

# **POWER UP**

**AMIGA™ GOES POWER PC™**

**THE INNOVATION LEAP  
INTO THE NEXT DECADE  
OF AMIGA-COMPUTING**



If you also rank among the AMIGA users looking forward to tomorrow, we are delighted to inform you that there is life for the AMIGA after the 68000 version.

# POWERUP

## AMIGA™ GOES POWERPC™

Since its foundation, phase 5 digital products year after year has introduced new and significant innovations for the AMIGA - in 1993 the Fastlane Z3, the first Zorro-III-DMA-Controller, in 1994 the Cyberstorm 060, the world's first 68060 board for AMIGA systems, in 1995 the CyberVision64 and the CyberGraphX-software, which jointly have defined a new standard in graphic capabilities on the AMIGA or the BLIZZARD board for the AMIGA 1200, which in its present 4th generation is setting standards in respect of price and performance. This success is based upon the experience of the engineering team, which has been working with the AMIGA for almost ten years since introduction of the legendary A1000. phase 5 digital products has now imported all its expertise and know-how into a new sensational project, the PowerUp-program, which will provide the basis in 1996 for taking the decisive innovation leap into the next decade of AMIGA-Computing: the PowerPC-RISC-processors will provide the AMIGA with a new and powerful heart.

### **68000 and then....**

The 68060 processor represents the state-of-the-art performance peak of the 68k processors currently used in the AMIGA; it is installed in such products as the Cyberstorm 060/50, the BLIZZARD 1260 or the BLIZZARD 2060. Even though this processor features outstanding topical performance and is the No.1 choice for all Power users seeking to expand and accelerate their system today, significant advance development with this processor family is not possible, as the 68060 will be the last of the 68k processors. Any increases of clock rates would only result in marginal capacity increases.

### **Sufficient power ultimately is the only option**

The PowerPC-RISC-processors provide a way out of this dead-end road by bridging the gap between the 68k processors and the AMIGA future. With their enormous power performance at favorable prices and the innovative energies of the producers Motorola and IBM which are advancing PowerPC architecture as alternative to conventional PC processors, the PowerPC processor family provides the solution assuring AMIGA a position among the future high-performance desktop workstations.

And that's not all: by combining this new processor generation with the AMIGA's unique features, this computer's performance in numerous specific applications are fully developed and raised to new heights. A number of PowerPC models in various performance classes already obtainable as well as a wide range of future models even more powerful in addition offer the right processor for each application and price range. With a fast RISC architecture and their high Floating-Point-Performance, the PowerPC processors today and in the future are more than adequately equipped for the most demanding tasks in the sectors multimedia, 3-D, image processing, video processing, rendering, and animation.

### **Hardware for the next millennium**

In mid-1996, the PowerBoards marketed by phase 5 digital products will introduce two novel types of PowerPC processors as new heart for the AMIGA: MPC603e-processors with clock rates of 100MHz upwards will open new performance dimensions in the lower price bracket, while MPC604 processors (also in the range above 100 MHz) will be installed in accelerator boards for professional utilization. 150MHz versions of these CPUs have already been announced for 1996. In addition, more high-performance members of the PowerPC family including the genuine 64-bit processor MPC620 with clock rates up to 300 MHz are being developed and will open new performance dimensions in the near future. Next to utilization of PowerPC processors, the phase 5 PowerBoards naturally will also feature other state-of-the-art technical details. 64-bit memory expansion options naturally are standard, just as much as a fast 64-bit local bus system (with optional PCI-Bridge) which allows connection of both favorably-priced accessories and high-per-



formance expansions for the PowerBoards. The PowerBoards offered by phase 5 digital products will be offered in a number of capacity categories and price brackets depending upon the performance category between approximately US\$ 700 and US\$ 1,500 initially for AMIGA 1200, AMIGA 3000, and AMIGA 4000 - naturally with the outstanding quality, compatibility, and flexible expansion options typical for phase 5 products. There is a wide variety of system software described below as well as CyberGraphX3.0 Native, which is included in the phase 5 PowerBoard's scope of delivery.

