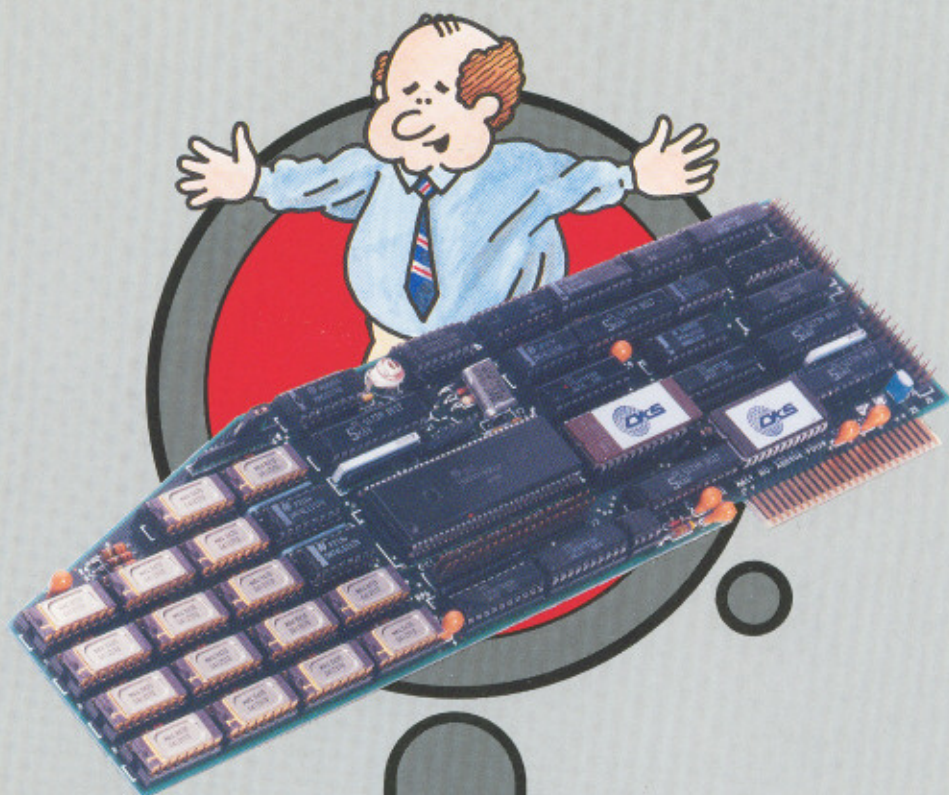
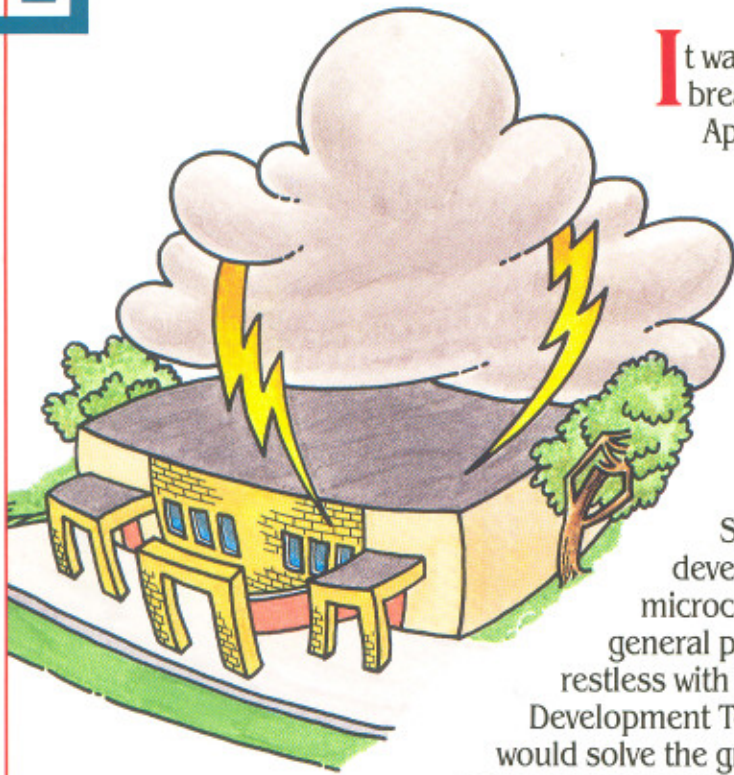


KACHE PLUS CARD



FOR APPLE II USERS





It was a startling phenomenon. A rare technological breakthrough that would catapult the performance of Apple II floppy drive systems to new heights. For in the spring of 1986, in the skies over Dayton, Ohio, there appeared a blinding flash. A flash of brilliance that hovered over the development laboratories of Ohio Kache Systems and heralded the creation of the Kache Plus Card... the ultimate enhancement product of Apple II systems with floppy disk drives.

Development Of The Kache Plus Card

It began in the "think tank" of Ohio Kache Systems (OKS), a company solely dedicated to the development of enhancement products for today's microcomputers. It was no great mystery to OKS or to the general public that Apple II floppy owners were growing restless with the limitations of their systems. So, OKS set its Development Team to the task of creating an adapter board that would solve the greatest frustrations of these Apple owners: slow data accessing and limited system expandability.

