

# DPX®-J100S1

## AMD Ryzen™ Embedded V & R Series Gaming System



### 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
- 72 +20 pin JAMMA pin definitions adaptable for different applications. To match all commonly used pin outs
- Full featured driver API for IO and security



### Introduction

The DPX-J100S1 is the latest addition to the DPX family of integrated gaming platforms. Based on the revolutionary AMD R1000/V1000 Series embedded platform, the DPX-J100S1 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-J100S1 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 (J-Port-72)	24 ESD protected inputs 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 Adaptable Pin definitions to meet existing applications
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

## 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 ~ 40°C Storage Temperature: -20 ~ 85 °C
Approvals	EMC: CE, FCC Class A RoHS, WEEE
Dimensions	262mm (W) x 232mm (L) x 65mm (H). (10.31" x 9.13" x 2.56"), Excl. Jamma gold fingers

## Benefits

Best-in-Class integrated graphics  
Single integrated solution  
Designed for the Gaming Industry  
Small size  
Low power  
Long Lifecycle  
Adaptable pin definitions to match existing applications

## Optional Accessories

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

## 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.
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## Front I/O



## J-Port 20 pin power (R series APU)



## J-Port 72 pin JAMMA I/O



## 4-Pin Power (V1605 APU)

