

# DPX-M1270

## Intel® 8th & 9th Generation Core™-i7/i5/i3 Embedded Multi-media Gaming System



### Features

- Rugged Logic box design
- Security and access to meet the requirements of the gaming industry
- Intel® 8th/9th Generation Core™-i7/i5/i3 CPUs 8,6,4,2 core
- Supports 3 display outputs (2 x DP++, HDMI)
- PCIe x16 Gen 3.0 graphics card slot
- Modular Expansion Slot for Application specific I/O & COMs modules
- Storage 2 x SATA with 1 x M.2, easy service SSD mount
- Future proof I/O shield for upgrade to future DPX-M motherboards



### Introduction

The DPX-M1270 is a versatile gaming platform based on Intel's 8th and 9th generation Core-i processors. The system provides a high performance multi-media engine optimized to the needs of gaming OEMs. The modular expansion architecture allows cost effective modules to be added for the specific application, adding features such as I/O, COMs, security, and specialized interfaces. The DPX-M1270 is available with optional power supplies and graphics cards.

### Specifications

Processor System	CPU/chipset	Intel® 8th & 9th Gen. Core™-i7/i5/i3 CPUs 8,6,4,2 core up to 3.2(4.6) GHz, Celeron, Pentium Q370 or H310 chipset Long lifecycle 5-7 years availability
	TDP	Up to 65W
	BIOS	AMI UEFI SPI with Secureboot support
	PCIe x16	Gen3, 16 GB/s, 1 slot, half height
Expansion	Modular	Modular Expansion bus: Two full PCI-e x1 gen 1.0 lanes and two USB2.0 ports. (one USB2.0 with H310) PCIe x4 form factor 'golden finger' Five digital inputs /intrusion inputs (logged)
	Technology	Dual Channel DDR4 2666 MHz SDRAM (Non-ECC)
Memory	Max. Capacity	32 GB/ 16 GB per SO-DIMM
	Socket	2 x 260 PIN DDR4 SO-DIMM
	Controller	Intel UHD Graphics 630 / Intel HD Graphics 615. DirectX12, OpenGL 4.5
Graphics	VRAM	Shared system memory, Half of total RAM installed (Windows)
	Display Port	Two DP++ ports v1.2 supporting 4K displays, 4096 x 2304 @ 60 Hz
	HDMI	One HDMI v1.4 max 4096 x 2160 @24 Hz (Any 2 from 3 with H310)
	Interface	10/100/1000 Mbps
Ethernet	Controller	Two GbE LAN (PXE boot supported, BIOS Enable/Disable selectable)
	Connector	2 x RJ-45
	Max Data Rate	600 MB/s (SATA 3.0)
SATA	SATA	2 x SATA 3.0
	M.2 (NVME)	M.2 1 x M.2 (B-Key) for SSD 2280 size. Up to 16GB/s

I/O Panel	DP/DP++	1 x dual connector (2 ports)
	HDMI	1 x single connector (H310 provides 2 of 3 from DP and HDMI ports)
	LAN/USB	2 x USB/LAN towers containing 2 x Gigabit LAN & 4 x USB3.0/2.0 (BIOS – can disable bootable USB devices)
	USB	3 x USB 2.0 (2x with H310)
	Audio	6-Way header (Line-out (FL, FR, LFE), SPDIF_Out). Lo-Z driver, > 32 Ohm load on FL/FR)
	Serial	2 x DB-9 RS-232 full signal, supports 9 bit data) COM1 & COM2
Internal Connector	USB	1 x vertical USB 2.0 Type A, 4 x USB2.0 on two 0.1" Connectors (2 USB 2.0 with H310)
	Serial	2 x 8 pin 0.1" COM connector: 4 serial ports; COM3 – RS232 Tx/Rx/CCTalk, COM4 – TTL/RS232/ID003 Tx/Rx, COM5 – RS232, COM6 – RS232 Tx/Rx
	SATA	2 x SATA 3.0 with locking slots, 2x SATA power 2 pin header (supports two devices, 3.3V/5V options at the time of manufacture). SATA ports have pin 7 +5V/0V jumper selectable
	M.2	1 x M.2 supporting up to M2280 form factor devices
	LPC	1 x pin header LPC bus for PORT80 debug
	Audio	Mic In, Line-In, and Line-out (Io-Z driver, > 32 Ohm load), SPDIF In, SPDIF Out
	BIOS	1 x WSOIC clamshell
	DC Power	12V DC only. Remote (cabinet mounted) reset button header
	CPU, Sys fans	2 PWM controlled 'smart fan' headers
	Battery	CR2032 battery holder with off board solder hoops for an external battery connection

