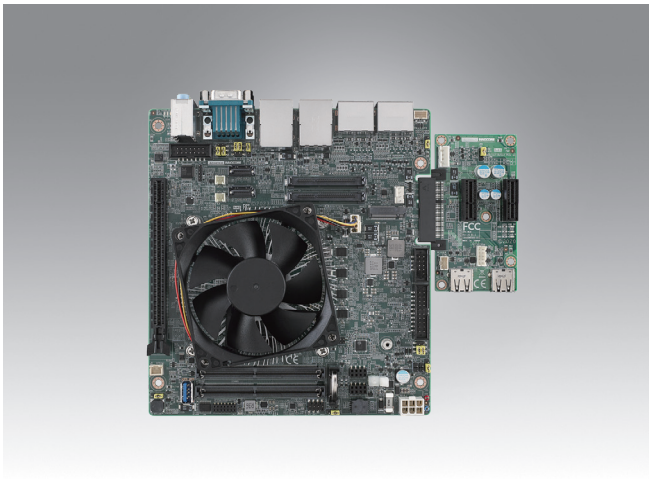
DPX-M266

AMD Ryzen™ Embedded R2000 Multi-media Gaming Board



Features

- 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
- Pre-boot Media Validation support
- RS232, ccTalk, TTL, ID003, I2C, intrusion and DIs

Introduction

The DPX-M266 is a versatile gaming platform based on AMDs Ryzen™ Embedded R2000 processors. The board provides a high performance multi-media engine optimized for 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. Alternatively, the ODM may deploy their own I/O solution which can be integrated easily with the M266 for a robust gaming system. The DPX-M266 is also available in two enclosures and offers graphics card expansion via the standard PCIe x 16 slot.

Specifications

Processor System	CPU	AMD Ryzen™ Embedded R2000 processors, Dual and Quad Core APUs up to 3.35 (3.7) GHz
	TDP (W)	Up to 54W
	BIOS	AMI UEFI SPI with Media validation/ OPROM support
Expansion Slot	PCIe x16	PCIe x16 slot, Gen 3 (x8 electrical, x4 with R2312 APU)
	Modular Expansion	2x PCIe x1 Gen 3.0 lanes, 2x USB2.0 ports, 5x intrusion/DI inputs. "Golden finger". (R2312 APU supports 1x PCIe, 2 USB)
Memory	Technology	Dual channel DDR4 2666 MT/s SDRAM (2400 with R2312)
	Max. Capacity	32 GB / 16 GB per SO-DIMM
	Socket	2x 260 PIN DDR4 SO-DIMM (Non-ECC or ECC supported, BIOS selectable)
Graphics	Controller	Radeon™ VEGA GPU with up to 8 compute units
	VRAM	Shared system memory
	Display Port	4x DP++ 1.2 ports supporting 4K displays (3 with R2312)
	Features	Direct X 12, OpenGL 4.6, EGL 1.5, Vulcan, HVEC & VP9, 10-bit decode, H.264 8-bit decode
Ethernet	Interface	10/100/1000 Mbps
	Controller	2x GbE LAN, (PXE boot supported, BIOS Enable/Disable selectable). (1 LAN with R2312 APU)
	Connector	2 x RJ-45 (1 with R2312)
SATA/ CFast	Max Data Rate	600 MB/s (SATA 3.0)
	SATA/CFast	2 x SATA 3.0, 2 x CFast (Jumper select any two SATA devices)
M.2 (NVME)	M.2	1 x M.2 (M-key) for SSD 2280 size. PCIe X2 or x4. Up to 16GB/s speed.

