ADi-SA6X-AD

High-Performance Gaming Platform based on 12th/13th/14th Gen Intel® Core™ Processors Supports up to Eight Independent Displays Including 4K UHD



Features

- High performance "all-in-one" gaming platform
- Highly scalable platform meets individual performance, graphics and power needs
- Compact dimension yet with intensive expansion for vertical add-ons
- Advanced security feature set and software solutions
- Intelligent middleware shortens development time

Introduction

ADLINK's ADi-SA6X-AD all-in-one gaming platform features powerful processing and graphics performance for gaming infotainment and retail. Equipped with 12th/13th/14th Generation Intel® Core™ processors, the ADi-SA6X-AD provides compelling graphics performance from a PCI Express 4.0 x16 discrete graphics card and/or an embedded Intel® UHD Graphics 770 together with multi-display support for up to eight independent monitors. With the powerful processing performance, advanced security functions, smart middleware solutions, and versatile I/O array, the ADi-SA6X-AD fully satisfies the needs of your gaming application.

The ADi-SA6X-AD is a true application-ready gaming platform providing OEMs with a highly flexible and reliable all-in-one system that offers unparalleled portfolio of services that help developers save time and remain in compliance. The platform is designed to meet the GLI-11 (Gaming Laboratories International) certification and all major global gaming market compliance requirements. The comprehensive middleware as well as the security and extensive I/O solutions enable developers to easily bridge applications with peripheral devices, sensors, and surrounding solutions up to central monitoring and control systems.

High Scalability and Ideal Range of Performance Class

The ADi-SA6X-AD is designed with highly scalable and reliable hardware that can be flexibly scaled from entry level up to the highest performance class, with tailored configuration of CPU and GPU selections. The platform also provides compact dimensions for developers using a more compact cabinet footprint and offers extensive expansion capabilities for the needs of vertical add-ons.

Multi-Display Graphics Capabilities

The ADi-SA6X-AD provides support for up to 4K resolutions via four standard video outputs based on the Intel® Q670E chipset. It is capable of supporting dedicated graphics cards for up to eight independent monitors that conform to the latest DisplayPort 1.2 standard.

Advanced Security and NVRAM PCI Express for Gaming Designed to Meet GLI-11

ADLINK's ADi-BSEC is a high-speed PCI Express card with up to 16 MB NVRAM & SRAM. It offers a crypto and authentication security chip with power-off monitoring and event logging designed to meet the GLI-11 (Gaming Laboratories International) certification requirements. Further features are also available, such as TPM 2.0 trusted platform module, Bit Lock, Software Chain of Trust (sCOT), BIOS customizations, Intrusion Detection, Security Dongle to provide the comprehensive protection of the assets.

ADLINK Comprehensive Middleware Solutions

ADLINK's ADiAPI (intelligent Application Programming Interface) and SEMA® (Smart System Management Agent) provide advanced integration of hardware/software monitoring and controlling allowing simplified and unified application development without dependencies on the peripheral devices.

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Options

- ADi-BSEC & ADi-BACC-G2F (external)
  Intelligent infotainment security and NVRAM PCI Express card & external gaming and retail extension I/O board
- ADi-SIOG-LEC1
  Extension Gaming & Retail I/O controller Module
- ADiAPI
  Intelligent infotainment service and utility
- ADiDLL
  Infotainment middleware
- SAS 6.02/6.03 engine
- AGA/SOA

Optional Accessories

- ADi-BSEC cable kit
- ADi-SIOG-LEC1 Cable kit

Ordering Information

- ADi-SA6X-AD-EAAP
  Intel® Pentium® G7400TE, Intel® Q670E, TPM, SEMA, 8GB DDR4, M.2 128GB device (2242, PCIe Gen3)
  *Other configurations on request