## The full program

The phase 5 digital products PowerUp program is concerned with development of a PowerPC solution suited as complete and convenient upgrade of existing AMIGA systems based upon 68k technology. In addition to development of high-performance hardware for various AMIGA computers, it thus also encompasses adaptation to the new PowerPC processors. A team of experienced system programmers is involved in realization of these necessary phases; it is developing an image of the Exec and Multitasking function of the AMIGA-OS into PowerPC native code. This image - fully compatible to the previous AMIGA Exec - as lowest level and supported by the superior 68k emulator will allow utilization of the existing operation system versions 3.0 and higher. Native coding of the important Exec and Multitasking functions will guarantee a high level of performance from the very beginning. The remaining operation system functions are initially generated in the fully compatible emulation and are optimized as required in following versions via new function libraries on PowerPC native code.

### CyberGraphX 3.0 Native

In order to avoid an essential performance bottleneck from the very beginning, a new version of the popular CyberGraphX software will be developed in the scope of the PowerUp project. It will be available as PowerPC native code and thus will considerably accelerate the entire graphical output on graphic boards or also (a new feature for version 3.0 and higher) via the AA chipset of the AMIGA 1200 and the AMIGA 4000. As the high demand on graphic output in today's multimedia applications requires a major share of the computer performance, this version of CyberGraphX adapted to the PowerPC processors will immediately provide for massive performance increases and a high utilization rate of the PowerPC processors' RISC perfor-

mance. In addition, CyberGraphX functionally will be expanded by new interfaces for 3D applications and multimedia allowing utilization of a new generation of applications on the AMIGA. The availability of powerful 3D routines and multimedia functions for audio and video independent from hardware will allow software producers to generate programs at extremely low costs which are operable on a wide variety of computer configurations. This considerably increases the system's attractiveness and will result in a record demand for high-quality applications and for games of the next generation.

### We are not alone

Already at commencement of the PowerUp project, a large number of leading software producers, among these Almathe-ra, Maxon Computer, ProDad, and Softwood, to name just a few, plans to actively support the PowerUp project by adapting their high-performance programs to the new PowerPC processors. The anticipated support by additional software producers will provide for a wide range of extremely capable native software already at the time the PowerPC accelerator boards are introduced to the market.

In the scope of the PowerUp project, phase 5 digital products has already initiated far-reaching measures to support software producers on the AMIGA market. Evaluation boards enabling software development on the AMIGA under a PowerPC processor will already be available in early 1996 for established and new commercial developers. Software tools and development systems are being prepared by phase 5 digital products and partner companies. Commercial developers will be provided full support by phase 5 digital products; development of strategical applications also is supported in direct cooperation with Motorola.

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# POWERUP

## AMIGA™ GOES POWERPC™ Information Coupon

Simply mail this coupon if you are a user requiring more information about the new PowerBoards by phase 5 digital products or as software developer are interested in the PowerUp program and our support options. We will make the required information available for you as soon as possible.(product documentation not before the first quarter of 1996)

I am an AMIGA user interested in the phase 5 PowerBoards. Please send me further information including prices for your PowerPC accelerator boards as soon as possible for

AMIGA 1200     AMIGA 3000(T)     AMIGA 4000(T)

I already own a phase 5 accelerator board. Please also inform me about the planned upgrade program.

We are software developers and plan

commercials developments     PD or shareware-developments

for AMIGA or are interested in converting existing applications to PowerPC.

Please send me information on

your PowerUP developer support programm and/or     PowerPC evaluation boards as soon as possible.

*Annotation for software developers: to the extent possible, please enclose detailed product or project description relating to your software or additional information, if possible also a brief summary on your company or developer group and all required contact addresses and contact partners. Sincere thanks.*

## Secure your investments

But what can today's AMIGA users do, who desperately need more power for their applications and cannot or are unable to wait between six and eight months until the new processor board generation is on the market? Here, too, phase 5 digital products has thought of its users' demands and therefore offers appropriate upgrade solutions: all customers who have purchased a 68k acceleration board from phase 5 digital products after September 1, 1995 will be made special upgrade offers for purchasing one of the new PowerPC acceleration boards\* upon submission of a copy of their retail dealer's purchase receipt. A more extensive trade-in program is planned for owners of higher-price-bracket 68060 boards, which will facilitate conversion to the PowerPC generation. phase 5 thus already today provides the opportunity to utilize a 68k accelerator for required additional performance and at the same time to invest into the future. We won't leave you out in the cold.

