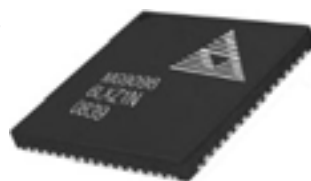




AMI MG9098 Backplane Controller For NVMe/SATA/SAS Backplanes

(Not For New Design)

The AMI MG9098 backplane controller enables the world's leading enterprise system builders and data center solution providers to design low-cost, robust backplane solutions for NVMe®, SAS and SATA-based storage subsystems.



A true single-chip solution, the AMI MG9098 backplane controller helps optimize backplane layouts with the latest enclosure management technologies. This highly integrated and space-optimized chip is available in compact QFN-64 package (9mm x 9mm) and supports all the features needed in a modern state-of-the-art SAS/SATA/NVMe backplane. MG9098 backplane controller also ships ready to use, with no firmware or programming required at power-on. Firmware is upgradeable through SMBus from host BMC.



Benefits

Developed to reduce latency and provide faster CPU to data storage device performance, NVMe (Non-Volatile Memory Express) is a scalable, high performance specification for accessing solid state drives (SSDs) attached directly to the PCI Express bus. The MG9098 backplane controller leverages the power signals on NVMe/SATA/SAS drive connector (SFF-8639) to detect drive presence, type, and activity.

Highlights:



- Supports Intel® VMD Enclosure Management for PCIe/NVMe SSDs through dual VPP SMBus for CPU0 & CPU1 from Intel®
- Supports Linux® Enclosure Management for PCIe/NVMe SSDs through dual SHP SMBus for CPU0 & CPU1 from AMD®
- Enclosure management of PCIe/NVMe SSDs connected to Broadcom®/Microsemi® PCIe switches is also supported in MG9098
- Support two channels of SGPIO for enclosure management of SATA/SAS drives

LED management of NVMe SSDs is done through SMBus Host Hot-Plug VPP or SHP Bus. For SATA/SAS drives, this is done through the SGPIO (SFF-8485) specification. Optionally, LED management can also be done with proprietary BMC SMBus commands. The MG9098 backplane controller also provides Power Disable/Device Sleep outputs for SATA/SAS & NVMe drives.

The MG9098 backplane controller supports 2-LED and 3-LED IBPI blinking patterns, along with many pre-defined custom LED blinking patterns. Custom blinking patterns can also be downloaded through the BMC SMBUS.

Highlights:



- Supports IPBI specification (SFF-8489)
- Supports Optional Enclosure Management of NVMe/SATA/SAS drives through BMC SMBus
- Hot-plug support with Host Hot-Plug SMBus (VPP)
- Power Disable support for SAS drives.
- Supply range 3.3V +/- 5%
- Small QFN-64 Package with 9 mm x 9 mm pin outline
- Internal Oscillator, no external crystal needed
- Ships ready to use, no firmware or programming required
- Firmware upgradeable through SMBus from host BMC
- Diagnostics and FW upgrade tools available for Windows®, Linux®, EFI and DOS



MG9098 Program Versions

Different program versions of MG9098 controller are available to support various features required in a modern state-of-the-art backplane for Single ported NVMe & SAS/SATA drives. Major differences between MG9098 versions are listed in the table below:

Differences	MG9098 Program Version	
	A	B
SGPIL (SFF-8485 Support)	Yes	Yes
Platforms Supported	Intel®	Intel®/Broadcom®/AMD®/Microsemi®

Supports Activity and Status LEDs for each drive

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