

PRODUCT SPECIFICATIONS

Size: 30mm x 40mm x 5mm

Weight: 13g

Capacity: 8GB / 6GB

Power: 3.3VDC (+5% / -15%)

- Current (write): 190mA
- Current (peak): 310mA

Interface:

PATA

- 35Pin ZIF (0.3mm pitch)
- 16bit DATA bus
- Up to 33MB/sec transfer rate in Ultra DMA mode 2
- Up to 16.7MB/sec transfer rate in PIO mode 4

CE-ATA & ATA on MMC

- 12 pin ZIF (0.5mm pitch)
- 4-bit DATA bus
- Up to 26MB/sec transfer rate with 52MHZ clock

ENVIRONMENTAL CHARACTERISTICS

OPERATING

Temperature: 5° to 60° C

Shock (half sine wave): 400 G (2 ms)

Random Vibration (RMS): 0.67 G (5 to 500 Hz)

Altitude: -300 to 3048m

Acoustics (Bels, Idle (Typical)): 1.8

NON-OPERATING

Ambient temperature: -40° to 70° C

Shock (half sine wave): 2000 G (1 ms)

Random Vibration (RMS): 3.01 G (5 to 500 Hz)

Altitude: -300 to 12,192m

RoHS Compliant⁶: Yes

¹ The ability to withstand a fall from a given drop height is dependent on a number of factors, including the angle of and surface of impact.

² Information on Compact Flash standards can be found at: www.compactflash.org

³ Information on PATA standards can be found at: www.t13.org

⁴ Information on ATA on MMC standards can be found at: www.mmca.org

⁵ Information on CE-ATA standards can be found at: www.ce-ata.org

⁶ RoHS refers to the European Union Directive 2002/95/EC on the restriction of hazardous substances in electrical and electronic equipment.

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CONVERGE



ENABLE





Introducing Mikey, the contact-managing, calendar-keeping, game-playing, photo-taking, movie-making, music-rocking, converged device-enabling new Microdrive® 3K8 from Hitachi. It'll change the way you design converged devices.

A WORLD OF SMALL EXPECTATIONS

Consumer demand for converged devices is growing at an astronomical rate, due in large part to an ever-widening array of must-have features and functions. A mobile phone is no longer a mobile phone; it's a camera, MP3 player, organizer, Internet-access device and video player — and there's a host of other memory consuming applications waiting in the wings. Not only are consumers demanding more

functionality, they're demanding longer battery life, more storage capacity and exceptional ruggedness...all in a diminutive, easy-to-carry package. To meet these demands, developers must incorporate a growing number of features into a shrinking form factor, and Hitachi is the one company with the products, service, and innovation to help developers deliver the feature-rich devices consumers want.

CONVERGENCE MADE EASY...Microdrive 3K8 - "Mikey"

Hitachi Global Storage Technologies (GST) recognizes the challenges developers face in converging a large number of features into a petite package, and answers that challenge with "Mikey," the brand new 1.0-inch Microdrive 3K8. Mikey packs an astounding 8 GB of storage into a miniscule 30 x 40 x 5mm form, and compared to previous Microdrive products, reduces power consumption by almost 40%. Mikey also boasts shock tolerance that more than doubles non-operating and operating drop heights.

WHEN IT COMES TO CONVERGED DEVICES...THINK SMALL

A smaller footprint that doesn't sacrifice storage capacity is one of the signature features of Mikey. It's the ultra-miniature, high-capacity Microdrive 3K8 that allows developers to feed the demand for high functionality with a low profile. Mikey is 20% smaller and almost 20% lighter than its predecessor, which gives developers unprecedented flexibility in designing the next great mobile handset.

A RUGGED DRIVE FOR A RUGGED WORLD

People drop things all the time. CE manufacturers need to address this reality with the Microdrive digital media that is as rugged as it is powerful. Hitachi understands this and has designed Mikey to survive the hardest hits, the highest drops and the clumsiest consumer. Developers can expect shock tolerance gains that more than double existing non-operating and operating drop heights. This 100% increase in shock robustness enables a non-operating drop height¹ of 1.2 meters (for the drive alone), which gives developers a built-in ruggedness that allows more design options when factoring in other shock reduction techniques. When employing standard shock reduction approaches like practical case design, drive suspension and shock isolation systems, developers can deliver a product that substantially exceeds the industry baseline for resiliency. Hitachi has designed two shock isolation systems, drive corner bumpers, that double the drive shock performance, one for existing CF-II² implementations and another for small profile, Mikey-specific designs.

For applications requiring even greater degrees of shock tolerance, Hitachi offers an innovative falling sensor technology. This optional feature, called Extra Sensory Protection™ (ESP), enables the drive to identify a freefall scenario in a mere 4-inch vertical span, triggering an immediate retraction of the read/write head. This effectively makes every drop a non-operating drop. In short, Mikey is the toughest Microdrive digital media on the market, and it allows developers to be confident that their products will survive the vagaries of a rugged world.

WHEN IT COMES TO POWER CONSUMPTION...LESS IS MORE

Lower power consumption means Mikey can be integrated into mobile phones with little impact on talk time. Manufacturers can now offer more feature-rich devices with better performance, as well as deliver an enhanced user experience and a more attractive product. By employing innovative technologies to reduce static power consumption, Mikey cuts consumption by an impressive 37% over its predecessor.

WHEN IT COMES TO CAPACITY...MORE IS BETTER

8 Gigabytes. That says it all. When developers are handed an incredibly robust, power frugal, miniscule Microdrive 3K8, the sky's the limit. More features, more functionality and more flexibility to build the next generation of must-have handsets is what Mikey makes possible. With the Hitachi name stamped on it, developers are finding that the possibilities are endless.

STANDARDIZATION DRIVES THE FUTURE

Hitachi provides industry standard PATA³ interface support, enabling developers to leverage existing and legacy hardware applications with Microdrive 3K8. With the new foam bumper solution, Mikey can replace existing embedded CF-II form factor storage solutions, with substantial improvement in drop shock performance.



Hitachi allows developers to take full advantage of the new ATA on MMC⁴ or CE-ATA⁵ standards. This means manufacturers can include the Microdrive 3K8 by adding a 12-pin MMC hardware interface, versus the 35 pins required for PATA, and can run the drive on a 3.3V power supply. ATA on MMC facilitates implementation of hard drives in existing MMC designs. Software engineering is easier with the CE-ATA interface because developers need only support a subset of the ATA command set. Ultimately with a smaller drive, a smaller connector, easier implementation and higher performance (26MB/s versus 16.7 MB/s PATA performance at PIO mode 4), developers have a smaller form factor, a more powerful converged device...and get to market faster.

HITACHI SERVICE, HITACHI SUPPORT, HITACHI SUCCESS

With 50 years of drive technology experience, Hitachi understands the production challenges facing developers today. That's why Hitachi has built five design facilities located in the UK, Japan, China, Taiwan and the US. This ensures that there will always be a team of design experts ready to offer practical advice and qualified assistance, regardless of time or geography. These Hitachi Design Studios are dedicated sources for design houses, integrators, ODMs and OEMs looking for hands-on training and information on the latest technological developments. Hitachi works closely with leading chip set manufacturers to provide developers with the easiest drive integration possible, and Hitachi continues to lead the industry in service, support...and success.