*\*The upgrade program is available to all registered initial users who have purchased a 68k turbo board from the phase 5 production through authorized retailers or directly from phase 5 digital products. Purchasers of used appliances are exempted from this offer.*

## Just dreams of the future?

Yes - but of the near future. Already in full operation today and supported by massive investments, the PowerUp program will result in PowerPC-based accelerator boards for various AMIGA computers by mid-1996. phase 5 digital products is one of the leading and best-established producers on the AMIGA market; its capabilities and innovative energies give you the security of purchasing state-of-the-art and proven technology for your AMIGA's future. If you as user are interested in the new performance dimensions of AMIGA computing or if you as developer want to take a leap into the future with PowerUp, simply mail us the attached info coupon. You will receive the requested information on the PowerUp program as soon as it is available.



## WHERE DO YOU WANT TO BE TOMORROW?

**In der Au 27**  
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**POWERUP**  
**AMIGA™ GOES POWERPC™ Information Coupon**

Please mail in a postpaid window envelope to:

**phase 5 digital products**  
**POWERUP-Programm**  
**In der Au 27**

**D-61440 Oberursel**  
**Germany**

Full name: \_\_\_\_\_

Company: \_\_\_\_\_

Position: \_\_\_\_\_

Street: \_\_\_\_\_

Zip code, city: \_\_\_\_\_

Country: \_\_\_\_\_

Telephone: \_\_\_\_\_

Telefax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

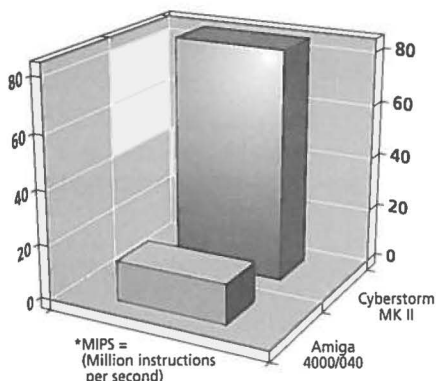
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# CYBERSTORM MK II

**Product  
Announcement**

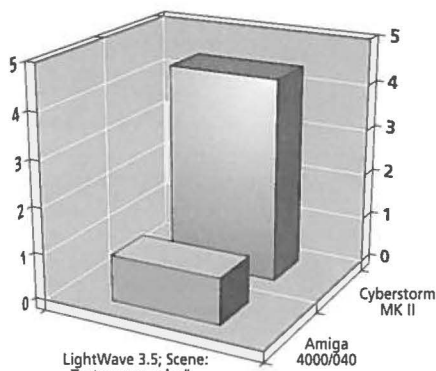
## Performance data CYBERSTORM MK II

MIPS\*-Test



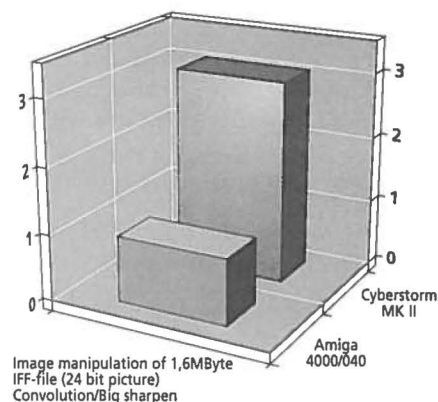
Reference system Amiga 4000/40 with 16 MByte FastRam = Absolut-Value in MIPS

