

# RAMWORKS™

## Add up to 3 MEG memory with the RamWorks® III expansion board.

You command vast power with RamWorks III™ — up to 48 times more memory than your IIe came with.

You work faster, more efficiently. Your IIe does things it could never do before.

Memory intensive software like AppleWorks runs faster. You can put Pinpoint or Beagle Brothers' TimeOut

AppleWorks' 7,250 word processing lines, you get up to 22,500 lines. And clipboard capacity zooms from AppleWorks' 255 lines to 2,042 lines. If your IIe has a ProDOS clock, the time and date will be automatically stamped on your files and displayed on screen.

RamWorks boards include an AppleWorks printer buffer — up to 105K in the 512K model — so you can keep working while your printer is printing. Also, you don't have to buy a separate

For even more power, snap a 512K, 1 MEG or 2 MEG Expander Card™ into the RamWorks III low profile connector. The Expander Card won't interfere with Slot 1.

## Recover your investment in the wrong card.

Most of it, anyway.

If you bought someone else's RAM card — one that's not recognized by your programs — RamWorks III can help recoup your loss. Pull the 64K or 256K memory chips off your old card and plug them into RamWorks III.

## Truly compatible.

RamWorks III is compatible with more off-the-shelf software than any other RAM card. It is recognized by all memory intensive programs for the IIe.

Its power enhances AppleWorks, Beagle Brothers' TimeOut Series, Tax Preparer, Springboard Publisher, Sensible Speller, ProFILER, Managing Your Money, SuperCalc 3a, VIP Professional and many, many more...even software written specifically for Apple cards.

RamWorks III is compatible with most hardware add-ons like ProFile and Sider hard disks.

Of course, RamWorks III is fully compatible with all IIe's — enhanced or unenhanced, American or European.

## Easy to install and use.

RamWorks III quickly plugs into your IIe's auxiliary slot. You get memory expansion and super-sharp 80 column text (U.S. Patent 4601018).

RamWorks III comes with everything you need to get up and running. The easy-to-understand manual shows you how to get the most from your new memory. The two accompanying 5.25" disks include a Hi-Res memory chip test, AppleWorks enhancement program, ProDOS and DOS 3.3 RamDrive™ and other useful utility software.

## Superior color graphics, more readable text.

The ColorLink™ RGB Option gives brilliant, sharp graphics and text. It means all Apple standards for RGB output control. So it's compatible with more off-the-shelf software.

You can use Apple or IBM RGB monitors. ColorLink provides Apple standard analog and IBM standard digital RGB outputs (cables included).

ColorLink offers four text colors so you can use the one that's easiest on

The industry standard for IIe expansion.



RamWorks III

512K Expander

2 MEG Plus Expander

Series into RAM at the same time for instant response. And you can work with massive files without constantly going back to your disk drive.

## Run AppleWorks 20 times faster.

With 512K or larger RamWorks, all of AppleWorks (including printer routine) automatically loads into RAM.

The result? AppleWorks runs up to 20 times faster. You don't waste time accessing the program disk drive. You switch instantly from word processing to spreadsheets to database. Anytime. And without wear on disk drives.

No other expansion board, not even Apple's, gets so much out of AppleWorks.

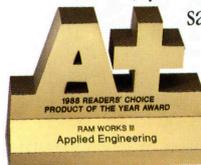
RamWorks III gives you a huge AppleWorks desktop — 366K with the 512K RamWorks III and on up to 2,251K with the 3 MEG RamWorks III (even after all of AppleWorks automatically loads in memory).

RamWorks eliminates AppleWorks' internal memory limits. While AppleWorks 2.0 and 2.1 make up to 6,350 database records available, you get up to 22,500 with RamWorks. Instead of

print buffer, a savings of up to \$250.00.

## Auto-segments large files.

RamWorks automatically segments large files so they can be saved on two or more disks. When you need to work with the file, you simply load in the same sequence you saved it.



Add up to 3 MEG without using a single expansion slot.

RamWorks III, even when it's carrying its full 3 MEG of new memory, fits in your IIe's auxiliary slot. Your valuable expansion slots 1 through 7 are free for other peripheral cards.

