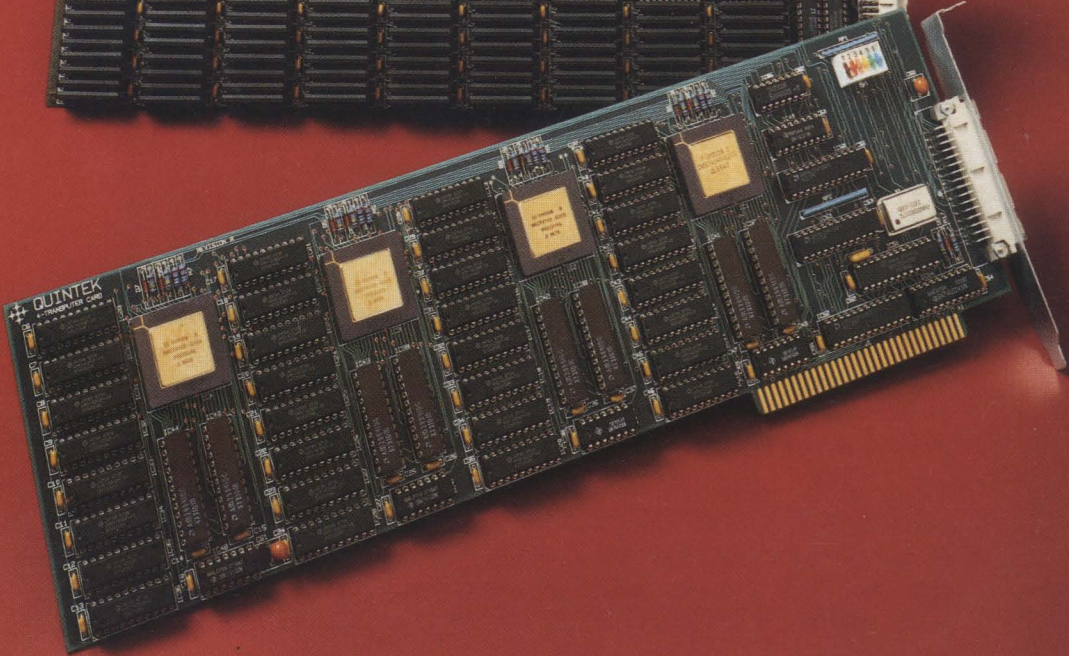
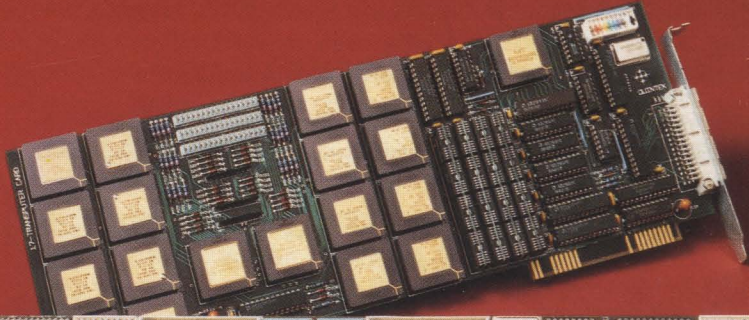


# QUINTEK



PARALLEL PROCESSING

## The Quintek Fast Family of PC Expansion Boards

Quintek's Fast Family is a series of multiprocessor computing modules, each of which occupies one expansion slot in an IBM PC/AT or compatible computer. Each board has a link interface to the PC host.

Whatever your computing needs, we have a product to help you:

- At entry level the **Fast4**, with 4 transputers, each with a megabyte of memory, provides a low-cost development network.
- For serious applications of parallel processing the **Fast9** with its 9 transputers and 9 megabytes of memory, provides the highest possible processing density in one AT slot. The processors are coupled together in a network which can be configured in many ways using a matrix switch.
- The **Fast17** is ideal for computationally-bound or pipelined applications. It consists of a master transputer with 4 megabytes of RAM, 16 slave transputers which use their own internal RAM, and two matrix switches.

All of these boards can be supplied with either T414 or floating-point T800 transputers, to suit your programming requirements. They are suitable for network evaluation and parallel program development as well as acceleration of IBM end-user applications. Quintek's products are designed to work equally well in standalone applications or cascaded together to provide even greater transputer power. They run the TDS and are fully compatible with Inmos hardware and software products.

## The Harlequin Frame Grabber/Graphics Board

The Harlequin combines the input and output requirements of a high-performance transputer-based workstation, providing 512x512 resolution displays with a palette selected from a range of 262,144 colours.

The board incorporates an Inmos 32-bit T414 or T800 transputer with one MByte of dynamic RAM, and has two quarter-MByte image buffers of dual-ported video RAM. Video transfer takes place autonomously so that some 99% of the bandwidth is available for applications processing. A link interface is provided to the parallel bus of the host PC.

The Harlequin runs Inmos B007 graphics software and is compatible with other transputer hardware currently available.

## The Fast Vector Library for PC Users

With the advent of Quintek's Fast Vector Library, PC users may apply the Fast4 and Fast9 boards directly to their existing programs running on the PC. This combines the flexibility of a standard PC environment with the computational power of the parallel environment.

The Fast Vector Library comprises some 60 mathematical subroutines which may be called directly from programs running in the PC under Microsoft's Fortran, C and Pascal, and also Borland's Turbo Pascal and Turbo C. The subroutines access the Fast4 or Fast9 and run optimised parallel occam code, making full use of the 4 or 9 megabytes of memory available. This increases the speed of double-precision real vector functions by as much as 500 times for some functions on the Fast9-T8 over a comparable library using an 80287 maths co-processor.

For some applications, users may define additional subroutines to speed up the computationally-intensive parts of the programs.

*Relative speed to calculate vector of 10,000 double-precision reals*

	Turbo Pascal*	Turbo Pascal	Fast4	Fast9
Processor	80286	80286/87	4xIMS-T800	9xIMS-T800
CopyV	1	1	33	47
AbsV	1.42	1	151	251
MeanV	0.70	1	351	527
VMulV	0.24	1	128	231
SqrtV	0.03	1	45	97
KVAddKV	0.33	1	149	272
SinV	0.11	1	66	133

\*The speeds for Turbo-Pascal on the 80286 are scaled from 6 byte reals.

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Microsoft is a registered trade mark of the Microsoft Corporation.

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