Engineers and programmers at OKS forged ahead through the tedious hours of development and testing. Finally, their dedication and hard work paid off. They successfully created a board that promised to be the ultimate enhancement product for Apple II floppy drive systems... The Kache Plus Card.

What Is The Kache Plus Card?

In one word? Remarkable! But, to be more precise...it's a powerful floppy disk adapter board that operates up to six floppy drives, and offers faster accessing speed than hard disk drives "plus" the added features of up to 15 popular expansion boards. In addition, it increases your Apple's performance with up to 512K of RAM disk. Development of the Kache Plus Card marks a substantial step forward in the field of computer technology, surpassing the sophistication level of any enhancement product or comparable card created to date.

By offering faster data accessing than a hard disk drive, condensing the features of several expansion boards into one card and adding a RAM disk, the Kache Plus Card effectively resolves the two greatest frustrations of Apple II floppy users—slow data retrieval and limited system expandability. Remarkable? We think so.

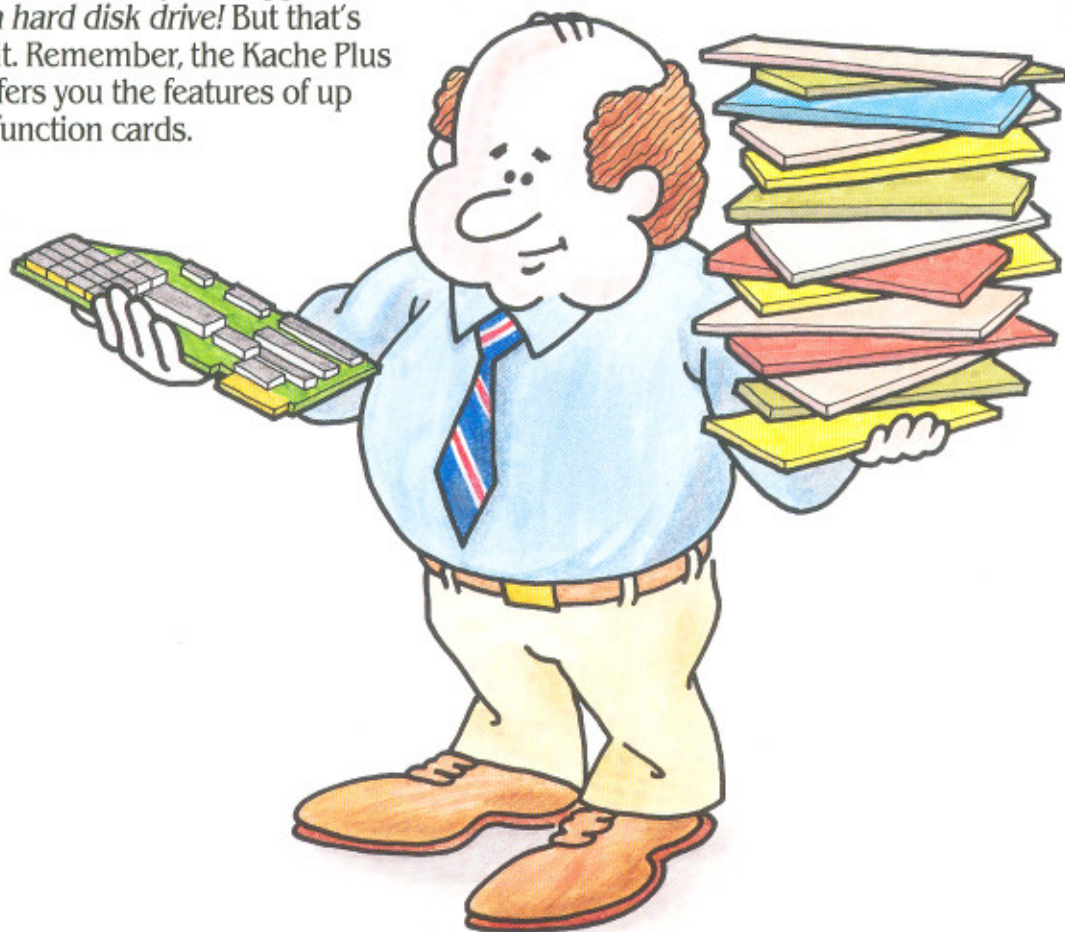


Can The Kache Plus Card Really Access Data Faster Than Any Hard Disk Drive?

You bet! The Kache Plus Card combines the efficiency of cache memory with the intelligence of a Hitachi 64180 microprocessor to achieve accessing speeds from floppies that are 2.5 times faster than *any* hard disk drive.

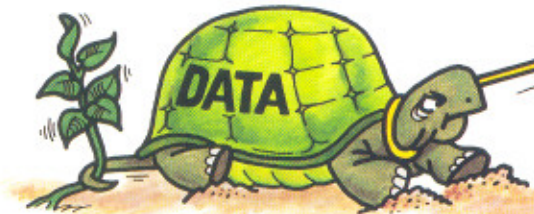
I Suppose You'll Even Tell Me There's Magic In The Kache Plus Card.

No, not magic. OKS prefers to call it "flashes of brilliance". You see, with magic "the hand is quicker than the eye", and we all know that the Kache Plus Card *makes your floppies access faster than a hard disk drive!* But that's only part of it. Remember, the Kache Plus Card also offers you the features of up to 15 multi-function cards.



