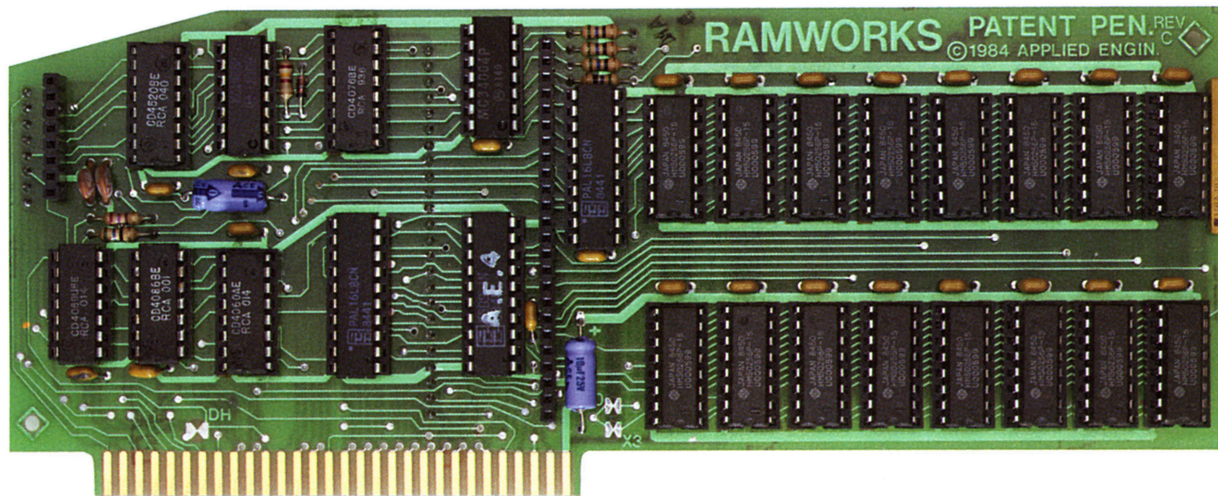


# RAMWORKS

COMPATIBLE WITH IIe



Applied Engineering has solved the most common problem that computer owners have—running out of memory. RAMWORKS is the perfect solution because it offers the widest and biggest memory sizes available anywhere.

RAMWORKS—A card that plugs into the Apple IIe auxiliary slot and functions EXACTLY like Apple's extended 80 column card (in fact, a 128K RAMWORKS actually costs less than Apple's 64K extended card) but with RAMWORKS you get more memory, 80 column text, a 3-year warranty and most importantly, room to grow without using more slots. A design so advanced there's a patent pending on it. If you have an IBM, we suggest you do what everybody does, trade it in on a IIe.

With the optional RAMDRIVE™ software RAMWORKS can also be used as an ultra high speed RAM disk. Depending on the memory size of the RAMWORKS card, you can emulate up to 4 disk drives with one RAMWORKS card. All at about 20 times faster than mechanical floppy drives and about 5 times faster than a hard disk.

RAMWORKS can be used as a solid state disk with DOS 3.3, PASCAL, CP/M and PRO-DOS (up to 1,900 blocks free)!

RAMWORKS can be purchased in a wide range of sizes and is user upgradeable using either 64K RAMS or the new 256K RAMS. In fact, RAMWORKS is the only auxiliary slot card on the market that will allow the new 256K RAMS to be used. If you already have an extended 80 column card, no problem. Just unplug the 64K RAMS and plug them into the RAMWORKS for an

additional 64K. An RGB option is also available, you can order it with your RAMWORKS card or add it on at a later date.

RAMWORKS saves you time, money, slots and hassle. You'll have additional memory NOW and in the future.