If you don't need all of that power now, you can start with as little as 64K. It's easy to add additional memory to the expandable RamWorks III board as your needs grow.

You can go to 1 MEG on the main board using standard RAMs. That's more memory than many people ever use. (1 MEG is about 500 pages of text.)

IIe

your eyes (others offer only green).

The ColorLink option plugs into the back of RamWorks III (or can be used in conjunction with piggy-back memory expanders), so it won't interfere with Slot 1.

You can order ColorLink with your RamWorks III board or add it later.

### Optional 16 bit power.

You can explore powerful programming possibilities with Applied's optional 65C816 Card. It's capable of linearly addressing more than 1 MEG.

It connects to RamWorks III's built-in CPU port. Instead of using another slot, AE's 65C816 Card simply replaces the 65C02. It maintains complete 8-bit compatibility.

### The RamWorks basic® alternative.

Need power but not all the capabilities of RamWorks III? Look at RamWorks basic. It has the same performance features as RamWorks III, it's attractively priced and it's available with up to 512K memory on the main board, and can use all the RamWorks III "piggy-back" options.

### Backed by the leader.

Applied Engineering has been designing and building Apple enhancements for over 8 years. We invented large RAM cards for the Apple. Today, our innovative technology leads the field. We sell more Apple enhancements than anyone else, including Apple Computer. So you know we'll be around to solve problems and answer questions.

### It's got it all:

- 5 year warranty — parts and labor
- Super sharp 80 column text (U.S. Patent 4601018) with or without RGB option
- Supports Double Hi-Res graphics (with or without RGB option)
- Expandable up to 1 MEG (1024K) on main board
- Can use 64K or 256K RAMs in any memory block
- Linear addressing co-processor port
- Automatic AppleWorks Expansion — from 366K on a 512K RamWorks III and 2,251K on a 3 MEG RamWorks III
- Accelerates AppleWorks operation
- Built-in AppleWorks printer buffer
- 100% compatible with all standard IIe software
- RamDrive™ and ProDrive™, the ultimate disk emulator software included free

- Compatible RGB option featuring ultra-high resolution color graphics and multiple text colors, available with cables for both Apple and IBM type monitors
- Self-diagnostic software included
- Lowest power consumption (U.S. Patent 4601018)
- Takes only one slot — No slot 1 interference
- Software industry standard
- 16 bit option

### CP/AM MEGDrive™

CP/AM MEGDrive is just like RamDrive, only for CP/AM. CP/AM MEGDrive runs on any Z-80 card that runs standard CP/AM, e.g. Applied Engineering Z-80 Plus, Microsoft Soft Card or PCPI. CP/AM MEGDrive 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 instan-



RamWorks basic® Expansion Board

- Advanced computer aided design
- Used by Apple Computer, Steve Wozniak and virtually all software companies
- Displays date and time on the AppleWorks screen with any ProDOS compatible clock
- Much, much more!

<b>RamWorks basic with ZeroK</b>	<b>\$119</b>
<b>RamWorks basic with 64K</b>	<b>\$219</b>
<b>RamWorks basic with 256K</b>	<b>\$229</b>
<b>RamWorks basic with 512K</b>	<b>\$379</b>
<b>RamWorks III with ZeroK</b>	<b>\$139</b>
<b>RamWorks III with 64K</b>	<b>\$239</b>
<b>RamWorks III with 256K</b>	<b>\$249</b>
<b>RamWorks III with 512K</b>	<b>\$399</b>
<b>RamWorks III with 1 MEG</b>	<b>\$699</b>
<b>RamWorks III with 1.5 MEG</b>	<b>\$1079</b>
<b>RamWorks III with 3 MEG</b>	<b>\$1959</b>
<b>512K Expander</b>	<b>\$399</b>
<b>2 MEG Plus Expander with 1 MEG</b>	<b>\$729</b>
<b>2 MEG Plus Expander with 2 MEG</b>	<b>\$1279</b>
<b>65C816 16 Bit Card</b>	<b>\$159</b>
<b>ColorLink RGB Option</b>	<b>\$129</b>

taneous when used with CP/AM MEGDrive.