OK, I've Got That. Now What Is Cache Memory?

Historically, cache was a limited amount (16K-32K) of high speed buffer memory used between the CPU and the main memory in large main frame computers. It was a holding place or



"cache" for data (primarily operational procedures) that had been

retrieved from memory until the CPU was ready to receive it. Data in cache would then be transferred to the CPU electronically where the actual processing would take place.

So How Does "Historical" Cache Relate To Today's Kache Plus Card?

Throughout the history of computers the speed of processing has consistently exceeded that of data accessing and retrieval, resulting in lost efficiency and productivity. With recent advancements, floppy disk drives have come to be viewed as an exceedingly slow means of data accessing. The Kache Plus Card not only bridges this gap but accelerates the accessing performance of floppy drives beyond that of hard disks by creating a lightning fast "intelligent RAM disk card".

How Can The Combination Of Cache Memory And A Microprocessor Enhance Accessing Time?

Since data "most frequently accessed" already resides in cache, it can be transferred to the Apple's CPU electronically whenever it is requested for processing. In doing so, the Kache Plus Card replaces slow mechanical data accessing with the speed of electronic data transfer and eliminates four time-consuming steps previously required for each access...

- Repeated transfer of small segments of data
- Copying of data from disk to the CPU
- Mechanical search of data from disk
- Reading of data from disk

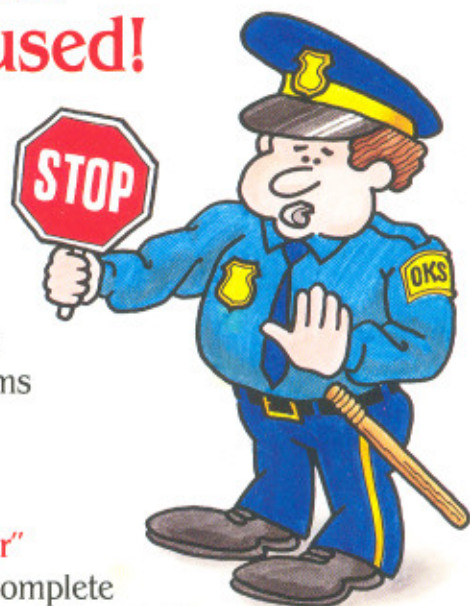
Additionally, it reduces disk operating overhead by retaining directory files in cache memory.

Electronic search, read and relay can be hundreds, even thousands of times faster than the same process performed mechanically. Multiply the time savings for a single access request by the number of times the same—or similar—function is performed, and you'll begin to see why we developed this product!



Stop! Wait! Hold The Phone! I'm Getting Confused!

Sorry, we're so excited about the Kache Plus Card that we tend to get ahead of ourselves. Okay, you already know that the Kache Plus Card accesses data 2.5 times faster than a hard disk drive, operates up to six floppy drives concurrently, expands Apple performance with up to 512K of RAM disk, utilizes up to 512K of cache memory and has its own onboard microprocessor. Now, let's take a look at what the combination of these key components means in terms of performance.



Performance-Plus From The "Computer Within Your Computer"

The Kache Plus Card is in essence a small computer complete with processor logic and memory. It's powerful enough to do even the most intricate functions, and intelligent enough to do it without being told. So, it shouldn't be too surprising to know that the Kache Plus Card...

Automatically fills cache memory with up to 512K of your "most frequently accessed data"

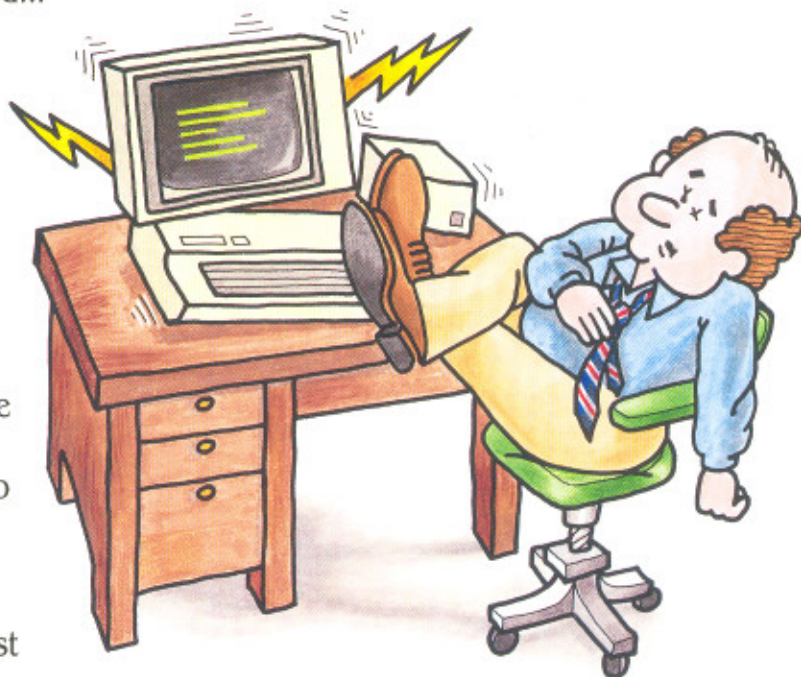
Automatically maintains the data content of cache using the "LUFO" method (Least Used First Out)