### It's Appleworks' Best Friend

A 64K RAMWORKS will add another 46K to your available desktop memory, a 128K RAMWORKS will add another 91K, a 256K RAMWORKS will add another 182K, and a 512K RAMWORKS will add another 364K and a 1 meg RAMWORKS will give you nearly an 800K DESKTOP. But RAMWORKS does more than just increase the desktop memory (as if that weren't enough). With RAMWORKS, Appleworks will be able to run up to 20 times faster. And now only RAMWORKS does this all automatically with no need for any optional software. Appleworks is a very large program. So large, in fact, that it won't all fit in a 128K Apple, so Appleworks has to constantly go back to the disk drive for more data. When you have a RAMWORKS card, you can have enough memory so that the entire Appleworks program can be loaded into the computer. This greatly increases the speed at which Appleworks operates because the disk drive operates at 300 RPM. APPLEWORKS operates at the speed of light!

### It's Compatible

The simple fact is that RAMWORKS is compatible with more off-the-shelf software than any other RAM card. RAMWORKS is 100% compatible with ALL soft-

ware written for the Apple 80 column and extended 80 column card. Additionally, RAMWORKS can emulate other RAM cards so software written for other cards will run without modification. Software written for RAMWORKS will not work on other cards. We can emulate others, but others can't emulate us.

**It's Easy**

RAMWORKS just plugs in and clear instructions show how to plug more memory chips into RAMWORKS as your needs increase.

**It's Popular**

Popularity translates into great software support because software companies can't support all RAM cards, they can only support the ones their customers are likely to own.

**It's Reasonable**

Applied Engineering's years of experience and wide product line really pays off, and because of our high sales levels we buy most of our I.C. chips factory direct. So don't let our low prices fool you, they're caused by high volume production. That's why we can offer the most memory for the least money.

**It's In Color**

For only \$129 an RGB option can be added to RAMWORKS to give you double high resolution color graphics and sharp 80 column text on any Apple compatible RGB monitor. The RGB option does not take up another slot, but rather it plugs into RAMWORKS. You can order the RGB option with your RAMWORKS or add it on at a later date.

**It Corrects Mistakes**

Let's say you bought some other RAM card (and that's a mistake) and your RAM card is not being recognized by Appleworks, Advanced VisiCalc, FlashCalc or other programs and you want RAMWORKS. No problem. The memory chips on the card that you have now, which is where most of the money is, can be unplugged and then plugged into the expansion sockets on RAMWORKS.

**It's Got It All**

- 80 Column Text
- Double high resolution graphics (with or without RGB option)
- User Expandable to 1 Megabyte
- Can use 64K or 256K RAMS in any combination
- Adds Memory to Appleworks
- Accelerates Appleworks
- 100% Compatible with All IIe software
- RAM Disk software available, compatible with PRO-DOS, DOS 3.3 and PASCAL (\$29.00)
- RAM Disk available for CP/M (\$29.00)

- Visicalc preboot available (\$29.00)
- RGB option
- Takes only one slot
- 3 year no hassle warranty

Ramworks™ with 64K.....	\$179
Ramworks™ with 128K.....	\$249
Ramworks™ with 256K.....	\$299
Ramworks™ with 512K.....	\$399
Ramworks™ with 1 MEG.....	\$649
RGB Option (can be added later).....	\$129

**LOW COST SOFTWARE OPTIONS**

**Ram Drive IIe**

Ram Drive IIe will give you a high speed solid state disk drive. The Ram Drive IIe software features audio-visual access indicators, easy setup for turnkey operation, and easy menu driven documentation. The program can be modified and is copyable. If you have a 64K RAMWORKS, Ram Drive IIe will act as half a disk drive. If you have a 128K RAMWORKS, Ram Drive IIe will act as a full disk drive. As you go past 128K of memory, RAMWORKS will act as multiple disks, so all one megabyte can be as a solid state disk. Either way, your programs will load and save over 20 times faster. Ram Drive IIe is compatible with APPLESOFT, PRO-DOS, DOS 3.3, and PASCAL. The disk also includes a high speed RAM copying program. Ram Drive is another disk drive only 20 times faster and no whirring, clicking or waiting!