Application test LightWave rendering



Reference system Amiga 4000/40 with 16 MByte FastRam = Factor 1

Application test AdPro



Reference system Amiga 4000/40 with 16 MByte FastRam = Factor 1

Available for all A4000, A4000T, as well as A3000 and A3000T models, the world's leading 68060 accelerator design takes another step forward into the future. With the brand-new Cyberstorm Mk. II you can now expand your creativity to new horizons for a price that is a real bargain! Based on the development knowledge of more than 18 months of 68060 experience, our engineering team has realized a new generation of accelerators for the AMIGA. These advanced accelerators bring the incredible 68060 power to you for a price that nobody dared to dream of in the past! Check out the features of this successor of the award-winning Cyberstorm accelerator:

- ▶ Available in a 50 MHz 68060 version, ready for 66 or 80 MHz versions (upgrades to faster versions will be possible when faster CPUs are shipping by Motorola)
- ▶ Up to 5 times and more faster than a stock A4000/040, with peak rates of more than 80 MIPS @50 MHz
- ▶ Superior floating point performance gives speed increases by a factor of 5 and more over an A4000/040 with High End applications such as Lightwave 3D
- ▶ Integrated memory upgrade option for to 128 MByte with industry-standard SIMMs. This ultra-fast burst-mode memory provides high-performance operation for all memory-hungry applications
- ▶ All installed memory is always configured as one contiguous block of memory, independent of the size of the modules used, and will be configured automatically without any jumper change or software configuration by the user
- ▶ Full Burst Mode access to the Zorro-III bus allows up to 32 Mbyte/sec. transfer into the Zorro-III devices which allow burst mode access, such as the upcoming 2-GO! DSP board from phase 5
- ▶ A fully-featured expansion slot allows the use of existing Cyberstorm expansion modules, such as the Fast.SCSI-II DMA controller and other upcoming high-performance expansions
- ▶ The Next Generation 68060 Accelerator from the company who developed the first 68060 board in 1994, and ships 68060 boards in quantities since early 1995
- ▶ Go for true 68060 power today! This real break-through in AMIGA Accelerator design will cost you significantly less than you expect and offers an incredible value

After this new product had been delayed for several month due to the lack of a constant supply of 68060 CPUs, it will now be coming to your local store in early 1996. Ask Your dealer for more details!

Your dealer:

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DIGITAL PRODUCTS

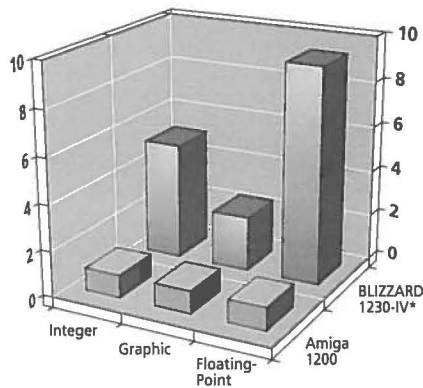
# BLIZZARD

1230 IV TURBO BOARD

With its BLIZZARD 1230-IV Turbo Board, phase 5 digital products has already presented the 4th generation of the powerful turbo board series for the AMIGA 1200. Based upon the experience made with the proven predecessors models, which ranked outstandingly well in numerous tests conducted by the international press and were elected Product of the Year on several occasions, the BLIZZARD 1230-IV combines an exceedingly high degree of performance, flexible expansion options, expansive functionality, and an extremely attractive price. These properties range from memory expansion options up to 128 Mbytes and the socket for the mathematical coprocessor over features such as fully-automatic RAM size detection all the way to the high-power 32-bit DMA port for connecting the FAST SCSI-II-Controller BLIZZARD SCSI-KIT IV. These outstanding characteristics in high-quality finish and state-of-the-art SMD technique define a top-quality product setting standards in its class.

