

88NV1140/88NV1120 VALUE SSD CONTROLLER

The 88NV1140/88NV1120 is Marvell's first NVM Express DRAMless SSD controller supporting X1-lane PCIe 3.0 or 6Gb/s SATA interface for Small-Form-Factor and Value Line SSD markets. While NAND Flash cost is expected to bring a value-line SSD close to a hard disk drive for a 128GB SSD, the 88NV1140/88NV1120 offers a cost-effective solution to help SSD makers to achieve the goal. In fact, it will play a big part in quickly driving SSD adoption in client PC market.

In addition to Value-line SSD enabling, the 88NV1140/88NV1120 design is also optimized for Small Form Factor applications. By using 28nm CMOS process node technology, the controller is perfect for multiple-chip-package (MCP) integration running on embedded SRAM without external memory. It's perfect for low-z-height or compact mobile devices looking for SSD performance, like premium tablet or 2-in-1 notebook. The standalone packed version also help enable modules as small as M.2 2230(3cm in length).

The 88NV1140 supports new NVM Express standard or legacy AHCI through PCIe interface while the 88NV1120 supports popular SATA interface in a client PC system. The controller also has Marvell's 3rd-generation LDPC technology for reliability enhancement, endurance boost and TLC NAND device support on top of MLC NAND.

The controller's NVMe (non-volatile memory) design has passed IOL NVMe Compliance Testing and 3rd-party OS/platform compatibility testing, ready to enable next-generation mobile PC device with affordable price and leading SSD technologies.

Key Benefits

- Dual PCIe or SATA interface for single firmware development
- Optimized design for MCP and Small Form Factor
- Low-power CMOS process and new advanced NAND controller design
- PCIe 3.0 and NVMe support for new 2015 chipset and Operation systems
- Proven 3rd-gen LDPC technology secures NAND endurance and reliability

Target Applications

Value-line client SSD and small form factor SSD for low z-height mobile PC devices