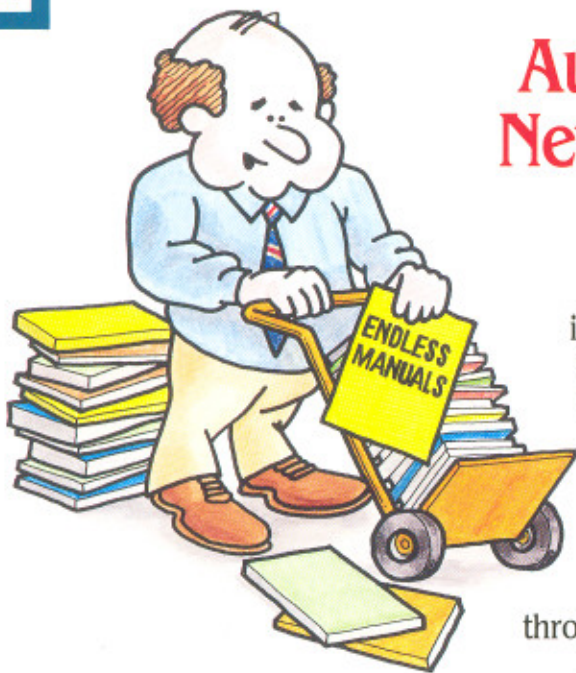
Automatically anticipates data requests and transfers needed files to your Apple's CPU electronically

Automatically saves data in RAM disk mode for future transfer to floppy disk

Automatically directs the transfer of data to and from cache

Automatically coordinates the various functions and features of the Kache Plus Card as they interface with those of the host





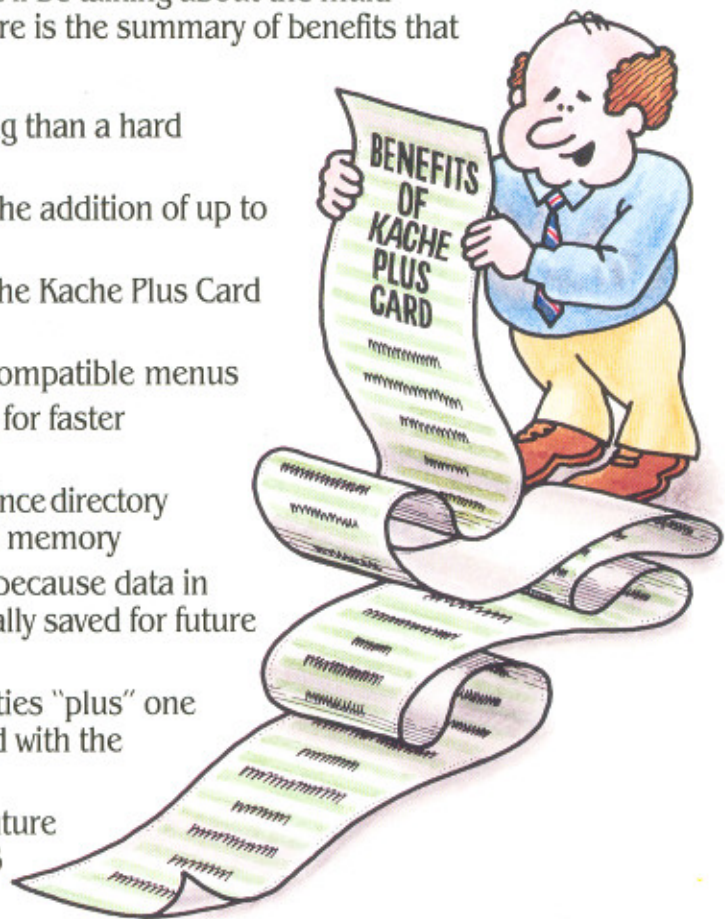
Automatic Huh? How Many New Commands Will I Really Have To Learn?

None, really! The Kache Plus Card is intelligent, independent and totally self-sufficient. There is no loading, no reading of endless manuals, no minimum IQ or age required. The Kache Plus Card comes complete with on-board firmware, ROM and software. Self diagnostics are built-in, and the card is completely menu driven. The Kache Plus Card will even ask you the information it needs for configuration as well as any subsequent changes you might desire. And, everything is done through the keyboard with the help of straightforward menus.

Summarize The Benefits For Me

Gladly! Keep in mind, though, that we have only focused on *half* of what the Kache Plus Card can do. We'll be talking about the multi-function features in a moment. But, here is the summary of benefits that have accrued so far:

- 2.5 times faster data accessing than a hard disk drive
- Expanded performance with the addition of up to 512K of RAM disk
- No new commands to learn; the Kache Plus Card is totally automatic
- Easy-to-understand, mouse-compatible menus
- Up to 512K of cache memory for faster data accessing
- Reduced operating overhead since directory files can be retained in cache memory
- Decreased data vulnerability because data in RAM disk mode is automatically saved for future transfer to disk
- Comprehensive software utilities "plus" one back-up diskette are included with the Kache Plus Card
- Designed to accommodate future expansion features from OKS



THE SECOND FEATURE!

