

Quixant

ahead of the game

The QXi-4000 is a complete PC based gaming platform designed to drive pay to play gaming machines. It has a comprehensive feature-set designed to address all the requirements of running the latest generation of gaming machines.

- Mid range “all-in-one” gaming platform
- Supports up to four independent HD monitors
- AMD Embedded R-Series APU with integrated AMD Radeon™ HD7000G Series graphics
- Fan-less operation
- Advanced PCI Express® gaming logic & NVRAM

High performance APUs

Dual or Quad-core AMD Embedded R-Series APUs up to 2.1Ghz (2.8 GHz with boost). Latest AMD Radeon™ HD7000G Series integrated graphics delivers powerful graphics acceleration for DirectX® 11, OpenGL® 4.2, OpenCL 1.2 and hardware HD video decoding & encoding.

Outstanding multi-screen graphics capabilities

Capable of driving up to four independent displays with support for the latest DisplayPort 1.2 standard, including Multi-Stream Transport for daisy-chaining of multiple monitors from a single DisplayPort cable.

Fan-less operation, small form factor

High efficiency components and innovative Quixant case design enable the QXi-4000 to be operated without fans, improving reliability and reducing noise and power usage. Physically compact case dimensions.

Comprehensive gaming features

Two banks of NVRAM, digital inputs and outputs, audio amplifier, multiple layers of security and intrusion detection.



QXi-4000 High Performance Four-Screen Gaming Platform



Market compliance

Meets the requirements of GLI-11 and all major global gaming jurisdictions.

Complete software suite

Device drivers, gaming protocols including SAS 6.02, secure customizable BIOS. Full support for Windows Embedded and Linux.

5+ years guaranteed supply

The latest AMD Embedded chipset and graphics processors provide 5+ years product lifetime from launch.

Compatibility

Mechanically, electrically and API compatible with QXi-200 and QXi-100.



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QXi-4000 General features



APU/CPU

AMD Embedded R-Series APU "Accelerated Processing Unit" integrates CPU and GPU

2nd generation "Piledriver" core architecture:

- Dual or Quad 64-bit cores
- Core frequencies up to 2.1GHz (up to 2.8 GHz with boost)
- Up to 2MB L2 cache
- AVX 1.0/1.1, AES, SSE4.1 & 4.2, XOP & FMA4 instructions
- Low Power (25W max TDP) design

Advanced integrated AMD Radeon™ HD7000G Series graphics:

- Discrete-level graphics performance
- Support for up to four independent displays from the APU
- Four DP++ interfaces support DVI, HDMI and DisplayPort, including MST for daisy-chaining of monitors
- DirectX® 11, OpenGL® 4.2, OpenCL 1.2, DirectCompute compatible

UVD3 Multimedia Engine

- Hardware HD Decode of H.264, VC-1, MPEG-2 & DivX
- Hardware Encode of H.264 at 1080p@60fps

Main Memory

2 x DDR3-1333 (PC3-10600) SODIMM sockets

Up to 16GBytes, 128-bit bus

Communication Interfaces

6 x serial ports

- 16550 compatible
- Hardware 9-bit data support
- RS232, RS485, JCM ID003 and ccTalk support

2 x PCI Express® Gigabit LAN controllers

4 x USB 2.0 Ports

SPI interface for clock serial peripherals (e.g. SEC meter)

I²C Interface

iButton interface

Power Requirement

Simple single 12V nominal input

No extra ATX PSU - uses standard cabinet PSU

Low total power consumption for low heat and energy efficiency

Storage

2 x CFAST (SATA 3.0) sockets on board, up to 6Gb/s

2 x SATA 3.0 sockets, up to 6 Gb/s (for SATA DOM, SSD, HDD) with selectable power on pin 7

Gaming Hardware

Up to 16MBytes of NVRAM

- Non-volatile MRAM or battery backed SRAM
- Ultra-fast 32-bit bus, PCI Express® connection
- Hardware accelerated mirroring and CRC support
- Dual independent physical banks
- 5-year battery life
- Optional Lithium Pentoxide rechargeable cells

Battery powered logging processor

- 8 intrusion inputs (4 for QXi-4000 case, 4 for external cabinet)
- Supports standard and opto switches
- Date/time stamped recording of 64 events
- Auto system switch on (time)
- Programmable watchdog timer
- Battery voltage monitoring & warning
- Automatic meter handling

Advanced digital I/O connected via PCI Express®

32 digital inputs

- Individually configurable for interrupt generation
- Trigger on rising or falling edges or both
- Input pulse width measurement and screening
- Configurable hardware debounce filtering

32 digital outputs

- 24 x 50V 350mA open drain with overload protection
- 4 x 50V 3A open drain
- 4 x TTL level

Security

Advanced hardware security engine

1kb EEPROM with SHA-1 MAC engine

- Challenge-and-response authentication
- Guaranteed unique electronic serial number

Audio

High Definition Audio

- 7.1. Audio channels
- Built-in stereo 18W/channel digital amplifier
- Stereo line input
- Mic input

BIOS

BIOS designed specifically for gaming:

- Hardware validation of BIOS via secure hash algorithm
- BIOS Validation of boot drive via secure hash algorithm
- Write-protection of BIOS ROM
- Fully customisable

Software

Full software support for Windows Embedded and Linux

- Static and dynamic libraries
- 32 and 64-bit OS support
- Example code and demo software available

Protocol Software

Quixant supplied communication & peripheral protocols

- SAS 6.02, Generic COM Port driver (with 9-bit support)
- JCM ID003, MEI, ccTalk (including MD100 and JCM Vega devices support)
- Futurelogic, Money Controls, Ithaca
- iButton, I²C devices, generic SPI, SEC Meter
- Others being developed

