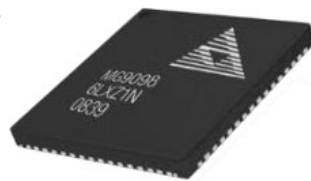


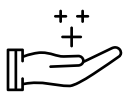


AMI MG9098 Backplane Controller For NVMe/SATA/SAS Backplanes

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.



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®
SHP Interrupt	None	1

Supports Activity and Status LEDs for each drive

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

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