

The Micro Disk Serial ATA Module is solid-state design for serial and parallel ATA translation interface. It's an ideal replacement for standard SATA hard disk by no errors even under extreme shock and vibration conditions. The Micro Disk Serial ATA Module is extremely small and highly suitable for rugged environments, thus providing an excellent solution for space limitations. It is compatible with all consumer applications designed for data storage, allowing simple use for the end user.



**Features:**

- Serial ATA 1.0a Specification compliant.
- Max Capacity supported: 2G Byte.
- Optional designs for left side type and right side type
- High reliability assured based on the internal Error Correcting Code function.
- Reliable wear-leveling algorithm to ensure the best of flash endurance.
- Auto Standby and Sleep Mode supported.
- Flexible file system structure.
- Automatic Recognition and Initialization of flash devices.
- Excellent performance supporting Ultra DMA Mode.
- Capacity supported: 128MB, 256MB, 512MB, 1GB, 2GB

| Specifications                     | Descriptions  |               |
|------------------------------------|---|---------------|
| Compatibility                      | Serial ATA 1.0a Specification                                 |               |
| Flash Technology                   | NAND Type SLC Flash Memory based                              |               |
| Flash Capacity                     | 128MB, 256MB, 512MB, 1GB, 2GB                                 |               |
| Form factor                        | Horizontal Type in Rightwards<br>Horizontal Type in Leftwards |               |
| Connector                          | Standard 7-pin female Serial ATA connector                    |               |
| <b>System Performance</b>          |   |               |
| Data Transfer Mode                 | PIO mode or UDMA mode   |               |
| Sequential Read                    | 15Mbytes / sec Max.   |               |
| Sequential Write                   | 12Mbytes / sec Max.   |               |
| Average Access Time                | 2ms (estimated)   |               |
| <b>Environmental Specification</b> |   |               |
| Standard Temperature               | Operating   | 0°C ~ +70°C   |
|                                    | Non-operating   | -20°C ~ +80°C |
| Wide Temperature                   | Operating   | -40°C ~ +85°C |
|                                    | Non-operating   | -50°C ~ +95°C |
| Humidity                           | 5~95% non-condensing  |               |
| Acoustic Noise (@ 1 meter)         | 0dB   |               |
| Vibration                          | 20 G peak to peak   |               |
| Shock                              | 1500 G  |               |

| Reliability               |  |  |
|---------------------------|--|--|
| Main Time Between Failure | > 1,000,000 hours  |  |
| Error Code Correction     | 4 bits ECC Code per 256Bytes   |  |
| Endurance                 | Greater than 1,000,000 cycles logically contributed by Wear-leveling and advanced bad sector management algorithms |  |
| Data reliability          | < 1 non-recoverable error in 10 <sup>14</sup> bits read  |  |
| Data Retention            | 10 years   |  |
| Power Consumption         |  |  |
| Power Voltage             | +3.3V ± 5%   | +5V ± 10%                                  |
| Read                      | 180mA(Typ.)  | 180mA(Typ.)                                |
| Write                     | 210mA(Typ.)  | 210mA(Typ.)                                |
| Sleep Mode                | 120mA(Typ.)  | 120mA(Typ.)                                |
| Physical Specification    |  |  |
| Left Side Type            |  | Right Side Type                            |
|                           |  |  |
| <b>Warranty</b>           | Standard Temperature Level   | 3 years                                    |
|                           | Wide temperature Level   | 3 years ( Others based on special request) |