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 1.4 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
	Dual channel RAM up to DDR4 3200. ECC and Non-ECC, 2 SODIMMs up to 32GB
Video (Integrated)	Integrated – Radeon™ VEGA series graphics engine
	Quad monitor support from APU
	Four DP++ interfaces support DisplayPort 1.4 with HDR and HBR2/HBR3
	Direct X 12, OpenGL 4.6, EGL 1.4 support
Security	TPM security device on board
	Intrusion switch inputs (8 dedicated)
	BIOS customization
	iButton® socket and external iButton reader support
	Precision secure Real time clock device
Software	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
CPU/Chipset	AMD Ryzen™ Embedded V1000 processors Dual and Quad Core APUs up to 3.35GHz (turbo to 3.8GHz), up to 2MB L2 cache 54W Max. APUs
Memory	2 x SODIMM sockets
	Up to 32GB DDR4 3200 MT/s SDRAM system RAM ECC and non-ECC support (BIOS selectable)
BIOS	AMI APTIO UEFI BIOS
	BIOS can be write protected
	BIOS expansion ROM (OPTOM) device
LAN	2 x Ethernet Gigabit LAN
	Full duplex operation
	Wake-On-LAN capability
	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
	1x M.2 form factor up to 2280 size modules, 2 lane PCI-e interface. NVME support
Ports	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)
	Of which 8 I/O ports can be configured as meter outputs with presence detect
Sound	HD 5.1 audio with stereo amplified outputs 20W/ch
SRAM (NVRAM)	Up to 8MB battery backed fast SRAM
	Battery state software readable
TPM	TCPA/TPM 2.0/1.2 compliant security device on board.
Watchdog Timer	Programmable time-out
EEPROM	32kB user EEPROM (option for larger)
Asset Tag	Unique API readable serial number
Intrusion Detection	8x Intrusion detection input lines
	Operates with and without system active
	Logs date/time of last 254 events
	Logs system resets/brownouts as events
	EEPROM backup for 10 years retention
System Health Monitoring	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	I²C, 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 TBC
	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
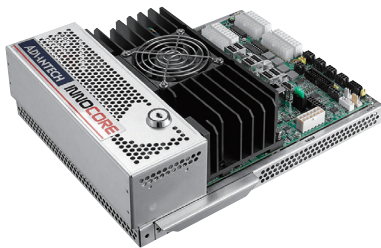
Designed for the Gaming Industry
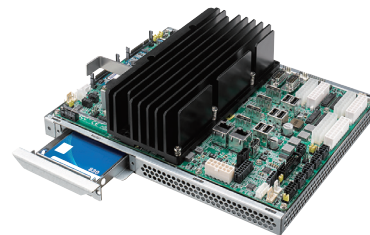
"Cabinet-ready" connectors

Small size

Long Lifecycle

OEM Customization and Product Development

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

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

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Innovations in Gaming Computing