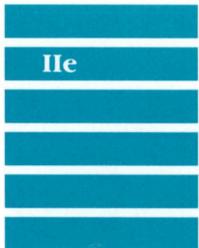
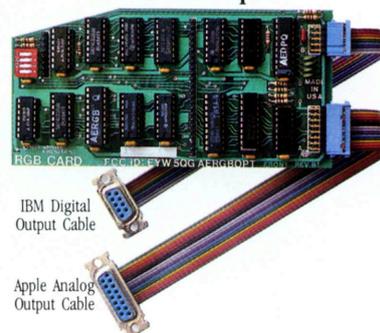
**Z-80 Plus, Microsoft version \$29**  
**PCPI APPLI-CARD version \$29**

### 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 III or larger required). When used with advanced VC IIe you'll get 235K with a 256K RamWorks III and 437K with a 512K RamWorks III.

**VC IIe Expander \$29**

### ColorLink RGB Option



## Comparison Between RamWorks™, RamFactor™, GS-RAM Plus™ and GS-RAM Ultra™

Many of the features and benefits of RamWorks III™, RamFactor™, GS-RAM™, GS-RAM Plus™ and GS-RAM Ultra™ are the same; however, there are differences that we would like to point out so that you can make the best choice.

Most importantly, RamWorks III is specially designed for the Apple IIe

while GS-RAM, GS-RAM Plus and GS-RAM Ultra are specially designed for the Apple IIGS. These three cards will not work on a II+, Franklin or Laser. That leaves RamFactor as the source of most of the confusion, since it is compatible with the IIe, II+, IIGS, Franklin, Laser 128 and most compatibles.

For the most powerful AppleWorks enhancements, stick with RamWorks III for the IIe and GS-RAM, GS-RAM Plus or GS-RAM Ultra (the major difference is capacity) for the IIGS. For other applications, RamFactor reduces disk access time and storage and can be battery backed-up. See the accompanying chart for further comparison.

Capability	RamWorks® III	RamFactor™	GS-RAM™ GS-RAM Plus™ GS-RAM Ultra™
Computer compatibility	Apple IIe	Apple II+, IIe, IIGS and compatibles	Apple IIGS
Maximum memory on main card	1 Megabyte	1 Megabyte	1.5 MEG GS-RAM 6 MEG GS-RAM Plus 4 MEG GS-RAM Ultra
Expander cards (for expansion beyond main card)	512K, 2 MEG	RamFactor 4 MEG, "Y" connector for 2 RamFactors	2 MEG RAM
Compatible slot	Auxiliary slot	Slots 1-7 except 3	Memory expansion
RAM disk	Disk based	EPROM/disk based	IIGS Control Panel
Software standard	Yes	Yes	Yes
Battery back-up	No	Yes	No on main board*
AppleWorks compatibility	All versions	Versions 1.3, 2.0, 2.1 and 3.0	Versions 2.0, 2.1 and 3.0
Maximum number of records in database in AppleWorks	22,500	22,500	22,500
Maximum number of lines in word processor in AppleWorks	22,500	22,500	22,500
Lines in WP and DB clipboard in AppleWorks	2,042	2,042	2,042
Autoload AppleWorks	Yes	Yes	Yes
Displays time on screen with ProDOS clock	Yes	Yes	Yes
Auto-segments large files	Yes	Yes	Yes
AppleWorks printer buffer	Yes	No	Yes
Fully socketed and user upgradeable	Yes	Yes	Yes
16 bit option (65C816)	Yes	No	N/A
Memory chip types for expansion	64Kx1 256Kx1	256Kx1	256Kx1 GS-RAM 1 MEGx1 GS-RAM Plus 256Kx4 GS-RAM Ultra

Comparisons made using AppleWorks 2.1, however, similar performance is obtained using older AppleWorks versions with RamWorks.

\*RamKeeper provides the GS-RAM, GS-RAM Plus and GS-RAM Ultra with battery back-up.