KACHE PLUS CARD SOLVES CASE OF LIMITED SYSTEM EXPANDABILITY



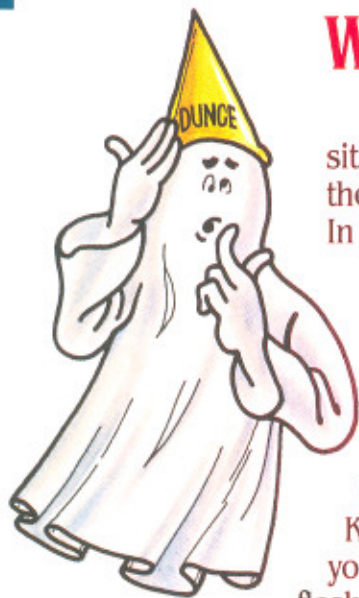
Grab some popcorn and candy and get comfortable. The *second* amazing feature of the Kache Plus Card is just starting, and it promises to be a thriller!

A crippling technological "disease" had begun to spread through Apple II systems. A debilitating "disease" that threatened the expandability of Apples with each new outbreak of "EXPANSION BOARD FEVER". Let's face it, over the past few years developers have eagerly produced bandaid-type remedies to help the Apple keep pace with the growing sophistication of both its users and the computer market as a whole. Excessive ghost slotting, wasteful one-function-per-board designs, and the lack of inter-compatible boards have congested the Apple's peripheral slots and all but brought the future of its expansion capabilities to a screeching halt. The exclusive purpose of add-on boards is to enhance the performance of the host, not throw road blocks in the way of future expansion products. The Development Team of OKS again searched their brains and called upon their years of experience to not only address this problem in the design of the Kache Plus Card but also solve it once and for all.

How Can The Kache Plus Card Solve The Problem Of Limited System Expandability?

The Kache Plus Card doubles as a multi-function board with a choice of up to 15 expanded features for your Apple II system. It eliminates the "card congestion" in your computer by combining in one powerful board the features that would otherwise require numerous, individual expansion boards. And, by utilizing the benefits of the Kache Plus Card's cache memory and 64180 microprocessor, each feature offers a performance advantage over comparable expansion boards on the market. And, it doesn't require "forced" ghost slotting in the traditional sense of the word.





What Is "Forced" Ghost Slotting?

Forced ghost slotting is a term traditionally used to describe situations where multi-function cards require the user to assign or "force" the allocation of one peripheral slot for each function featured on the card. In most instances, three to four expansion slots can be tied up with the insertion of a single card, and these "ghost slots" cannot be used for any other expansion needs unless the multi-function card is removed. Moreover, accidental placement of a card in a ghost slot can even cause damage to it.

The Kache Plus Card resides in slot six and ghost slots in one and two; however, it does not require the use of slots one and two in order to run. The Kache Plus Card actually gives you optional use of your six remaining peripheral slots thanks to a flash of brilliance called "intelligent" ghost slotting.



What In The World Is "Intelligent" Ghost Slotting?

"Intelligent" ghost slotting enables you to utilize cards in *any* of your peripheral slots without disturbing the operation of the Kache Plus Card. The on-board microprocessor senses when a card is placed in a slot and automatically assigns running priority to that card. In doing so, the Kache Plus Card shuts down its own function that originally required ghost slotting of that particular slot.

No one can eliminate the problem of ghost slotting entirely because certain software simply requires it, but OKS has gone beyond other developers to free up as many peripheral slots as possible. After all, you have more important uses for those extra expansion slots. With the Kache Plus Card's "intelligent" ghost slotting you always have the option of using them.



What Multi-Functions Are Available?

The Kache Plus Card comes complete with several of the most popular expansion features to date. And, with the optional features offered it can be easily upgraded to grow with the sophistication of the computer market. Here's a run-down on all the features the Kache Plus Card can bring right to your doorstep...

Up to 512K cache memory or RAM disk

Clock/Calendar with time and date stamping of files

Controller Board—Allows user to operate 6 floppy disk drives concurrently. It is packaged separately in a clear lucite case, mounted externally and connected via cable directly to the Kache Plus Card.

Parallel printer interface—Emulates three popular printer interface boards to fulfill all possible printing needs:

- The Apple Parallel Printer card (dumb) for text only modes
- The Grappler Plus (smart) for graphic and text modes
- The OKS board (super intelligent) for graphic and text modes "plus". It possesses the ultimate capabilities for the ultimate performance in interface drivers

Serial interface—Standard three line RS232 serial interface. Supplied for in-house communication, limited printer use and future expansion adaptation.

Super Serial Card interface—Supplied for modem, printer, and terminal communication needs. An exact, function-for-function duplication of Apple's Super Serial Card.

Up to 400K print buffer—On-board firmware that allows you to configure varying portions of the cache memory as a parallel print buffer with up to 400K.

Software utilities—Comprehensive utilities for the clock/calendar, analog, digital, read, write, time/date stamp, geographical time mapping, etc. Supplied on standard 5¼" floppy diskette. One master and one back-up copy included.

External power supply—Optional package for users who prefer to power the Kache Plus Card independently of their Apple. The Kache Plus Card can operate safely without the aid of the external power supply. Even fully loaded it draws a minimum amount of power from your Apple.

However, there are a couple of strong advantages to be gained by the ongoing use of the external power source:

- Serves as a data support system. By keeping OKS's external power source on after you turn your Apple's power off, your data will be retained in the Kache Plus Card's cache memory. It eliminates power drain and excessive heat dissipation from your expansion boards and keeps your data booted up until you return to use your computer.

