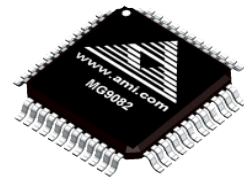


AMI MG9082 Backplane Controller

For SAS/SATA backplanes



The AMI MG9082 is a low-cost, ultra-small, single-chip solution for enclosure management of SAS/SATA backplanes for up to 8 drives per backplane. Cascaded controllers can support up to 32 drives.

A true single-chip solution, the AMI MG9082 helps optimize backplane layouts with the latest enclosure management technologies. This highly integrated and space-optimized chip features an internal oscillator, is available in TQFP-48 Package (9mm x 9mm), and omit the usual components that drive backplane costs up such as external crystal, flash memory, EEPROM and LED Driver. It also ships ready to use with no firmware or programming required.

BENEFITS

MG9082 controller directly drives 2 LEDs for up to 8 SAS/SATA drives providing drive activity, fail, rebuild and locate LED indication signals. It supports SGPIO (SFF-8485) and IBPI (SFF-8489) for LED management, and SMBus for firmware upgrade from host BMC. These features make the controller suitable for a wide variety of systems handling multiple drives from 2 to 32. Currently, 16 different off-the-shelf configurations are available from AMI.

MG9082 leverages the use of power signals on the SAS/SATA drive connector to detect its presence and activity. LED management uses SGPIO (SFF-8485) from RAID Controllers, PCH and SAS Expanders.

LED BLINKING PATTERN

In 3-LED mode, MG9082 follows the blinking pattern as defined in the following table for various drive states:

| Drive State: | 3-LEDs/SLOT | | |
|----------------------------|----------------------|--------------------|--|
| | Activity (Green) LED | Locate (Amber) LED | Fail (Red) LED |
| Drive Not Present | OFF | X | X |
| Drive Present, No Activity | ON | X | X |
| Drive Present, Activity | 4Hz | X | X |
| Locate (Identify) | X | 4Hz | OFF |
| Fail | X | OFF | ON |
| Rebuild | X | OFF | 1Hz |
| Predicted Fail | X | X | 2 Fast Blinks at 4Hz & Pause for 0.5 Sec |
| Hotspare | X | X | 2 Fasts Blink at 4Hz & Pause for 3.5 Sec |

HIGHLIGHTS:

- Support Enclosure Management for SAS/SATA Drives
- Support Enclosure Management through 2 channels of SGPIO (SFF-8485)
- Supports IBPI specification SFF-8489
- Supports Present & Status LEDs for each drive
 - Directly drives 2 LEDs for up to 8 slots
 - Directly drives 3 LEDs for up to 6 slots
 - With latches, drives 3 LEDs for up to 8 slots
- Supports IBPI Specification SFF-8489
- Global Activity LED supported
- Cascaded controllers can support up to 32 drives.
- Small TQFP-48 Package
 - 9mm X 9 mm pin outline
 - 7mm X 7 mm housing
- Internal Oscillator
 - No external crystal needed
- Part 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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For more information: <http://ami.com/products/backplanes-and-enclosure-management>