# Transtech TMB08
## A TRANSPUTER MODULE MOTHERBOARD
## FOR THE IBM PC

**Features**
- ♦ **Ten TRAM (TRAnsputer Module) slots**

- ♦ **Plugs directly into IBM PC AT or XT and compatibles**

- ♦ **Includes IMSC004 link crossbar switch for configurable reconnectivity**

- ♦ **Supplied with network configuration software**

- ♦ **DMA/IRQ capability for fast MS.DOS I/O transfer**

- ♦ **Supports Occam TDS development and 3L's scientific languages**

- ♦ **Compatible with the Transtech range of TRAMs**

- ♦ **Fully compatible superset of Inmos IMSB008**
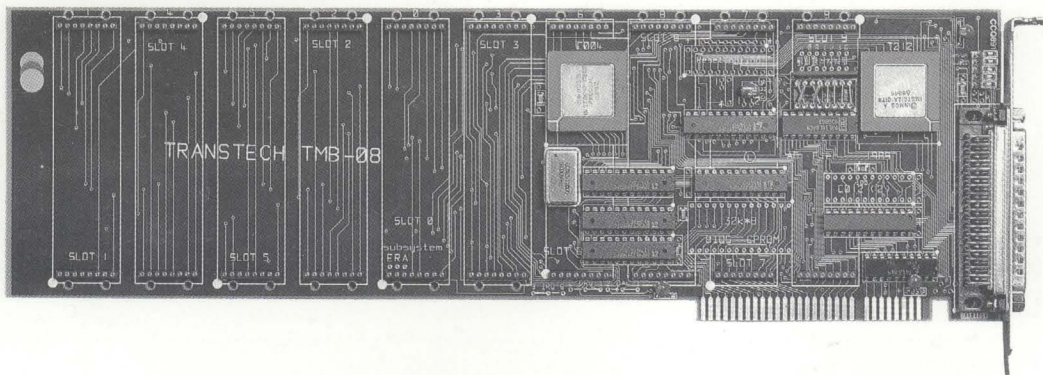


**Introduction** The TMB08 is a 10 TRAM motherboard for IBM PC XT and AT compatible machines. It incorporates a link crossbar switch (IMSC004) allowing user configuration of network topologies. Eight of the links connected to the C004 are hardwired to the D-type edge connector, allowing networks with external connections to be configured.

**IBM PC Bus Interface** An interface to the PC bus is provided via an IMSC012 link adaptor for communication between the host machine and a transputer network. The interface supports software polling of the link adaptor, used in many earlier transputer boards and also a DMA mechanism allowing transfer rates of between 200 and 300 KBytes/sec to be achieved. The TMB08 also has the ability to interrupt the host PC on a number of user defined events.

**Software Link Configuration**

The ten TRAM slots are connected in a default pipeline using links 1 and 2. The remaining links 0 and 3 from each site are connected to the C004. The user may programme the C004 directly from software, thereby 'softwiring' the links to the desired configuration. This process may be repeated, thus enabling the user to evaluate a variety of network topologies for a given application. The C004 is programmed, in the default configuration, from a T222 16 bit transputer which allows the configuration pipeline to be cascaded for multiple board systems. For a single TMB08 board the C004 can be programmed via a second optional link adaptor from an EXE running on the PC, enabling the link configuration to be set up on power on.

**System Control**

The reset, error and analyse system control of the TRAMs is user definable, by selecting one of a variety of reset configurations. TRAM slot 0 can be reset either from the external world via the edge connector, or from the PC, while the remaining TRAM slots 1 to 9 can be reset either from the same source as TRAM 0 or from a subsystem generated by TRAM 0

**IMSB008 Superset**

The TMB08 is a superset of the Inmos IMSB008 with additional options including a site for an EPROM in the PC address map to hold boot code, a second link adaptor for programming the C004, and the capability to reset each individual TRAM slot by control from the T222.

**Compatibility**

The TMB08 accepts the whole range of TRAMs from Transtech and is compatible with those of other manufacturers, giving customers the freedom to choose many different processor and memory combinations or application specific TRAMs. Information on the range of Transtech TRAMs is available from Transtech or your local distributor. Further details on the TRAM standard and TRAM motherboard architecture are published by Prentice Hall in 'Transputer Technical Notes' ISBN 0-130929126-1.

**Software**

The TMB08 can be programmed with software development packages to run Occam, C, FORTRAN, Pascal and other transputer language compilers as well as Helios, TransIDRIS, Express and other transputer operating systems. It can also be used as the processing hardware for a number of application specific software packages that are available for the transputer. The board is also supplied with a diagnostic test program and system software for programming the IMSC004 crossbar switch.

**Ordering Information**

| PART NUMBER | DESCRIPTION |
| --- | --- |
| TMB08 | IBM PC FORMAT TRAM MOTHERBOARD WITH 10 TRAM SLOTS |

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