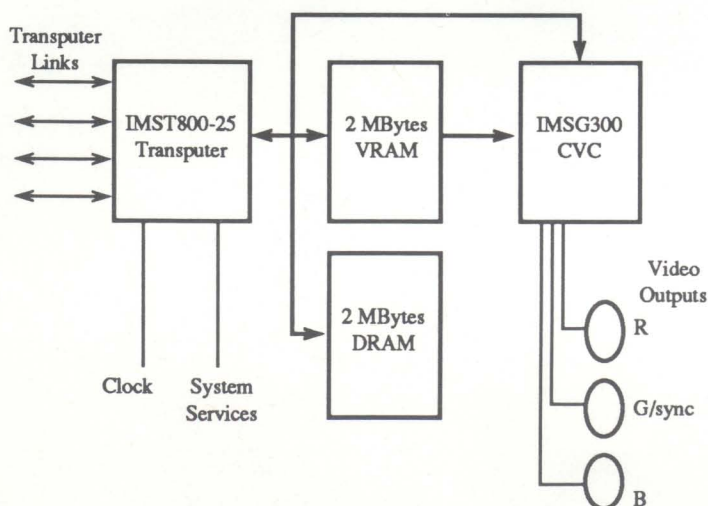# Transtech TRAMs
TTG3
A HIGH RESOLUTION GRAPHICS MODULE

Features

- ◆ IMST800-25 transputer
- ◆ IMSG300 CVC (Clour Video Controller)
- ◆ 2 MBytes of video RAM (dual ported)
- ◆ 2 MBytes of dynamic RAM
- ◆ Supports resolutions upto 1280 x 1024 8-bit pixels
- ◆ Fast hardware screen clear function
- ◆ Interleaved memory
- ◆ Four serial transputer links
- ◆ Industry standard size 4 TRAM
- ◆ Compatible with Transtech range of TRAM motherboards

Introduction The Transtech TTG3 TRAM (TRAnsputer Module) is a small industry standard daughterboard for the Transtech range of TRAM motherboards. It is the first commercially available product to make use of the new Inmos IMSG300 CVC (colour video controller). The TTG3 consists of an IMST800-25 floating point transputer with 2 MBytes of program memory and 2 MBytes video memory, where the video memory is dual ported and also accessed by the IMSG300 CVC.

IMSG300 Graphics Display The TTG3 supports resolutions upto 1280 x 1024 8 bit pixels, or two screens of 1024 x 1024 8 bit pixels for double buffered animation applications, displaying 256 colours from a palette of 16.7 million possible colours at a 60 Hz refresh rate. The IMSG300 is a fully programmable display controller consisting of a video timing generator, VRAM interface, on chip colour look up table and three 8 bit DACs (digital to analog converters). The IMSG300 can be programmed by the transputer via memory mapped registers.

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Hardware Functions
The TTG3 supports an interleaving mechanism transparent to the user which increases performance when the IMST800 is accessing contiguous blocks of memory. The IMST800 has full read and write control over the video memory. A fast screen clear function in hardware enables the entire video memory to be cleared in less than 0.5 ms, or for a band on the screen to be cleared to any colour at less than 1 us per pixel. Separate Red, Green and Blue SMB connectors are available for connection to standard RGB analogue monitors with composite sync on green, as well as separate sync available on headers.

TRAM Standard
Measuring only 4.20" by 3.66" (10.66mm by 9.30mm) the TTG3 conforms to the published TRAM standard, allowing them to be easily plugged onto a wide range of motherboards for many different host machines. Up to 10 TRAMs can be accommodated on a Transtech TMB08 board for IBM PC XT or AT's and compatibles, 4 on the Transtech TMB04 and TMB05, 16 on a TMB12 double extended eurocard and 32 on the MCP1000 Multi Computing Platform for Sun workstations, allowing rapid prototyping of transputer systems. Transtech TRAMs are also compatible with motherboards from other manufacturers. Further details on the TRAM standard and TRAM Module Motherboard Architecture are published by Prentice Hall in 'Transputer Technical Notes' ISBN 0-130929126-1.

Software
The TTG3 is supported by Occam primitives which generate key graphics functioins callable from the Occam TDS or 3L's scientific languages. The board will also support the X windows environment. This allows the TTG3 to implement graphics primitves directly or to act as an intelligent channel receiving data via the transputer serial links.

Ordering Information

PART NUMBER	DESCRIPTION
TTG3	HIGH RESOLUTION GRAPHICS TRAM WITH T800-25 AND G300