Specifications

Model Name	ADi-SA6X-AD
Core System	
Processor	Socket LGA1700 supporting 12th/13th/14th Generation Intel® Core™ Processors from 35W up to 65W (Intel® Core™ i5-12500TE/i3-12100TE/Pentium® Gold G7400TE/Celeron® Processor G6900TE; Other options on request)
Chipset	Intel® Q670E or H610E
BIOS	AMI uEFI on 16 MB SPI BIOS flash with Intel® AMT 16.0 support via onboard BIOS socket and SPI header
Expansion Slot	1 PCIe x16 slot 1 PCIe x1 slot 2x M.2 (M key, Support 2242 and NVMe boot) M.2 #1 (Q670E: PCIe 3.0 ×4; H610E: PCIe 3.0 x4) M.2 #2 (Q670E: PCIe 3.0 ×4; H610E: PCIe 3.0 x1 and w/o SATA interface)
Memory	Dual channel non-ECC 3200 MHz DDR4 memory up to 32GB in dual vertical SODIMM sockets
Graphics	Intel® UHD Graphics up to 770 NVIDIA® T1000 embedded with extended availability NVIDIA® T400 embedded with extended availability Other options on request
Core System	
Storage	1x SSD (2.5“) 1x CFast (via 2.5“ adapter option) 2x SATADOM *on request 2x M.2 storage
Security	Intrusion switch for ADi-BSEC power-off, Security Dongle, Eylet for seal, TPM, Bit Lock, Software Chain of Trust, BIOS Customization, ADi-BSEC security card (option) , Cable and connector covers (option)

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I/O interface	
Serial ATA	3x Serial ATA 6Gbps ports
Ethernet	2x GbE ports (10/100/1000 GbE connection)
Serial Ports	1x RS-232/422/485 via onboard header 3x RS-232 via onboard header and 1x CCTALK x2 on internal header
Audio Interface	Codec Realtek ALC888S 7.1 channel audio via 5 jacks and S/PDIF output on rear I/O 7.1 channel audio signals and S/PDIF output on internal header
USB	4x USB 3.2 Gen 1 and 4x USB 2.0 on rear I/O 2x USB 3.2 Gen 1 onboard header (H610E : 1x USB 2.0) 1x USB 3.2 Gen 1 on vertical connector with keep out area for dongle (H610E: USB 2.0)
DisplayPort	Q670E: 4x outputs with resolution up to 4096 x 2160 pixels H610E: 3x outputs with resolution up to 4096 x 2160 pixels 4x PEG card outputs (option)
Mechanical	
Dimensions	208 mm (W) x 221.34 mm (D) x 91 mm (H; w/o brackets) (8.18 in x 8.71 in x 3.58 in)
Environmental & Safety	
Operating Temperature	0°C to 50°C (32˚F to 122˚F)
Storage Temperature	-20°C to 70°C (-4˚F to 158˚F) (excl. HDD/SSD/CFast)
Humidity	~85% @ 50°C (144˚F) (non-condensing)
Vibration	Operating, 1 Grms, 5-500 Hz, 3 axes (w/ CFast or SSD) Operating, 0.5 Grms, 5-500 Hz, 3 axes (w/ 2.5“ HDD)
Shock	Operating, 20 G, half sine 11 ms duration (w/ CFast or SSD)
EMC	CE and FCC Class A
ESD	Contact +/-4 KV and Air +/-8 KV
Safety	UL/cUL, CB
Operating Systems	
	Windows® 10 IoT Linux (Ubuntu)
Gaming-Specific Features and Security (Options)	
	Up to 2x 8MB dual independent (battery-buffered) high-speed NVRAM (fast PCIe x1 interface)
	Crypto & Authentication Security Chip (SHA-256, RNG, UID, EEPROM, OTP)
	Intrusion detection and event logging (battery-buffered)
	EEPROM support (various; SMD down and DIP socket jurisdiction EEPROM)
	1-Wire bus support (multiple UID S/Ns silicon numbers and EEPROM)
	4x additional serial interfaces (RS-232, RS-232 TTL, ccTalk)
	ccTalk, ID003, EBDS, SSP, TCL and MDB
	32x digital inputs / 32x digital outputs
	24 x open drain /40V LED drivers
	3x high-current outputs
	EPFail support (early power fail detection input)
	User LEDs and function switches
	DIP switch option
	8x independent current-sensed hardmeter support
	SEC soft meter suport (SPI)
	1-Wire support (UID & EEPROM)
	Key lock, eyelet for sealing, TPM, dedicated security ICs, secure key storage
	Fully customizable secure BIOS

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