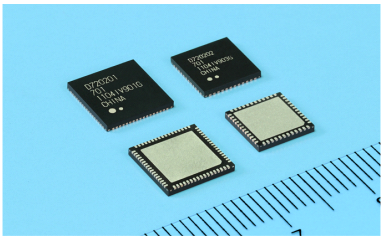
USB3.0 Host Controller

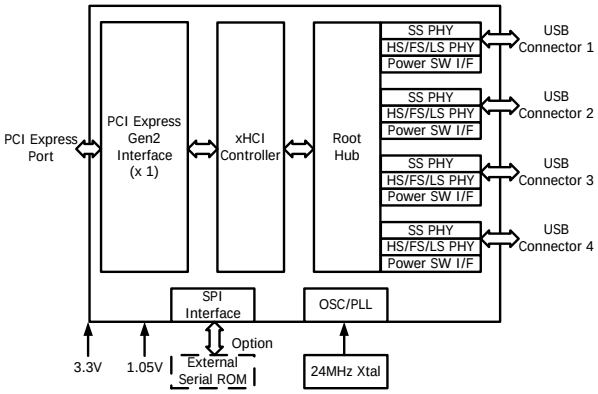
μPD720201/μPD720202



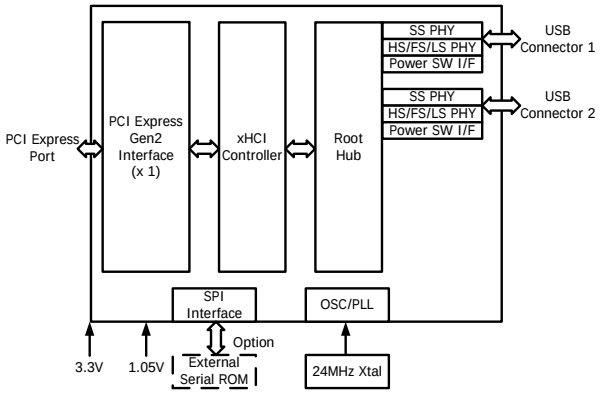
The μPD720201 and μPD720202 are the third generation Universal Serial Bus 3.0 host controllers, which comply with the Universal Serial Bus 3.0 Specification, and Intel's eXtensible Host Controller Interface (xHCI). The μPD720201 supports up to four USB3.0 SuperSpeed ports and μPD720202 supports up to two USB3.0 SuperSpeed ports.

The μPD720201 and μPD720202 use a PCI Express® Gen 2 system interface bus allowing system designers to easily add up to four (μPD720201) or two (μPD720202) USB3.0 SuperSpeed ports to systems containing the PCI Express bus interface. When connected to USB 3.0-compliant peripherals, the μPD720201 and μPD720202 can transfer information at clock speeds of up to 5 Gbps. The μPD720201 and μPD720202 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



μPD720201K8-701-BAC-A
μPD720201K8-711-BAC-A



μPD720202K8-701-BAA-A
μPD720202K8-711-BAA-A

USB 3.0 Host Controller μPD720201/μPD720202 Specification

- **Differences with the second generation μPD720200A**
  - Improved effective throughput
  - Improved power consumption
  - Adopted small size package
- **μPD720202K8-701-BAC-A (Ta : 0 ~ 85°C) & μPD720202K8-711-BAC-A (Ta : -40 ~ 85°C) Features**
  - 4 USB downstream ports
  - 68-pin QFN, 8mm x 8mm
- **μPD720202K8-701-BAA-A (Ta : 0 ~ 85°C) & μPD720202K8-711-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

2012.9
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World's lowest power USB3.0 host controller

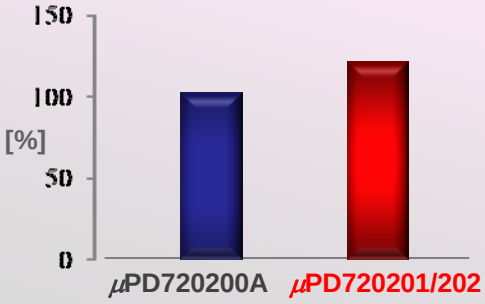
- ✓ Sleep mode (< 10mW)
- ✓ Power reduction with no peripheral connection

μPD720200A

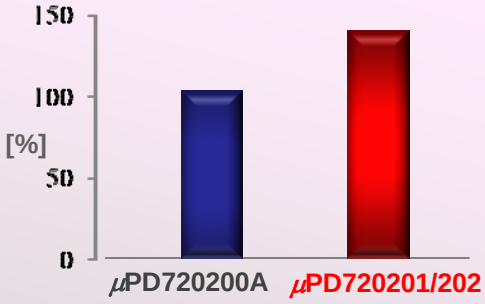
Saves laptop battery power

μPD720201/202

Higher performance data transfer



20% Read Performance Increase



40% Write Performance Increase

Space-saving QFN package and easy PCB layout

μPD720200/200A

176pin BGA (10x10)

50% Reduction

μPD720201

68pin QFN (8x8)

μPD720202

48pin QFN (7x7)

Supports firmware download from system BIOS

+ External Serial ROM

μPD720200/200A

Reduces BOM cost & PCB space

μPD720201/202

External ROM optional

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