**\$29**

**CP/M Ram Drive IIe**

CP/M Ram Drive is just like the Ram Drive IIe, only for CP/M. CP/M Ram Drive IIe runs on any Z-80 card that runs standard CP/M, i.e. Applied Engineering Z-80 Plus or Microsoft Soft Card. CP/M Ram Drive will dramatically speed up the operation of most CP/M software because CP/M normally goes to disk fairly often. Fast acting software like dBase II, Wordstar and Turbo Pascal becomes virtually instantaneous when used with CP/M Ram Drive.

**\$29**

**VC IIe Expander**

VC IIe Expander gives owners of Visicalc IIe and Advanced Visicalc IIe increased storage. When used with VC IIe you'll get 141K workspace (128K RAMWORKS or larger required). When used with Advanced VC IIe you'll get 131K with a 128K RAMWORKS, 253K with a 256K RAMWORKS and 437K with a 512K RAMWORKS.

**\$29**



and C.O.D. 214/241-6060

# NEW RAMWORKS™ CARD BREAKS THE MEMORY BARRIER

We openly admit that one megabyte is probably more memory than you need TODAY, but what about TOMORROW? Let's look at the history. When the Apple first came out, 4K made most users happy but soon they wanted 16K, then 48K, then 64. When the IIe was introduced, Apple made it with 64K on board and another 64K on a plug-in card (the extended 80 column card) for a total of 128K. Now many programs require 128K minimum and still many are running out at 128K.

The answer? RAMWORKS—A card that plugs into the Apple IIe auxiliary slot and functions EXACTLY like Apple's extended 80 column card (in fact, a 128K RAMWORKS actually costs less than Apple's 64K extended card) but with RAMWORKS you get more memory, 80 column text and most importantly, room to grow without using more slots. If you have a IIc or an IBM, we suggest you do what everybody does, trade it in on a IIe.

Applied Engineering has solved the most common problem that computer owners have—running out of memory. RAMWORKS is the perfect solution because it offers the widest and biggest memory sizes available anywhere.

You can utilize this RAM memory to expand Apple Works\*\* and VisiCalc. RAMWORKS can also be used as an ultra high speed RAM disk. Depending on the memory size of the RAMWORKS card, you can emulate up to 4 disk drives with one RAMWORKS card.\* All at about 20 times faster than mechanical floppy drives and about 5 times faster than a hard disk.

RAMWORKS can be used as a solid state disk with DOS 3.3, PASCAL, CP/M, and PRO-DOS (up to 1,900 blocks free)!

RAMWORKS can be purchased in a wide range of sizes and is user upgradeable using either 64K RAMS or the new 256K RAMS. In fact, RAMWORKS is the only auxiliary slot card on the market that will allow the new 256K RAMS to be used. If you already have an extended 80 column card, no problem. Just unplug the 64K RAMS and plug them into the RAMWORKS for an additional 64K. A RGB option is also available, you can order it with your RAMWORKS card or add it on at a later date.

RAMWORKS saves you time, money, slots and hassle. You'll have additional memory NOW and in the future.