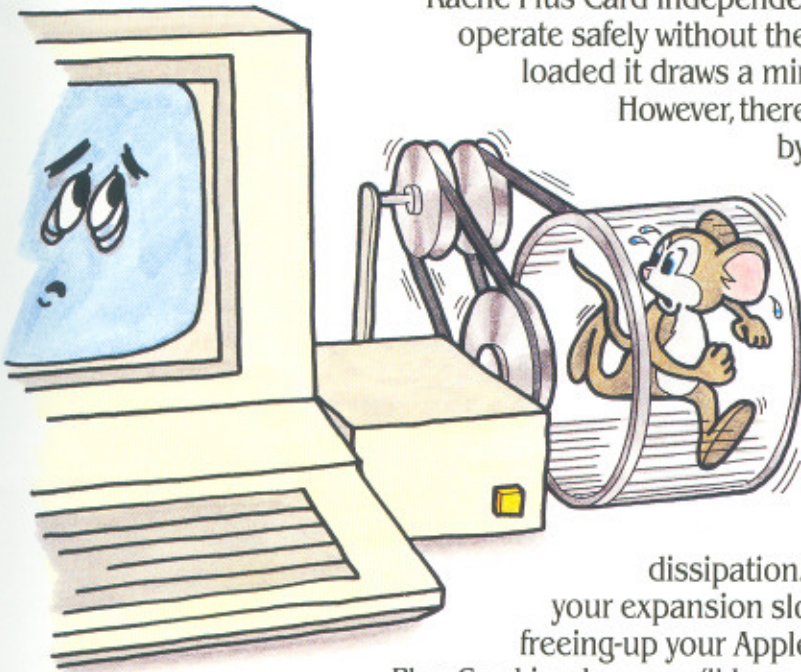
- Prevents excessive power drain/heat dissipation. We designed the Kache Plus Card to free up your expansion slots. Why shouldn't you also have the option of freeing-up your Apple's power source? Remember, with the Kache

Plus Card in place, you'll have new use of your six remaining slots, so load

them up with a clear conscience. OKS's external power source eliminates any chance that your peripheral boards will overload your Apple.

To reduce the congestion inside your Apple, OKS's Development Team designed a special plexiglass case to house the optional Kache Plus Card features. The transparent case enables you to see the entire interworkings of the option board which mounts in clear view on the exterior of your Apple.

Future innovations already under development at OKS are being carefully engineered for easy assimilation into the Kache Plus Card and its accompanying option board.

