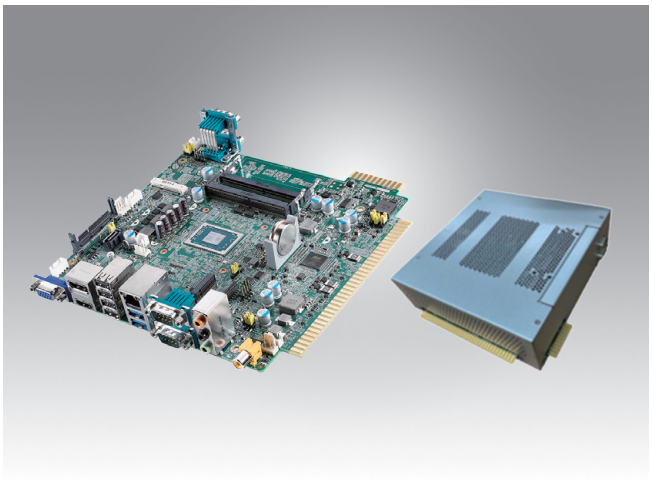
DPX®-J100

AMD Ryzen™ Embedded V & R Series Gaming Platform



Features

- High performance AMD Ryzen™ Embedded V1000/R1000 APUs
- Quad and dual core APUs up to 2.6 (3.5) GHz, 25W
- Radeon™ VEGA GPU with up to 8 compute units
- Up to three independent monitors supported
- Passive cooling (some APUs)
- Comprehensive gaming features
- 72 + 20 pin JAMMA harness connectors
- Full featured driver API for IO and security
- Optional enclosure

Introduction

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.

Specifications

System	AMD Ryzen™ superscript for all TMs Embedded V1000/R1000 APUs
	Long life cycle 5+ years availability
	Dual channel RAM up to DDR4-2400, ECC and non-ECC, up to 2 SODIMMs 32GB
Video (integrated)	Radeon VEGA graphics engine
	Three monitor support (two with R1102)
	One DP++ interface support DisplayPort (up to 3840 x 2160 60fps)
	One HDMI (up to 3840 x 2160 30fps)
	One Analog VGA port (1920x1080 60fps)
	Direct X 12, OpenGL 4.6, EGL 1.4 support
Security	TPM security device on board (option)
	Eight Intrusion switch inputs (7 on J-Port, one on board)
	BIOS customization
	iButton® /one-wire option (for external iButton reader)
	Protected I²C option (for Contador module)
Software	Edge-to-edge drivers and Software API/SDK
	Windows 10, Window10 IoT, Linux
	Range of Advantech-Innocore software products for Gaming
CPU/Chipset	AMD Ryzen Embedded V1000/R1000 series Processing Unit (APU)
	V1000 series Quad Core APU up to 2.0 (3.6) GHz, up to 2MB L2 cache, 25W
	R1000 series Dual core up to 2.6(3.5)GHz, 6 - 25W
Memory	2 x SODIMM sockets (1 x SODIMM with R1102)
	Up to 32GB DDR4 2400 MT/s SDRAM system RAM
LAN	1 x Ethernet Gigabit LAN
	Full duplex operation
	Wake-On-LAN capability
Storage	1 x CFast socket (vertical)
	1x M.2 form factor up to 2280 size module, 2 lane PCI-e interface. NVME support (Option)
	1 x SATA port

Ports	6 x RS232 consisting of:
	2 x Full RS232 (I/O panel DB9s)
	1 x RS232 Tx/Rx/CTS/RTS (rear facing DB9)
	1 x RS232/485 (Tx/Rx/CTS/RTS) (rear facing DB9)
	2 x ccTalk (J-Port)
	6 x USB (4 x USB 2.0, 2 x USB 3.1/2.0)
	Audio - Line out 5.1, SPDIF out (Option) (I/O panel)
	I²C, iButton® /one-wire connectors
	Fan header (PWM)
	Case open intrusion input
	Mini-PCI (half length) PCIe (Option) and USB
Digital I/O	24 ESD protected inputs
(J-Port-72)	15 Outputs OD (500mA), 5 outputs OD (2A)
	Option additional 8 OD outputs (500mA, 50V)
(J-Port-20)	1 Output 500mA sink / 100mA 12V source or sink SSR relay port on J-Port-20
Audio	Line out 5.1 (I/O panel)
	SPDIF out (I/O panel) (Option)
	6W + 6W (FL, FR) Class D audio amplifier (header)
BIOS	AMI APTIO UEFI BIOS
	BIOS can be write protected
	BIOS expansion ROM support
FRAM (NVRAM)	Option for FRAM (2 banks) up to 2MB total. (Default is zero FRAM)
TPM	TCPA/TPM 2.0 compliant security device on board (option)
Watchdog Timer	Programmable time-out
EEPROM function	16kByte user storage
Unique Serial no.	API readable serial number
Intrusion Detection	8x Intrusion detection input lines
	Operates with and without system active
	Logs date/time of events
	Logs system resets/brownouts as events
	FRAM backup for > 10 years retention

See overleaf for continued specification
Last updated: 20-Jul-2022

Specifications Cont.

System Health Monitoring	Measurement of CPU core temp., ambient, RAM temp, Input voltages, battery voltage. PWM fan control
Expansion	J-Port 72, 20 pin JAMMA
	Mini-PCI (half length) PCIe (Option) and USB
	Protected I2C port (Option)
	iButton® /one-wire (Option)
Power	12V DC single input power supply for V1605 APU
	5V/ 12V JAMMA input for R series APUs

Environment	Operating Temperature: 0 ~ 60 °C
	Storage Temperature: -20 ~ 85 °C
Approvals	EMC: CE, FCC Class A
	RoHS, WEEE
Dimensions	190mm (W) x 190 mm (L) (7.48" x 7.48") Excl. Jamma gold fingers

Benefits

- Best-in-Class integrated graphics
- Single integrated solution
- Designed for the Gaming Industry
- Small size
- Low power
- Long Lifecycle

Optional Accessories

- SSD storage devices, C-Fast, M.2
- iButtons® iButton reader
- Mini-PCI modules (Wifi, Bluetooth, etc)
- DPX-J100 system enclosure

Software Products

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

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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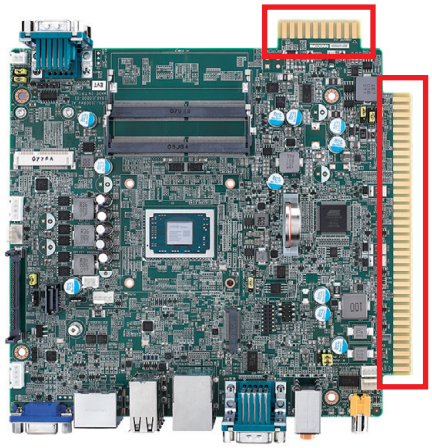
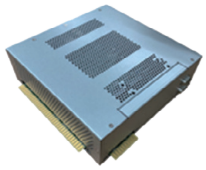
Front I/O

J-Port 72 +20 Pin



DPX-J100 System



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