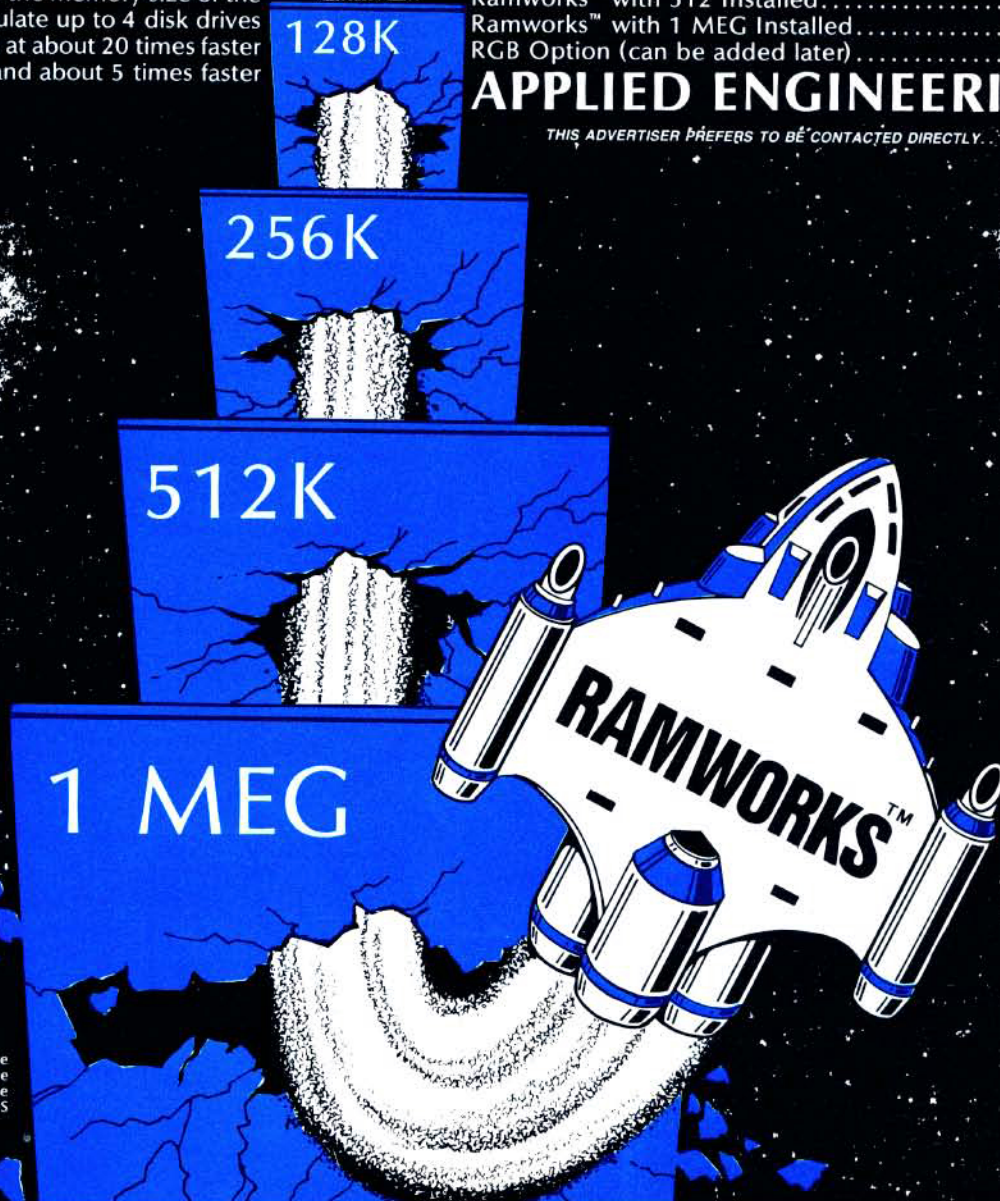
RAMWORKS memory expansion for today and tomorrow. Send check or money order to: APPLIED ENGINEERING, P. O. Box 798, Carrollton, TX 75006. Texas residents add 5% sales tax. Add \$10.00 if outside U.S.A.

Call 214/492-2027, 8 AM to 11 PM, 7 days a week. MasterCard, VISA & C.O.D. welcome. No extra charge for credit cards.

