 | | 2 | |
| | Ethernet | 2 | | 6 (2 via side expansion) | |
| | USB 2.0 | 10 (Q370. 2 via side expansion) / 6 (H310. 1 via side expansion) | | 3 | |
| | USB 3.0 | 4 | | 1 (ch2.1) | |
| | Audio | 6-Way header (Line-out (FL, FR, LFE), SPDIF_Out) | | 6 | |
| | Serial Port | 2 x DB-9 RS-232 full signal, supports 9 bit data) | | 6/1/1/1 | |
| | Serial Type RS232/Ctalk/TTL/485 | 6/1/1/0 | | - | |
| | SRAM | - | | SPI ROM module | |
| | ROM Sockets | - | | TPM 2.0/1.2 | |
| | TPM | TPM2.0 | | - | |
| Gaming Hardware | Audio Amplifier | - | | - | |
| | Digital Inputs | - | | - | |
| | Digital Outputs | - | | 1 | |
| | Intrusion Inputs | 5 (4 via side expansion) | | - | |
| | iButton® / GPIO | - | | - | |
| | DPCI Expansion | - | | 1 | |
| | Watchdog Timer | 1 | | - | |
| | Dual BIOS | - | | N/A | |
| | DPCI Advanced Gaming API & Runtime | N/A | | Standard | |
| | DPX Connector Peripherals Libraries | Standard | | Standard | |
| Gaming Software | Embedded OS Support | Standard | | Optional | |
| | BIOS Customization | Optional | | Optional | |
| | DPX SAS Connector | Optional | | Optional | |
| | Media Validation Toolkit | Optional | | ATX or 12VDC power | |
| Other Features | | 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 | - |
| | MXM | - |
| Memory | Technology | Dual Channel DDR4 2400MHz |
| | Max. Capacity | 32GB |
| | Socket | 2x SODIMM |
| Graphics | Controller | in APU (AMD Radeon™ VEGA series graphics engine) |
| | VGA | 1 |
| | DVI | - |
| | DP | 1 |
| | HDMI | 1 |
| Ethernet | LAN1 | GbE |
| | LAN2 | GbE |
| Storage | SATA | 1 |
| | CompactFlash | - |
| | Cfast | 1 |
| | M.2 | 1 |
| Rear I/O | 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/Cctalk/TTL/485 | 3/2/0/1 |
| | Serial Type RS232/Cctalk/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 |
| Other Features | DPX SAS Connector | Optional |
| | Media Validation Toolkit | Optional |



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

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| Toll Free | 00800-2426-8080/81 |
| Munich | 49-89-12599-0 |
| Düsseldorf | 49-2103-97-855-0 |

France

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| Paris | 33-1-4119-4666 |
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Italy

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| Milan | 39-02-9544-961 |
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UK

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| Newcastle | 44-0-191-262-4844 |
| London | 44-0-870-493-1433 |

Spain

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| Madrid | 34-91-668-86-76 |
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Sweden

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| Stockholm | 46-0-864-60-500 |
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Poland

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| Warsaw | 48-22-31-51-100 |
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Russia

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| Moscow | 8-800-555-01-50 |
| St. Petersburg | 8-812-332-57-27 |
| | 8-921-575-13-59 |

Czech Republic

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| Ústí nad Orlicí | 420-465-524-421 |
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Ireland

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| Galway | 353-91-792444 |
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Americas

North America

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| 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

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| Toll Free | 0800-770-5355 |
| São Paulo | 55-11-5592-5367 |

Mexico

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| Toll Free | 1-800-467-2415 |
| Mexico City | 52-55-6275-2777 |
| Guadalajara | 52-33-3169-7670 |

Middle East and Africa

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|-----------------|-----------------|
| Israel | 072-2410527 |
| Turkey-Istanbul | 90-212-222-0422 |
| Turkey-Bursa | 90-224-413-3134 |

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