## Performance data BLIZZARD 1230-IV Turbo Board:

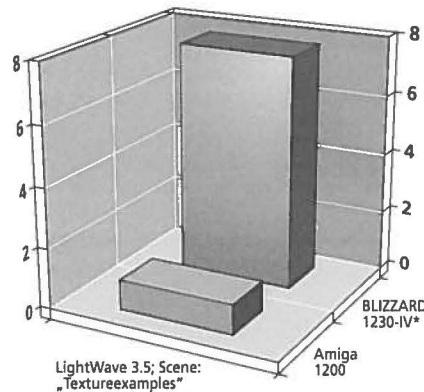
AIBB V6.1 Benchmarktest



\*with 50 MHz 68882 Coprocessor

Reference system Amiga 1200 with 8 MByte FastRam = Factor 1

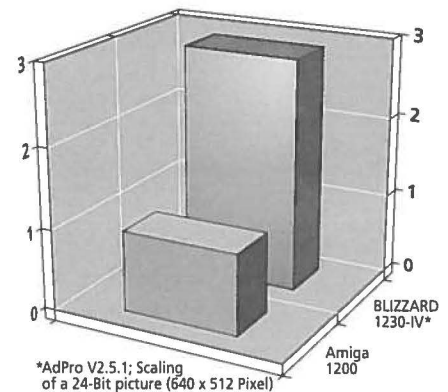
Application test LightWave rendering



\*with 50 MHz 68882 Coprocessor

Reference system Amiga 1200 with 8 MByte FastRam = Factor 1

Application test AdPro



\*with 50 MHz 68882 Coprocessor

Reference system Amiga 1200 with 8 MByte FastRam = Factor 1

## Technical data BLIZZARD 1230-IV Turbo Board:

- ▶ High Performance Accelerator Board for the AMIGA 1200, with 50 MHz 68030 Processor with MMU for performance increases between 400 and 500%
- ▶ A 72-pin SIMM socket allows easy memory upgrades by use of standard 32 bit SIMMS up to 128 Mbyte
- ▶ Autoconfiguring memory and optional MAPROM function for copying the operating system into the fast memory
- ▶ A very fast memory design allows high memory performance resulting in excellent overall system performance and significantly accelerated graphics
- ▶ Socket provided for Maths Co-processor 68882 with 50 MHz clock rate
- ▶ A DMA expansion connector allows upgrading of the BLIZZARD 1230-IV with expansion modules such as the BLIZZARD SCSI-KIT IV Fast SCSI-II controller
- ▶ Asynchronous design for full genlock compatibility
- ▶ 68030 may be disabled with a simple keystroke on boot up to enable A1200 to revert to 68020 mode allowing full game compatibility
- ▶ Battery backed, self-recharging clock with calendar
- ▶ fits easily into the Trapdoor Expansion slot in the base of your AMIGA 1200
- ▶ Does not invalidate On-Site Warranty
- ▶ Highest quality of manufacturing incorporating latest SMD technology
- ▶ Made in Germany with a 12 months parts and labour Warranty

## Expansion options:

The BLIZZARD SCSI Kit IV is a fast SCSI-II DMA controller which allows the instant access to a large variety of SCSI-I and SCSI-II devices available on the market. It's 32-Bit DMA engine transfers up to 10 MBytes/sec. with up to 80% free CPU time, defining a new performance dimension for an A1200 expansion. A second SIMM socket allows the memory on the BLIZZARD accelerator to be expanded by up to 128 MBytes. These features make the BLIZZARD SCSI Kit IV ideally suited for all High End applications on the AMIGA 1200.

- ▶ FAST SCSI-II DMA Controller for the BLIZZARD 1230-IV or BLIZZARD 1260 Turbo Board, with full autoboot capability
- ▶ Transmission rates up to seven Mbytes/sec. asynchronous and up to ten Mbytes/sec. synchronous on the SCSI-bus.
- ▶ 72-pin standard SIMM socket for memory expansion by up to 128 MB in addition to the memory already installed on the BLIZZARD Turbo Board, completely auto-configuring.
- ▶ The processor on the BLIZZARD Turbo Board is not burdened because of the DMA transmission (Direct Memory Access). The BLIZZARD SCSI-KIT IV therefore is ideally suited for multimedia applications.
- ▶ Comprehensive software including the dynamic caching software DynamiCache and the CD-ROM file system CDrive facilitates working with slower SCSI devices and allows immediate connection of CD-ROMs.
- ▶ Made in Germany, 12 months warranty.

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