Ramworks™ with 64K Installed .....	\$179
Ramworks™ with 128K Installed .....	\$249
Ramworks™ with 256K Installed .....	\$449
Ramworks™ with 512K Installed .....	\$799
Ramworks™ with 1 MEG Installed .....	\$1499
RGB Option (can be added later) .....	\$129

## APPLIED ENGINEERING

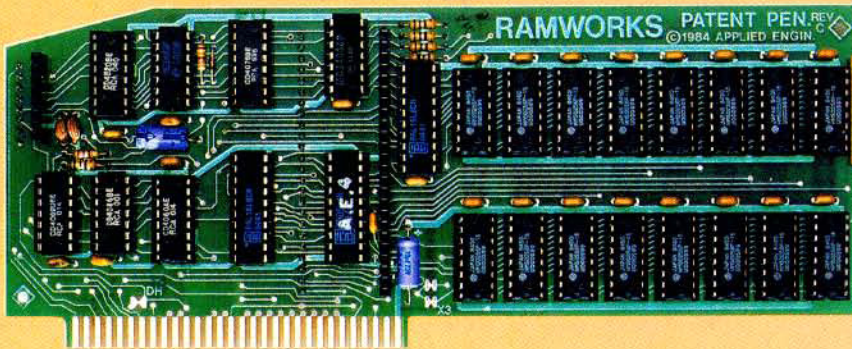
THIS ADVERTISER PREFERS TO BE CONTACTED DIRECTLY.



\*Requires optional low cost software.

\*\*Apple Works and VisiCalc will automatically recognize 64K memory of the RAMWORKS card, low cost software is available from Applied Engineering so that Apple Works and VisiCalc will recognize all RAMWORKS memory.

# RAMWORKS™



**“In an industry as dynamic as the personal computer industry, it’s inevitable that computers will be built with more and more memory. It’s equally inevitable that newer, faster, more powerful software will be written to take advantage of that extra memory. Where does that leave you?”**

**Direct quote from new Apple IIe owners manual.**

If you just want to play games with your Apple or write small BASIC programs, 128K is probably enough memory. But if you’re using your Apple IIe for a serious purpose, you’re going to need more memory. Applied Engineering has the answer: RAMWORKS. With RAMWORKS, you won’t have to split files into several small pieces just to fit them into memory. You’ll have ALL your data on line ALL the time.

RAMWORKS will automatically expand Appleworks, Magicalc, Magic Office System, PRODOS, Visicalc and hundreds of other programs. The simple fact is that RAMWORKS is compatible with more off-the-shelf software than any other RAM card.

A 64K RAMWORKS will ADD 46K to whatever you already have on your available desktop memory, a 128K RAMWORKS will ADD 91K, a 256K RAMWORKS will ADD 182K, a 512K RAMWORKS will ADD 364K and a 1 meg RAMWORKS will give you nearly an 800K DESKTOP. But RAMWORKS does more than just increase the desktop memory (as if that weren’t enough). With RAMWORKS, Appleworks will be able to run up to 20 times faster. And now only RAMWORKS does this all automatically with no need for any optional software.

When you have a RAMWORKS card, you can have enough memory so that the entire Appleworks program will be loaded into the computer. This greatly increases the speed at which Appleworks operates because the disk drive operates at 300 RPM. RAMWORKS operates at the speed of light!

RAMWORKS just plugs in and clear instructions show how to plug more memory chips into RAMWORKS as your needs increase.

For only \$129 an RGB option can be added to RAMWORKS to give you double high resolution color graphics and sharp 80 column text on any Apple compatible RGB monitor. The RGB option does not take up another slot, but rather it plugs into RAMWORKS. You can order the RGB option with your RAMWORKS or add it on at a later date.

RAMWORKS has taken the “waiting” out of computing. Floppies and hard disks are OK for long term storage. But they fall far short as on line storage. If you are using high level languages, spelling checkers, spread sheets, word processors, databases and other disk intensive software, RAMWORKS will save you time and make you more productive.

## Now There’s No Reason To Wait To Stop Waiting

Applied Engineering is passing along the cost savings that we’ve acquired through automated production. We’re lowering the price on the more popular sizes of RAMWORKS, so now there’s no reason to wait to increase your productivity. You’ll be amazed at what you can do!

