

# DPX®-E140

## AMD Ryzen™ Embedded V-Series Gaming Platform



### Features

- 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



### Introduction

The DPX®-E140 is a completely integrated system for gaming applications. Based on the new AMD Ryzen™ Embedded V-Series platform, the DPX-E140 provides a complete PC platform with a passive cooling system for APU up to 25W and a fan cooler to support the highest APUs at 54W. The system uses AMD's latest high performance dual and quad core SOC devices with "Discrete-level Graphics" from the integrated Radeon™ VEGA series graphics cores. Four independent monitors are supported via DisplayPort 1.2 DP++ ports. A full feature set of I/O and COMs designed specifically for gaming devices is also included making the DPX-E140 an ideal integrated platform for gaming, amusement and kiosk applications.

### Specifications

System	AMD Ryzen™ Embedded V1000 Dual and Quad Core APUs
	Long life cycle 5 years availability
Video (Integrated)	Dual channel RAM up to DDR4 3200. ECC and Non-ECC, 2 SODIMMs up to 32GB
	Integrated – Radeon™ VEGA series graphics engine
	Quad monitor support from APU
Security	Four DP++ interfaces support DisplayPort 1.2 with HDR and HBR2
	Direct X 12, OpenGL 4.6, EGL 1.4 support
	TPM security device on board
	Intrusion switch inputs (8 dedicated)
Software	BIOS customization
	iButton® socket and external iButton reader support
	Precision secure Real time clock device
CPU/Chipset	Edge-to-edge drivers and Software API/SDK
	Code portability through consistent API with other Advantech-Innocore boards
	Range of Advantech-Innocore software products for Gaming
Memory	AMD Ryzen™ Embedded V1000 processors
	Dual and Quad Core APUs up to 3.35GHz (turbo to 3.8GHz), up to 2MB L2 cache
BIOS	54W Max. APUs
	2 x SODIMM sockets
	Up to 32GB DDR4 3200 MT/s SDRAM system RAM
LAN	ECC and non-ECC support (BIOS selectable)
	AMI APTIO UEFI BIOS
	BIOS can be write protected
System Health Monitoring	BIOS expansion ROM (OPTOM) device
	2 x Ethernet Gigabit LAN
	Full duplex operation
	Wake-On-LAN capability
System Health Monitoring	PXE boot option

Storage	2 x C-Fast™ sockets
	2 x SATA 3 (up to 6Gb/s) headers for HDD, SSD or SATA DOM
	Secure, easy access tray for 2.5" SSD/HDD drive
Ports	1x M.2 form factor up to 2280 size modules, 2 lane PCI-e interface. NVME support
	4x RS232 (2x fully featured, 2x Tx/Rx/RTS/CTS)
	2 x CCTalk
	1 x TTL
	1 x ID003/TTL
	1 x RS485
	9 x USB (2x USB 3.0)
2 x I²C port	
iButton/GPIO	Bi-Directional GPIO header for two iButton, special purpose device, security module
Discrete I/O	32 ESD protected inputs
	32 OC Outputs (500mA, 50V)
Sound	Of which 8 I/O ports can be configured as meter outputs with presence detect
	HD 5.1 audio with stereo amplified outputs 20W/ch
SRAM (NVRAM)	Up to 8MB battery backed fast SRAM
TPM	Battery state software readable
Watchdog Timer	TCPA/TPM 2.0/1.2 compliant security device on board.
EEPROM	Programmable time-out
Asset Tag	32kB user EEPROM (option for larger)
Intrusion Detection	Unique API readable serial number
	8x Intrusion detection input lines
	Operates with and without system active
	Logs date/time of last 254 events
System Health Monitoring	Logs system resets/brownouts as events
	EEPROM backup for 10 years retention
	Measurement of CPU core temp. With thermal trip
	PWM fan control for system fans

## Specifications Cont.

Power Fail Detect	External sensor input for advanced warning of AC power fail
Expansion	1°C, 1-wire, M.2
Power	12V DC single input or ATX power supply Intelligent power control, scheduled power up, event log, system health monitoring

Environment	Operating Temperature: 0 ~ 50° C
	Storage Temperature: -20 ~ 85° C
Approvals	EMC: CE, FCC Class A RoHS, WEEE
Dimensions	200mm (W) x 270mm (L)

All product specifications are subject to change without notice .

## Optional Accessories

CFast™ cards, SATA DOM, SSD storage devices

iButtons®

Base and Short Cover - logic area secure cover

## Software Products

SecureBoot SDK

DPX Connector SDK

DPX Diagnostics

DPX SAS Engine

## Benefits

Performance integrated graphics- Four 4K monitors

Single integrated solution

Designed for the Gaming Industry

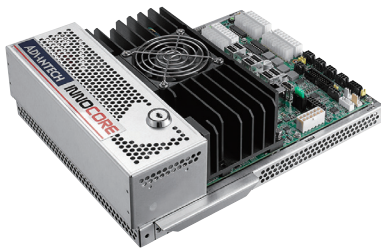
"Cabinet-ready" connectors

Small size

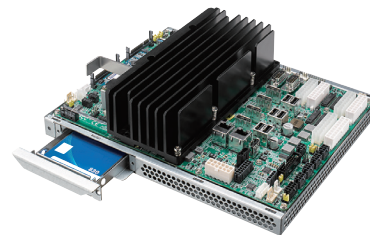
Long Lifecycle

## OEM Customization and Product Development

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DPX-E140 shown with logic area cover (active cooled version)



DPX-E140 shown without logic area cover (passive cooled version)