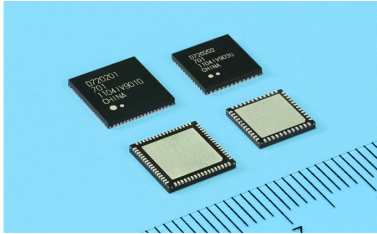


# USB3.0 Host Controller

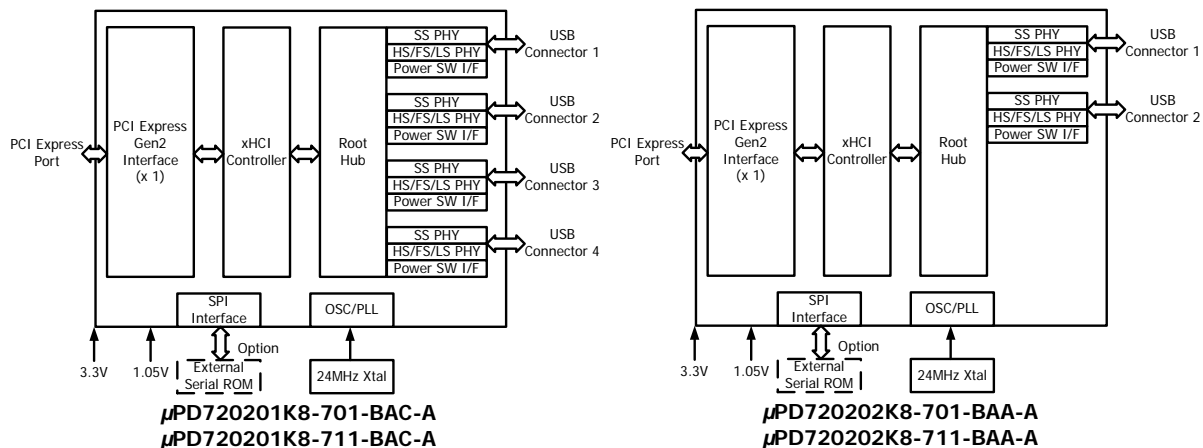
## $\mu$ PD720201/ $\mu$ PD720202



The  $\mu$ PD720201 and  $\mu$ PD720202 are the third generation Universal Serial Bus 3.0 host controllers, which comply with the Universal Serial Bus 3.0 Specification, and Intel's eXtensible Host Controller Interface (xHCI). The  $\mu$ PD720201 supports up to four USB3.0 SuperSpeed ports and  $\mu$ PD720202 supports up to two USB3.0 SuperSpeed ports.

The  $\mu$ PD720201 and  $\mu$ PD720202 use a PCI Express® Gen 2 system interface bus allowing system designers to easily add up to four ( $\mu$ PD720201) or two ( $\mu$ PD720202) USB3.0 SuperSpeed ports to systems containing the PCI Express bus interface. When connected to USB 3.0-compliant peripherals, the  $\mu$ PD720201 and  $\mu$ PD720202 can transfer information at clock speeds of up to 5 Gbps. The  $\mu$ PD720201 and  $\mu$ PD720202 and USB 3.0 standard are fully compliant and backward compatible with the previous USB2.0 Standard. The new USB 3.0 standard supports data transfer speeds up to ten times faster than those of the previous generation USB2.0 standard, enabling quick and efficient transfers of large amount of information.

### Block Diagram



### USB 3.0 Host Controller $\mu$ PD720201/ $\mu$ PD720202 Specification

- **Differences with the second generation  $\mu$ PD720200A**
  - Improved effective throughput
  - Improved power consumption
  - Adopted small size package
- **$\mu$ PD720202K8-701-BAC-A (Ta : 0 ~ 85°C) &  $\mu$ PD720202K8-711-BAC-A (Ta : -40 ~ 85°C) Features**
  - 4 USB downstream ports
  - 68-pin QFN, 8mm x 8mm
- **$\mu$ PD720202K8-701-BAA-A (Ta : 0 ~ 85°C) &  $\mu$ PD720202K8-711-BAA-A (Ta : -40 ~ 85°C) Features**
  - 2 USB downstream ports
  - 48-pin QFN, 7mm x 7mm
- **Common Features**
  - Universal Serial Bus 3.0 specification Revision 1.0
  - PCI Express Base Specification Revision 2.0
  - Intel's eXtensible Host Controller Interface (xHCI) Specification Revision 1.0
  - PCI Express Card Electromechanical Specification Revision 2.0
  - PCI Bus Power Management Interface Specification Revision 1.2
  - USB Battery Charging Specification Revision 1.2
  - Supports USB legacy function
  - Supports Serial Peripheral Interface (SPI) type ROM for Firmware
  - Supports Firmware Download Interface from system BIOS
  - System clock : 24MHz crystal
  - 3.3V and 1.05V Power supply

### Target System

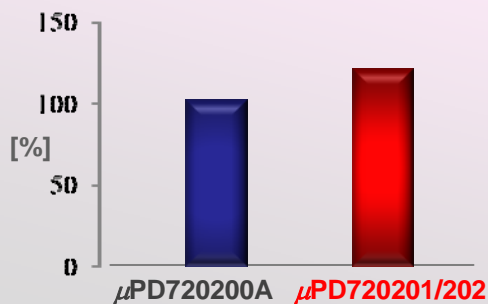
- Desktop and Laptop computers, Tablet, Server
- PCI Express Card / Express Card
- Digital TV, Set-Top-Box, BD Player/Recorder
- Media Player, Digital Audio systems
- Projector, Multi Function Printer
- Storage, Router, NAS, etc

## World's lowest power USB3.0 host controller

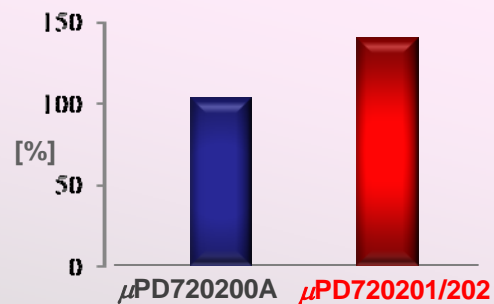
- ✓ Sleep mode (< 10mW)
- ✓ Power reduction with no peripheral connection



## Higher performance data transfer



20% Read Performance Increase



40% Write Performance Increase

## Space-saving QFN package and easy PCB layout



## Supports firmware download from system BIOS



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