IO Panel	DP/DP++	2 x dual connector (4 ports)
	LAN/USB	2 x USB/LAN towers containing 1 x Gigabit LAN & 2 x USB3.1/2.0, 1 Gigabit LAN & 2x USB2.0. (BIOS – can disable bootable USB devices)
	Audio	Audio jack tower (Mic-in, Line-out (L,R), Line-in(L,R))
	Serial	2 x (RS-232 full signal, supports 9 bit data) COM1 & COM2
Internal Connector	USB	1 x vertical USB 3.1/2.0 Type A, 2 x USB2.0 box header
	Serial	COM connector: 4 serial ports; COM3 – Full RS232 /CCTalk, COM4 – TTL/ RS232/ID003 Tx/Rx, COM5 – RS232/ RS485, COM6 RS232 Tx/Rx
	SATA	2 x SATA 3.0, 2x SATA power 2 pin header (supports two devices)
	CFast	2 x CFast (Each CFast/SATA selection is jumper selectable)
	M.2	1 x M.2 supporting M2280 form factor devices
	LPC	LPC bus connector for PORT80 debug
	Audio	Audio connector for Mic In, Line-In, and Line-out, SPDIF-In, SPDIF-Out
	BIOS	Proprietary BIOS module connector for the field verifiable removable BIOS module, optional 1 x WSOIC clamshell
	Intrusion Input	Connector for Intr#0. (Intrusion inputs 1-5 are available on the side expansion bus)
	DC Power	12 pin 12VDC power connector. Power and Reset header for remote control
	CPU and System Fans	4 pin PWM controlled 'smart fan' header
	Battery	CR2032 battery holder with off board solder hoops for an external battery connection

Specifications (Cont.)

Embedded Microcontroller	PuCLite	Protected I²C port; Precision RTC; Intrusion monitoring; Event logging; System health monitoring; Unique serial number; Power up timer; accessible using DirectPCI or ECPL
Watchdog Timer Security	Output	System reset, Programmable 1 ~ 255 sec/min
	TPM (standard)	TCG TPM 2.0 device (soldered).
	BIOS	BIOS customizations, write protect, Media Validation
	Intrusion Inputs	6x intrusion inputs. Logged. Power on and battery operation.
	Precise RTC	Optional precise RTC device

Power Requirements	Input power	12VDC single rail
Environment	Temperature Operating	0 ~60° C (depends on CPU speed and cooler solution) Non-Operating: -40 ~ 85° C (-40 ~ 185° F)
Software	OS	Windows 11/10 IoT Enterprise, Linux
Physical Characteristics	Dimensions	Modified "Mini-ITX" - 170 mm x 185 mm (6.69" x 7.28"). Standard width, mounting holes, I/O plate and slot locations. Extended length.

Benefits

- Good integrated graphics and PCIe x16 for discrete graphics card
- Versatile expansion options
- Designed for the Gaming Industry
- Low power
- Long lifecycle

Software Products

- Media Validation Toolkit
- DPX Connector SDK
- DPX Diagnostics
- DPX SAS Engine
- DirectPCI SDK & Run-time

Optional Accessories

- M.2 modules, CFast, SATA DOM, SSD storage devices
- Full system chassis
- Range of PCIe graphics cards
- Various I/O module

OEM Customization and Product Development

- Advantech-Innocore is part of the Advantech Co., Ltd. Group of Companies.
- Advantech-Innocore specializes in the fields of PC-based hardware design and software development. Our in-depth knowledge and global resources make us your ideal partner.
- Specifications subject to change. E&OE.
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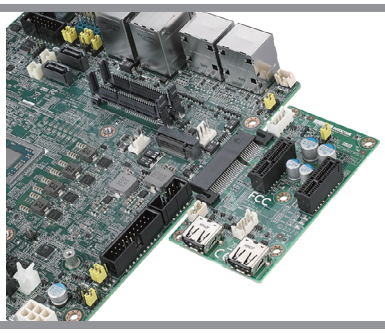
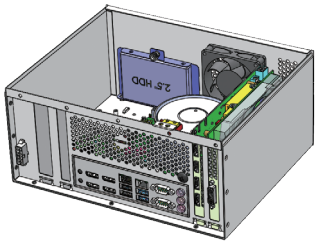
Front I/O

System Products

DPX-M1266 Gaming System

Modular Expansion





DPX-M2266 w/ full height graphics card