

FLASH ATA

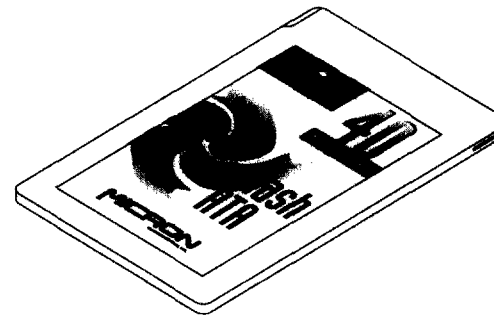
MQAT010A, MQAT020A,
MQAT040A, MQAT080A

PC CARD™ ATA/ATA (IDE)

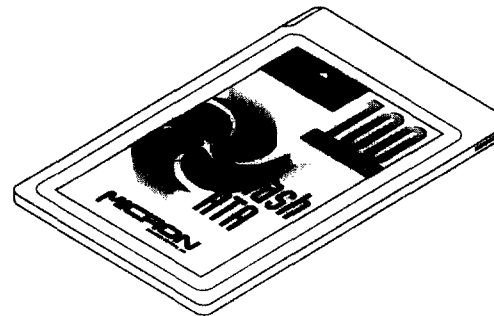
FEATURES

- Implements highly integrated memory controller:
 - 16-bit PC Card ATA standard
 - Also PCMCIA 2.1 compatible
 - ATA (IDE) compatible
- Type I PC Card form factor (3.3mm thick)
- Type II PC Card form factor (5mm thick)
- Uses standard ATA software drivers:
 - No additional software drivers required
- High reliability:
 - No moving parts
 - Noiseless
 - 10,000 card insertions/removals
 - 500,000 hours MTBF
 - High shock and vibration tolerance
- Powerful Reed-Solomon error correction and detection
- Optimized power consumption:
 - Selectable based on performance and power requirements
 - Automatic sleep mode with fast wakeup
- Supports standard power management commands:
 - POWER-DOWN command
 - SLEEP command
- High performance:
 - No spin-up or rotational latency
 - 6MB/second burst rate
 - Multiple mode supported for fast data transfers (2 sectors/block)
- Available densities:
 - 10MB, 20MB, 40MB (Type I PC Card)
 - 10MB, 20MB, 40MB, 80MB, 100MB (Type II PC Card)
- 3.3V or 5V supply voltage (no 12V required)
- Capacities doubled using optional preloaded compression software

TYPE I FLASH - ATA CARD



TYPE II FLASH - ATA CARD



FLASH CARD

GENERAL DESCRIPTION

The Micron Flash ATA Card is a PCMCIA-ATA and IDE-compatible, solid-state disk card with densities ranging from 10MB to 100MB. The card implements Micron's 40 megabit flash memory, which is specifically designed for high-performance, low-cost mass storage applications. The card is a drop-in replacement for existing rotating magnetic

PCMCIA hard drives and uses standard ATA software drivers. With no moving parts, silent operation and durable PCMCIA Type I or Type II enclosure, the Micron Flash ATA Card provides a superior memory solution for any application requiring rugged, compact, low-power (battery-powered) and reliable mass storage.

SPECIFICATION SUMMARY

PERFORMANCE

(0°C ≤ T_A ≤ +60°C; V_{cc} = 3.3V ±0.3V or 5V ±10%)

PARAMETER	TYP	UNITS	NOTES
Initial Access	1	ms	
Initial WRITE to Buffer	400	ns	
Sustained Rate (READ)	1	MB/s	1
Sustained Rate (WRITE)	400	KB/s	
Burst Rate	6	MB/s	2
Data Path	x8 or x16	Bits	
Rotational Latency	0	ns	
Spin-Up	0	ns	
Buffer/Burst Size	512	Bytes	3
Power-Up Time	2	ms	

FLASH CARD

CURRENT DRAIN

(0°C ≤ T_A ≤ +60°C; V_{cc} = 3.3V ±0.3V or 5V ±10%)

PARAMETER	TYP	UNITS	NOTES
READ Current	30 to 100	mA	4
WRITE Current	35 to 150	mA	4
Sleep Mode Current	<0.5	mA	

- NOTE:**
1. Parameter depends on software overhead.
 2. Parameter is specified for a READ or WRITE.
 3. Buffer/burst size is 1,024 bytes in multiple mode.
 4. Typical current draw is selectable based on power and performance requirements.

SPECIFICATION SUMMARY (continued)

RELIABILITY

(0°C ≤ T_A ≤ +60°C; V_{CC} = 3.3V ±0.3V or 5V ±10%)

PARAMETER	TYP	UNITS	NOTES
WRITE/ERASE Cycle Endurance	400,000	Per Sector	
MTBF	>500,000	Hours	
Start/Stop Cycles	NA		

ENVIRONMENTAL CONDITIONS

PARAMETER	MIN	MAX	UNITS	NOTES
Temperature (Operating)	0	+60	°C	
Temperature (Nonoperating)	-20	+85	°C	
Shock (Operating)		1,000	G	1
Shock (Nonoperating)		1,000	G	1
Vibration (Operating)		15	G	2
Vibration (Nonoperating)		15	G	2
Humidity (Operating)	8%	95%		3
Humidity (Nonoperating)	8%	95%		3
Humidity (Maximum wet bulb)		+30	°C	
Altitude (Operating)	-200	+80,000	Feet	
Noise		0	db	

- NOTE:**
1. Parameter is specified for any axis or direction. A ruggedized version of the Flash ATA Card will be offered in the future.
 2. Measured peak to peak.
 3. Noncondensing.

FLASH CARD