### Features:

- 80 Column Text
- Double high resolution graphics (with or without RGB option)
- User Expandable to 1 Megabyte
- Can Use 64K or 256K RAMS in any combination
- Adds Memory to Appleworks
- Accelerates Appleworks
- 100% Compatible with All Iie software
- RAM Disk software available, compatible with PRO-DOS, DOS 3.3, and PASCAL (\$29.00)
- RAM Disk available for CP/M (\$29.00)
- Visicalc preboot available (\$29.00)
- RGB option
- Takes only one slot
- 3 year no hassle warranty

Ramworks™ with 64K.....	\$179
Ramworks™ with 128K.....	\$249
Ramworks™ with 256K.....	\$299
Ramworks™ with 512K.....	\$399
Ramworks™ with 1 MEG.....	\$649
RGB Option (can be added later).....	\$129

### Call (214) 241-6060

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Send check or money order to:  
P. O. Box 798  
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MasterCard, Visa and C.O.D. welcome.  
No extra charge for credit cards.  
Texas residents add 5% sales tax.  
Add \$10.00 of outside U.S.A.



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**“WE SET THE STANDARD”**

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# 12 Good Reasons Why RAMWORKS™ Is The Best Expansion Card For Your Iie

**1 APPLEWORKS MEMORY** Even though Ramworks enhances and expands a VAST ARRAY of other programs, Appleworks is our claim to fame. A 64K Ramworks will ADD 46K to your available desktop memory, a 128K Ramworks will ADD 91K, a 256K Ramworks will ADD 182K, and a 512K Ramworks will ADD 364K and a 1 meg Ramworks will give you nearly an 800K desktop. And it's all done automatically! When you plug in more memory chips into your Ramworks card, Appleworks will find them—automatically. Ramworks also increases the maximum number of records from 1350 to 4300.

**2 APPLEWORKS SPEED AND POWER** Ramworks does more than just increase the desktop memory (as if that weren't enough). With Ramworks, Appleworks will be able to run up to 20 times faster. If you buy a 256K or larger Ramworks card, Appleworks will automatically load itself in Ramworks. This greatly increases the speed at which Appleworks operates by eliminating all that nasty, time consuming disk access on Drive 1. These are but a few reasons why we say that Ramworks is Appleworks best friend.

**3 EXPANDABILITY** Ramworks was designed with the future in mind, as your needs increase, so can Ramworks. Clear instructions show you how to plug in more memory (up to 1 meg).

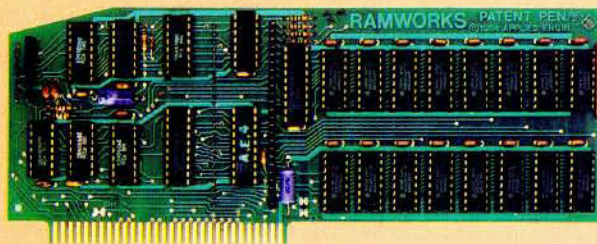
**4 SPEED** Today, as programs become more and more sophisticated, they inevitably become larger. And many of today's best selling programs (like Appleworks) won't fit in a 128K Apple, so many of these new larger programs continually go back to disk in search of more data. With Ramworks, you can have enough memory so that the entire program will be loaded into Ramworks' memory. This greatly increases the speed of software because your disk runs at 300 RPM, but Ramworks operates at the speed of light!

**5 COLOR** The same slot that's used for memory expansion is also the slot that's used for RGB color display, so all those lesser memory cards of yesterday make you decide in advance if you want RGB color. Only Ramworks lets you decide later to add RGB color. For only \$129, an RGB option can be added to Ramworks to give you double high resolution color graphics and 80 column text. All with a razor sharp, vivid brilliance that's unsurpassed in the industry. The RGB option does not waste another valuable slot, but rather plugs into the back of Ramworks and attaches to any Apple compatible monitor. Remember, you can order the RGB option with your Ramworks or add it on at a later date.