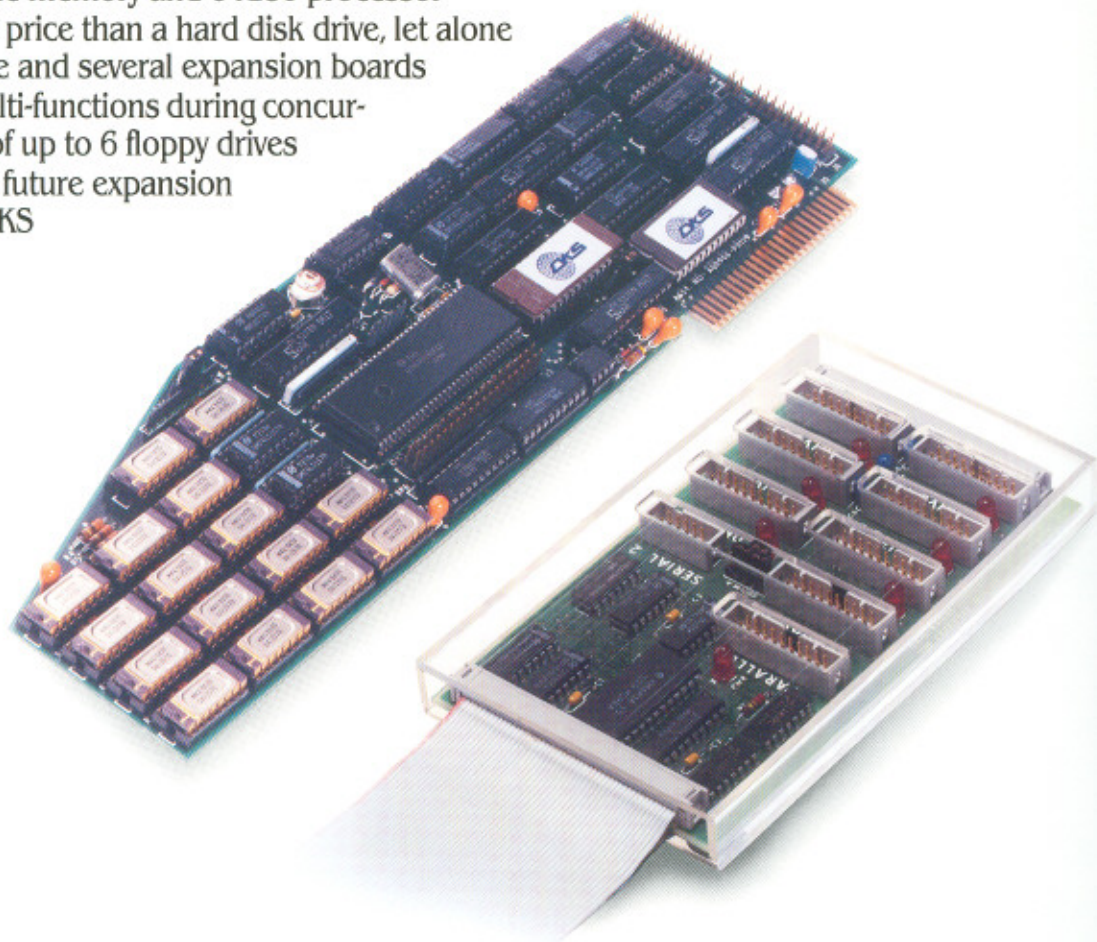




Wow! This Card Is Loaded With Features! How About Running Through The "Second Feature" Benefits For Me Again!

No problem. The Kache Plus Card does offer a large number of functions, features and benefits. Here's a full accounting of them. The Kache Plus Card...

- Offers Apple II owners up to 15 popular multi-functions in one board
- Upgrades your system to grow with the sophistication of the computer market
- Eliminates the "card congestion" in your expansion slots
- Replaces "forced" ghost-slotting with "intelligent" ghost slotting
- Outperforms comparable cards on the market because each multi-function utilizes the Kache Plus Card's cache memory and 64180 processor
- Sells for a lower price than a hard disk drive, let alone a hard disk drive and several expansion boards
- Performs all multi-functions during concurrent operation of up to 6 floppy drives
- Accommodates future expansion features from OKS



Compatibility

The Kache Plus Card is compatible with Apple II, II+, IIe and IIe Enhanced systems with floppy disk drives. It runs under all four Apple operating systems and is 100% compatible with every software package in today's market. The Kache Plus Card is adapted for use with 5¼" Apple disk II, Duo Disks with 140K and other pin compatibles.

Does Ohio Kache Systems Guarantee Its Product?

You bet! OKS offers a 30 day money back guarantee as well as a full year warranty on all components and labor. OKS further strives to ensure your satisfaction and convenience with a 48 hour in-factory turn-around time on all repair services.

Direct From OKS

The Kache Plus Card is available exclusively from Ohio Kache Systems on a direct mail basis only. For further information or to order your Kache Plus Card, call us toll free at:

1 (800) 338-0050

In Ohio call (513) 890-3913

or use the enclosed form to order by mail. Visa, MasterCard, bank or certified checks accepted. Please allow 2-3 weeks for delivery.



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513-890-3913

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computer enhancement products.

EXPOSE YOURSELF... TO THE KACHE PLUS CARD.

Accelerate Your Floppy Drives...To Out Perform Any Hard Disk Drive **PLUS** Gain The Added Features Of Up To 15 Multi-Functions

*The Kache Plus Card...Shocking Speed **PLUS** Expanded Performance-*The Kache Plus Card is a powerful floppy disk adapter board for Apple II systems that operates up to six floppy drives. It offers faster accessing speed than hard disk drive **PLUS** the added features of up to 15 popular expansion boards.

*Faster Accessing Than Hard Disk Drive-*The Kache Plus Card combines an advanced form of RAM, known as cache memory, with the power of a microprocessor to achieve a 2.5 to 1 speed advantage over hard disk accessing. Governed by a Hitachi 64180 microprocessor, the Kache Plus Card becomes an intelligent RAM disk card that...

AUTOMATICALLY fills cache memory with up to 512K of your "most frequently accessed data"

AUTOMATICALLY maintains the data content of cache using the "LUFO" method (Least Used First Out)

AUTOMATICALLY anticipates data requests and transfers needed files to your Apple's CPU electronically

AUTOMATICALLY saves data in RAM disk mode for future transfer to floppy disk

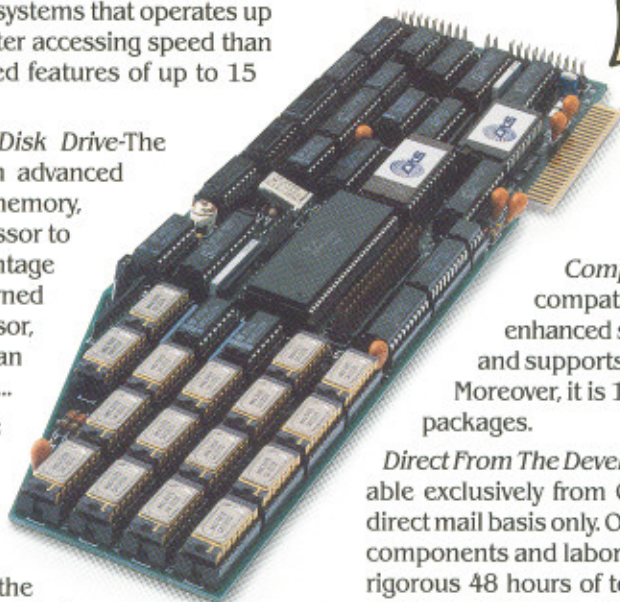
AUTOMATICALLY time and date stamps files written to disk

*Multi-Function Features-*The Kache Plus Card also doubles as a multi-function board with a choice of up to 15 expanded features for your Apple II system. And, by utilizing the benefits of the Kache Plus Card's cache memory and 64180 microprocessor, each feature offers a performance advantage over comparable expansion boards on the market.

