# XSAT2102A Product Brief

## 1. Description

The XSAT2102A is an PCI Express Gen2X1 to two-ports Serial ATA Controller, enables Serial ATA PHY up to 6Gbps high speed interface, following Serial ATA Revision 3.0 Specification.

## 2. Features

● 1.1V core and 3.3V I/O power supplies.

● Reference clock frequency of 25 MHz, provided by an external clock source or generated by an external.

● PCIe 2.0 endpoint device.

● Compliant with PCIe 2.0 specifications.

● Supports communication speed of 2.5 Gbps and 5 Gbps.

● Supports AHCI programming interface registers for the SATA controller.

● Supports aggressive power management.

● Supports error reporting, recovery and correction.

● Supports Message Signaled Interrupt (MSI).

● Improved PCIe read request efficiency.

● Compliant with Serial ATA Specification 3.1.

● Supports communication speeds of 6 Gbps, 3 Gbps, and 1.5 Gbps.

● Supports programmable transmitter signal levels.

● Supports Gen 1i, Gen 1x, Gen 2i, Gen 2m, Gen 2x, and Gen 3i.

● Supports two SATA ports.

● Supports AHCI 1.0 programming interface.

● Supports Native Command Queuing (NCQ).

● Supports Port Multiplier FIS based switching.

● Supports Partial and Slumber Power Management states.

● Supports Staggered Spin-up.

● A four-pin interface provides read and write access to an external SPI flash or SPI ROM device.

● Vendor specific information stored in the external device is read by the controller during the chip power-up.

● PCI Boot ROMs of PCIe function 0 can also be stored in the external SPI device and read through the Expansion ROM BAR and the SPI interface controller.

## 3. Applications

● PC/IPC Motherboard
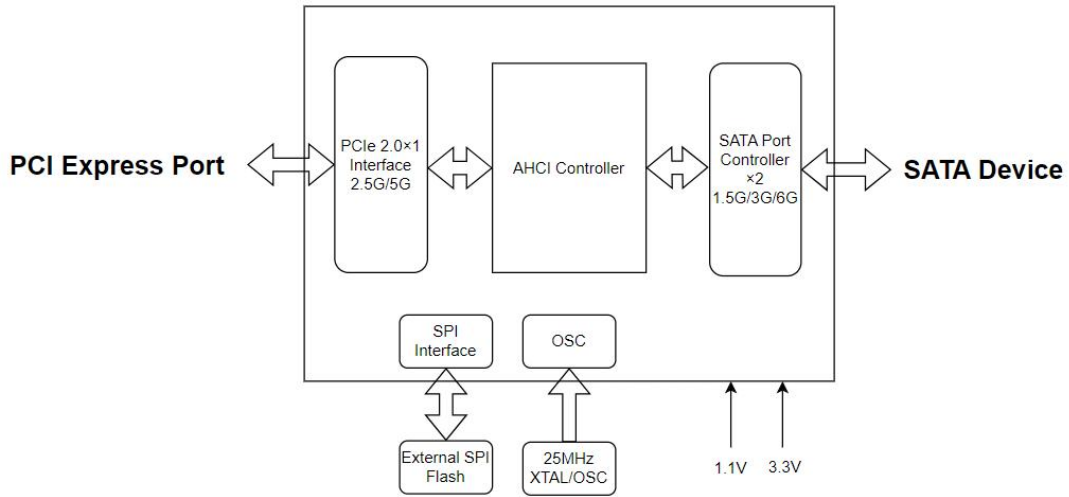
● NoteBook

● Server Motherboard

● NVR

● NAS

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## 4. Functional Diagram



**Figure 1 Functional Diagra**