

The NVMe IP core is compliant with NVM Express base specification revision 1.4 that performs memory transfer to or from the NVMe storage like SSDs. The IP core is designed to handle NVMe protocols without the need for external DDR memory via a PCIe interface. It is ideal for applications that require large storage capacity with high performance and is available with flexible vendor-specific PCIe IP to access SSD.

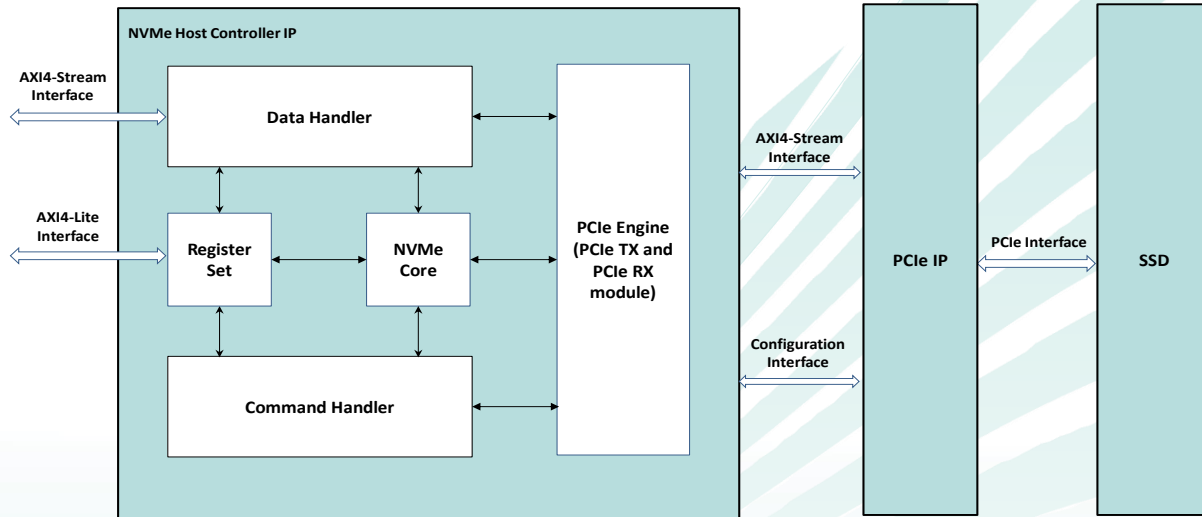
### Applications

- Used as Host for the NVMe solid state drives
- Used in application which requires high data storage with very high performance

### Features

- Compliant with NVM Express base specification revision 1.4
- Supports SMART, Identify, Shutdown READ, WRITE, Flush commands
- Includes internal RAM as a data buffer without using the external DDR
- Operates with PCIe IP using 4-lane PCIe Gen3 as a physical layer for the SSD
- Uses vendor-specific PCIe root port IP
- Supports single Admin queue and single IO queues
- Supports scalable IO queues depths and Admin queue depths
- Supports NVMe devices with 512 bytes and 4096 bytes sector sizes
- Supports maximum data transfer size of 1Mb per command
- Supports host memory page size of 4Kbytes
- Supports AXI4-Stream interface for the data interface
- Supports AXI4-Lite interface for the control interface

## iW NVMe Host Controller IP block diagram



### Deliverables

- RTL source code or Netlist
- IP example design
- IP datasheet
- Integration Manual

### Licensing Options

- Non-Transferable: Single Project/Product Netlist License – Single Site
- Non-Transferable: Multi Project/Product Netlist License – Single Site
- Non-Transferable: Single Project/Product RTL Source Code License – Single Site
- Non-Transferable: Multi Project/Product RTL Source Code License – Single Site

### Technical Support

iWave provides comprehensive support during your system integration & validation.

- The Client may open a new support incident by emailing to a technical support engineer
- iWave's response time shall be within 24 hours of the initial call, with the details of the action plan to resolve
- Support assistance shall be delivered by telephone, email and/or remote assistance via a web meeting
- iWave shall provide remote debugging support irrespective of the time zone/ region

iWave System Technologies, established in 1999, focuses on Product Engineering Services involving Embedded Hardware, Software & FPGA. The company designs and develops cutting edge products and provides the FPGA programable design solutions. iWave has been a leader in providing the robust and comprehensive IP cores and turnkey FPGA design services.

### iW NVMe Host Controller IP

The IP can be ordered online from the iWave Website <https://www.iwavesystems.com/product/nvme-host-controller-ip-core/> Or from our Local Partners in your region <http://www.iwavesystems.com/about-us/business-partner.html>

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