

Amtron Technology, Inc.

PCMCIA ATA Flash Card

Product Specification

Version 3.2



A. Product Information

The ATA Card is solid-state design and IDE compatible.

It is an ideal replacement for standard IDE hard disks.

It's a solid-state design offers no seek errors even under extreme shock and vibration conditions. The ATA Card is extremely small and highly suitable for rugged environments, thus providing an excellent solution for mobile applications with space limitations.

It is fully compatible with all consumer applications designed for data storage PC card, PDA, and Smart Cellular Phones, allowing simple use for the end user. The ATA Card is O/S independent, thus offering an optimal solution for embedded systems operating in non-standard computing environments. The ATA Card is IDE compatible and offering various capacities. It has low power consumption and can operate from a single 3.3/5.0 Volt power supply. The ATA Card provides memory storage for mobile computing applications, consumer electronics and embedded systems. It is fully compatible with existing systems.

B. System Features

- ATA/True IDE Mode compatible.
- High reliability assured based on the internal Error Correcting Code (ECC) function.
- Operating modes supports PC Card Memory Mode, PC Card I/O Mode and True-IDE Mode
- Reliable Wear-leveling algorithm to ensure the best of flash endurance.
- Auto Standby and Sleep Mode Supported.
- Excellent performance Supporting Ultra DMA Mode.
- Very low power consumption.
- Very high performance and high reliability.
- Rugged environment is working well.
- Automatic error correction and retry capabilities.
- +5 Volts or +3.3 Volts $\pm 5\%$ operation.
- Supports power down commands and Auto Stand-by / Sleep Mode.
- Capacity supported: 128MB, 256MB, 512MB, 1GB, 2GB, 4GB, 8GB, 16GB and 32GB

C. Specifications

System Performance		
Data Transfer Mode	PIO Mode 4 or UDMA Mode 4	
Sequential Read	20Mbytes / sec Max.	
Sequential Write	19Mbytes / sec Max.	
Average Access Time	2ms (estimated)	
Environmental Specification		
Standard Temperature	Operation	0°C ~ +70°C
	Non-operation	-20°C ~ +80°C
Wide Temperature	Operation	-40°C ~ +85°C
	Non-operation	-50°C ~ +95°C
Vibration	Operation max	20 G
	Non-operation max	20 G
Humidity	Operation max	5~95% non-condensing
	Non-operation max	5~95% non-condensing
Shock	Operation max	1500 G
	Non-operation max	1500 G
Reliability		
MainTimeBetweenFailure	> 2,000,000 hours	
Error Code Correction	8 bits ECC Code	
Endurance	Greater than 2,000,000 cycles logically contributed by Wear-leveling and advanced bad sector management algorithms	
Data Reliability	< 1 non-recoverable error 10 ¹⁴ bits read	
Data Retention	10 years	
Power Consumption		
Power Voltage	+3.3V ± 5%	+5V ± 10%
Read	57.7mA(Typ.)	57.7mA(Typ.)
Write	60mA(Typ.)	60mA(Typ.)
Sleep Mode	2.3mA(Typ.)	2.3mA(Typ.)

D. Physical Specifications

D.1 Physical Specifications

<i>PCMCIA-ATA Flash Card</i>	
Length:	85.5 ± 0.1 mm
Width:	54.4 ± 0.1 mm
Thickness:	5.0 ± 0.1 mm
Weight:	28.6 g (1.00 oz) maximum

D.2 Dimension