## Specifications Cont.

Embedded Microcontroller	PuC_Lite	2 x I <sup>2</sup> C ports (one password protected); 6 x Intrusion monitoring (Intrusion 1-5 individually re-configurable as digital inputs); Event logging; System health monitoring; Unique serial number. Battery monitoring. Runtime counters. Accessible using the WinPuC protocol; Optional protected precision RTC (±2.5mins per year)
Watchdog Timer	Output	System reset, Programmable 1 ~ 255 sec/min

Security	TPM (option)	Infineon SLB9665 (soldered)
	BIOS	BIOS customizations, write protect, Secureboot
	Lock	Casino grade lock
	Intrusion	Logic box intrusion switch (logged)
Power Requirements	Input power	12V <sub>DC</sub> single rail
Environment	Temperature	0 ~ 50 °C
	Non-Operating:	-40 ~ 85 °C (-40 ~ 185 °F)
Software	OS	Windows 10, Linux
Approvals	Compliance	CE, FCC Class A, RoHS, WEEE
Physical Characteristics	Dimensions	295 (W) x 104 (H) x 232 (D) mm (11.6 x 4.1 x 9.1")

## Benefits

- Good integrated graphics and PCI-E x16 for discrete graphics card
- Single integrated solution
- Designed for the Gaming Industry Low power
- Modular expansion for application specific I/O
- Long lifecycle

## Optional Accessories

- M.2 modules, SATA DOM, SSD storage devices
- Range of PCI-E graphics cards Various I/O modules
- Power supply

## Software Products

- SecureBoot SDK
- DPX Connector SDK
- DPX Diagnostics
- DPX SAS Engine

## OEM Customization and Product Development

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## Front View

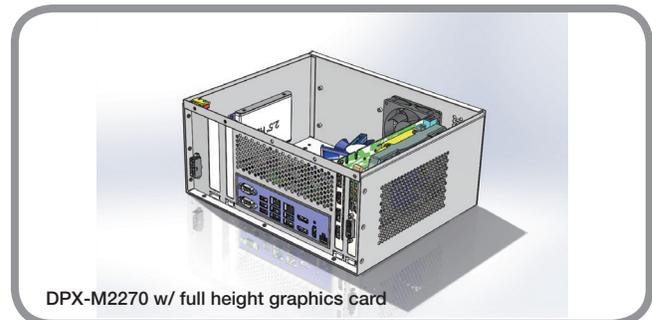
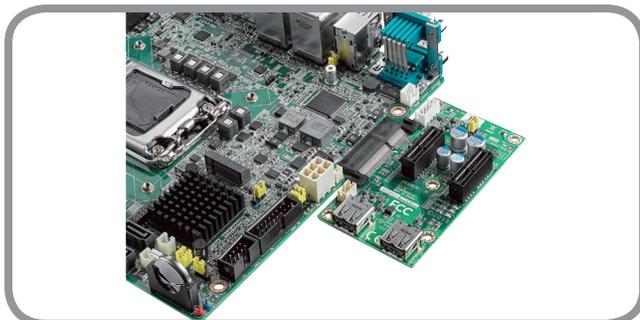


## Isometric View



DPX-M1270 Gaming System

## Modular Expansion



DPX-M2270 w/ full height graphics card