**6 COMPATIBILITY, OF THE SOFTWARE KIND** Programs like Appleworks, Magic Office System, Flashcalc, The Spread Sheet, Diverse-A-Dos, Supercalc, Magicalc and many others automatically recognize all or most of Ramworks memory (512K is average). The simple fact is that Ramworks is compatible with more off-the-shelf software than any other RAM card. Ramworks is 100% compatible with ALL software written for the Apple 80 column and extended 80 column card. Additionally, Ramworks can emulate other RAM cards so software written for other cards will run without modification. Software written for RAMWORKS will not work on other cards. We can emulate others, but others can't emulate us.

**7 COMPATIBILITY, OF THE HARDWARE KIND** Unlike others, Ramworks is fully compatible with hardware add on's from other companies, like the Sider and Profile hard disks. And Ramworks was designed in accordance with the official expansion rules defined by Apple so you don't have to worry about compatibility problems. As you continue to expand and make your Apple more powerful with other expansion products from Applied Engineering, you'll appreciate how each product has extra features designed to work with Ramworks and other products to give you a total performance package that is more powerful than the sum of its parts.

**8 IT SELLS THE MOST** Popularity translates into great software support because software companies can't support all RAM cards, they can only support the ones their customers are likely to own. And software companies appreciate the fact that when they write software for Ramworks in the Iie,



they're also writing software for our memory expansion card for the Iie, Z-RAM. And our customer list reads like the Who's Who of Apple computing with just about every software company in the land buying one, including Apple Computer (in the hundreds), Rupert Lissner, and Steve Wozniak (we didn't give one to Mr. Wozniak just to use his name, 2 one meg Ramworks were paid for at full price).

**9 IT'S FROM APPLIED ENGINEERING** Unlike most of the competition, we only make accessories for Apple, so we'll never spend your money on IBM product research. Applied Engineering's years of experience and wide product line really pays off, and because of our high sales levels we buy most of our I.C. chips factory direct. So don't let our low prices fool you, they're caused by high volume production. That's why we can offer the most memory for the least money. Guaranteed!

## 10 IT'S GOT IT ALL

- ✓ Sharp 80 Column Text
- ✓ Double high resolution graphics (with or without RGB option)
- ✓ User Expandable to 1 Megabyte
- ✓ Can Use 64K or 256K RAMS in any combination
- ✓ Adds Memory to Appleworks
- ✓ Accelerates Appleworks
- ✓ 100% Compatibility with All Iie software
- ✓ RAM Disk software available, compatible with Applesoft, PRO-DOS, DOS 3.3, and PASCAL (\$29)
- ✓ RAM Disk available for CP/M (\$29). (This program is included with our CP/M card)
- ✓ Visicalc preboot available (\$29)
- ✓ RGB option
- ✓ Takes only one slot
- ✓ 3 year no hassle warranty



**11 THE PATENT OFFICE HAS ONE** There are many advanced features on Ramworks, but two parts of the design are so advanced we applied for patents. One patent application deals with our ultra fast, ultra smooth 80 column screen display, and the other patent application deals with our ingenious way of dramatically reducing the power and heat of memory chips and improving reliability at the same time.

**12 HERE TODAY, HERE TOMORROW** In the seven years we've been making products for the Apple, we've seen a lot of companies come and go. Although nothing is forever, we're growing, expanding and we're profitable. And we are totally committed to Apple computing, which means you'll never run out of things to do with Ramworks. Or for that matter, reasons to buy one.


Ramworks™ with 64K .....	\$179
Ramworks™ with 128K .....	\$249
Ramworks™ with 256K .....	\$299
Ramworks™ with 512K .....	\$399
Ramworks™ with 1 MEG .....	\$649
RGB Option (can be added later) .....	\$129

Call (214) 241-6060

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C.O.D. welcome. No extra charge for credit cards. Texas Residents add 5% sales tax. Add \$10.00 if outside U.S.A.

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# How to get the most bytes out of your Apple.



Read why Steve Wozniak recommends RamWorks™ expansion cards.