The standard Kache Plus Card comes complete with several of the most popular expansion features to date. And, with the optional features offered it can be easily upgraded to grow with the sophistication of the computer market. In addition, future innovations from OKS will be carefully engineered for easy assimilation into the standard Kache Plus Card design.

Standard Features: 256K Cache Memory/RAM Disk, On Board Clock/Calendar with Battery Back-up; Utilities for Clock/Calendar; Back-up Utilities Diskette; Concurrent Operation of 2 Floppy Drives; User Friendly/Mouse Compatible Menus; On Board Firmware Utilities for Future Upgrade.

Optional Features: 512K Cache Memory/RAM Disk Upgrade; Expander Module which includes: Concurrent Operation of 6 Floppy Drives, Parallel Printer Interface, 256K/512K Parallel Print Buffer, Super Serial Interface, 3 Line Serial Interface, EEPROM; External Power Supply; Cable Options which include: Duo-Disk Cable, Serial Interface Cable, Parallel Interface Cable; Replacement Battery for Clock/Calendar.



Compatibility- The Kache Plus Card is compatible with Apple II, II+, IIe and IIe enhanced systems with 1-6 floppy disk drives, and supports DOS, PASCAL, ProDOS and CP/M. Moreover, it is 100% compatible with all software packages.

Direct From The Developer- The Kache Plus Card is available exclusively from Ohio Kache Systems (OKS) on a direct mail basis only. OKS offers a full year warranty on all components and labor as well as a 30 day trial period. A rigorous 48 hours of testing is completed on each unit prior to shipment. If the Kache Plus Card does not perform as we say it will, simply return it to OKS and your money will be fully refunded.

Don't Buy A Hard Disk Drive Or Another Add-On Board... Buy the Kache Plus Card instead. Priced at:

\$395⁰⁰

(Price indicated is for the standard Kache Plus Card. Optional features are available at an additional charge.)

The standard Kache Plus Card costs less than any hard disk drive. It's even priced below the cost of buying separate boards for each of the standard features.

For shocking speed **PLUS** expanded performance...Expose yourself to Ohio Kache Systems, and its latest product! For more information on the new Kache Plus Card call us toll free at...

1-800-338-0050

or write for our free brochure.

Available soon: The Data Kache Card for IBM and IBM compatible systems.



Ohio Kache Systems Corp.
4166 Little York Road
Dayton, Ohio 45414-2566
513-890-3913

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OKS KACHE PLUS CARD COMPARISON CHART



	Kache Plus Card	Business Card	Super Serial Card	Multi I/O Card	Multi Core Card	Apple Memory Card
Controls two Floppies	Yes	No	No	No	No	No
Controls up to six Floppies	Yes*	No	No	No	No	No
Caches Standard Floppies	Yes	No	No	No	No	No
Enhances Floppies to Hard Disk Performance	Yes	No	No	No	No	No
Standard Interface Connectors	Yes*	Yes //c	Yes	Yes	Yes	N/A
Clock/Cal w/Battery Back-Up	Yes	Yes	No	Yes	Yes	No
Parallel Printer Port	Yes*	Yes with Cable	No	No	Yes	No
Super Serial Port	Yes*	Yes	Yes	No	No	No
Serial Modem Port	Yes*	Yes	Yes	Yes	Yes	No
RAM Disk	up to 400K	None	None	None	256K	up to 1Meg
Print Buffer	up to 400K*	Optional 64K	None	None	None	None
ROM	34K	32K	2K	16K	4K	4K
Memory Size	256K up to 512K optional	0	0	0	256K	256K up to 1Meg optional
Requires 1 Slot For Min. Operation	Yes	No	Yes	Yes	No	Yes
Saves Slots	Yes	No	No	No	No	No

	Kache Plus Card	Business Card	Super Serial Card	Multi I/O Card	Multi Core Card	Apple Memory Card
Prints Graphics & Text	Yes*	Yes	No	Yes	Yes	No
Automatic Baud Rate	Yes*	No	Yes	No	No	No
Baud Rates Supported (Bit/Sec)	150 to 38.4K*	75 to 9.6K	50 to 19.2K	50 to 19.2K	150 to 19.2K	None
Option for 300/1200 Baud Modem	Yes*	No	No	Yes	Yes	No
Menu Driven Firmware	Yes	Yes	No	No	Yes	No
Mouse Compatible Menus	Yes	Yes	No	No	No	No
Future Upgrades	Yes	No	No	No	No	No
Save Configuration	Yes*	No	No	Yes	Yes	No
Utilities Package	Yes	Yes	No	Yes	Yes	No
Supply Back-Up of Utilities	Yes	No	No	No	No	No
Self Diagnostic Firmware	Yes	No	No	Yes	No	No
Fully socketed and User upgradeable	Yes	No	No	Yes	No	Yes
Optional Power Supply	Yes	No	No	No	No	No
Operating Systems Supported	ProDOS PASCAL DOS3.3 CP/M	ProDOS	ProDOS PASCAL DOS3.3 CP/M	ProDOS DOS3.3	ProDOS	ProDOS PASCAL DOS3.3
Base Price	\$395	\$239	\$139	\$149	\$399	\$250

*Featured on Optional Expander Module