

CTRAM

Computation TRAnsputer Module

Description

The ComputeTRAM (or CTRAM) consists of a circuit board with transputer, memory, and connective hardware which is plugged into a SuperLink/XL or ULTRA/XL TRAM holder from Alta Technology or similar boards from Inmos. Alta's family of CTRAM products follows all of the mechanical and electrical standards for Size-1, Size-2, and Size-5 TRAMs. The CTRAM includes from 1 to 32 MBytes of DRAM and supports the IMST80x transputer (with on-chip floating point processor) or IMST425 (integer only) transputers. A variety of processor speeds and memory speeds are available, providing users with a wide range of cost-effective compute modules.

Features

- * **Inmos Compatible TRAM**
- * **1, 2, 4, 8, 16 or 32 MBytes** of DRAM
- * **Zero-wait-state memory**
- * **IMS-T805**, IMS-T800, or IMS-T425 transputer options
- * 25 and **30 MHz transputer** options
- * **Industry standard** Size-1 or Size-2 TRAMs for 1-8 MBytes. Size 5 for 16 and 32 MBytes.
- * **Four serial transputer links** (Selectable between 10 or 20 Mbits/s)
- * Compatible with Alta and Inmos TRAM holders (such as the Ultra/XL or the IMS-B014)
- * 1-Year warranty on parts and labor

CTRAMs may be combined with other transputer modules on a single SuperLink/XL or ULTRA/XL to create an array of processors and peripherals for use in parallel processing algorithms. Multiple XL boards may be combined for solutions requiring massively parallel computation power. Some typical applications include workstation acceleration engines, graphics and animation engines, scientific and mathematical modeling, neural networks, simulations, image processing and artificial intelligence.

CTRAMs are *quality-built* for lasting value. They are manufactured using the most current Surface Mount Technology (SMT) for affixing the board components. The gold-plated (rather than tin-plated) connecting pins assure secure contacts and long life of the pins and motherboard sockets. Alta's testing and burn-in procedures include complete functional tests of the CTRAM's memory and transputer prior to shipment.

CTRAM Parallel Applications

The CTRAM is the basic unit for computation in parallel processing applications. With its range of external memory configurations and processor speeds, the CTRAM is a versatile tool for the system designer, the system integrator, or the Value-Added Reseller (VAR). The end-user can find extra value from the CTRAM by matching the configuration of each CTRAM with the needs of his application. This customization results in a tailored, economical mix of processors and memory configurations.

Designers can place up to ten size-1 or five size-2 CTRAMs on a single PC/AT tramholder (with 1, 2, 4 or 8 MBytes of memory each). Two each of the 16 or 32-MByte CTRAMs can be placed on a single tramholder. CTRAMs may be connected to other transputer modules via its four transputer links to form a great variety of topologies. Some of the topologies possible using the CTRAM include: single and double pipelines, regular arrays (of M by N nodes), binary and tertiary tree structures, and custom topologies of the user's design.

Standard Configurations

The following standard CTRAM configurations are available from Alta Technology. Other configurations (including the integer-only IMST425) are available by special quotation. Please contact your Alta sales representative or your local dealer for pricing and availability.

OEM and Educational Pricing

Alta offers special pricing for Volume End User purchases, OEM's and educational institutions. Please contact your Alta marketing representative for information.

Your Guarantee of Quality

Alta warrants all products to be free from defect for 1 year from date of purchase. Alta will repair or replace any defective product when returned within 1 year of purchase.

PRODUCT SPECIFICATIONS

ALTA PRODUCT #	TRANSPUTER (see note 1)	DRAM/ Cycles	WAIT STATES	TRAM SIZE	INMOS Equivalent*	NOTES
CTRAM-25-1F	T805-25	1 Mbyte/3	0	1	IMS B411-16	Notes 2,3,4
CTRAM-25-2F	T805-25	2 MBytes/3	0	2	[IMS B404-16]	
CTRAM-25-4F	T805-25	4 MBytes/3	0	1	IMS B426-16	
CTRAM-25-8F	T805-25	8 MBytes/3	0	2	[IMS B427-16]	
CTRAM-25-16F	T805-25	16 MBytes/3	0	5	[IMS B433-16]	
CTRAM-25-32F	T805-25	32 MBytes/3	0	5	None	
CTRAM-30-1F	T805-30	1 Mbyte/3	0	1	None	Note 2
CTRAM-30-2F	T805-30	2 MBytes/3	0	2	None	
CTRAM-30-4F	T805-30	4 MBytes/3	0	1	IMS B426-17	
CTRAM-30-8F	T805-30	8 MBytes/3	0	2	[IMS B427-17]	
CTRAM-30-16F	T805-30	16 MBytes/3	0	5	None	
CTRAM-30-32F	T805-30	32 MBytes/3	0	5	None	

* Products enclosed in [brackets] may not be exact INMOS replacements. See NOTES for exceptions.

Note 1 T805's are being shipped on CTRAMs. T800's and T425's are available.

Note 2 This TRAM does not have SUBSYSTEM circuitry.

Note 3 This TRAM does not have 32K or 64K of SRAM.

Note 4 This TRAM exceeds the performance specified by Inmos or is a smaller TRAM size.

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