The machine that Woz built is a powerful business computer. AppleWorks gave it a potent 1-2 combination. Now, RamWorks has added the knock out punch. With RamWorks expand the total memory of your IIe up to an incredible 2.5 MEG. Your AppleWorks will no longer be limited by the amount of factory supplied RAM. And you'll be able to perform virtually any application you want with far greater speed and ease.

## How AppleWorks works best with RamWorks.

RamWorks plugs into the IIe auxiliary slot and acts just like Apple's extended 80 column card. If you buy a 256K or larger card, AppleWorks will automatically load itself into RamWorks. This dramatically increases AppleWorks' speed because it effectively eliminates time required to access disk Drive 1. Now, switch from word processing to spreadsheet to database management at the speed of light. AppleWorks responds the moment your fingers touch the keyboard.

But AppleWorks has certain internal limits, independent of available memory. Fear not. Only RamWorks removes those limits with a proprietary, easy to operate program that "patches" onto the boot disk in seconds. Only RamWorks increases the maximum number of records available to you from 1,350 to over 5,000. And only RamWorks actually increases the number of lines permitted in the word processing mode.

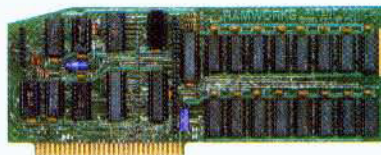
Plus, when you create an AppleWorks file larger than your disk capacity, only RamWorks automatically segments it to the appropriate size. RamWorks then prompts you to insert more disks, so you can save any size file on regular floppies or hard disk.

## The most friendly, most expandable card available.

RamWorks is compatible with more off-the-shelf software than any other RAM card. Popular programs like Magic Office System, Flashcalc, The Spread Sheet, Diversi-DOS, Supercalc 3A, Magicalc, etc. (And hardware add-ons like Profile and Sider hard disks.) Fact is, RamWorks is 100% compatible with all software written for the Apple 80 and extended 80 cards. In addition, RamWorks can emulate other RAM cards, so you can use



*"I wanted a memory card for my Apple that was fast, easy to use, and very compatible; so I bought RamWorks."*



programs written for them without modification.

RamWorks was designed so you could take full advantage of future developments in 16 and 32 bit microprocessors. As your needs grow, so can RamWorks. A handy expansion connector allows the latest and greatest co-processor cards to access RamWorks' memory. And allows you to piggyback another 2 MEG. Clear instructions show you how to plug in more memory.

For only \$129 you can add an RGB option to your RamWorks and get double high resolution color graphics. All with a super sharp brilliance that's unsurpassed in the industry.

## More features than you can shake a mouse at.

A word from the Woz should be sufficient. Because there's only one card like RamWorks. Imagine how you will benefit from these features: • 15 DAY MONEY BACK GUARANTEE • Sharp 80 column text (with or without RGB option) • Double high resolution graphics (with or without RGB option) • EXPANDABLE TO 2.5 MEGABYTES • Can use 64K or 256K RAMs in any combination • Adds memory to AppleWorks • Co-processor connector • Accelerates speed of AppleWorks • 100% COMPATIBLE WITH ALL IIe SOFTWARE • RAM disk software available (compatible with Applesoft, PRO-DOS, DOS 3.3 and PASCAL—\$29) • RAM disk available for CP/M (\$29;

included with our CP/M card) • RGB color option • Takes only one slot • FIVE-YEAR NO HASSLE WARRANTY.

RamWorks with 64K (\$179); 128K (\$219); 256K (\$249); 512K (\$319); 1 MEG (\$519); 2.5 MEG (\$1599). CALL 214/241-6060 TO ORDER YOUR RamWorks TODAY. (9 a.m. to 11 p.m. 7 Days, or send check or money order to Applied Engineering. MasterCard, Visa and C.O.D. welcome. Texas residents add 5 1/2% sales tax. Add \$10.00 outside U.S.)

**AE Applied Engineering**  
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