PCIe Gen3x4 NVMe 1.4/1.3 SSD Controller – YS9205/YS9203

General Description

YS9205/YS9203 are two high-performance PCIe Gen3X4 SSD controllers for enterprise and consumer grades respectively. Thanks to hardware and firmware optimizations, the YS9205/YS9203 will take full advantage of NVMe performance. YS9205 provides 4 Lanes and 4 NAND Flash channels, while YS9203 provides 8 Lanes and 8 NAND Flash channels, and both controllers support 3D SLC/MLC/TLC/OLC NAND. The use of 4K/2K code-length LDPC and End-to-End data protection provides comprehensive data pro-tection and enhances the persistence and retention of 3D NAND.

Key Features

- Support PCIe Gen3x4 Lane

- Support 3D SLC/MLC/TLC/QLC NAND Flash

- Support ONFI 4.0/3.0, Toggle 2.0

- Support 1.2V and 1.8V

- End-to-End Data Protection

- NV-DDR3, Speed up to 1600 MT/s (YS9205)

- Support NVMe 1.4Protocol (YS9203)

- Support NVMe 1.3 Protocol (YS9205)

- 8CH, 8CE/CH (YS9203)

- 4CH, 4CE/CH (YS9205)

- 2K LDPC (YS9203)

- 4K LDPC (YS9205)

- RAID, TCG-OPAL (YS9203)

- AES, TRNG, SHA256 (YS9203)

- Cryptographic Algorithm: SM2, SM3, SM4 (YS9203)

- DDR3/3L/4 (YS9203)

- Sequential Read: 3,600 MB/s (YS9205) / 3,600 MB/s (YS9203)

- Sequential Write: 3,200 MB/s (YS9205) / 3,000 MB/s (YS9203)

- Random Read: 500,000 IOPS (YS9205) / 680,000 IOPS (YS9203)

- Random Write: 520,000 IOPS (YS9205) / 520,000 IOPS (YS9203)

- Consumer grade operating temperature: 0°C ~ 70°C

- Industrial grade working temperature: -40°C ~ 85°C