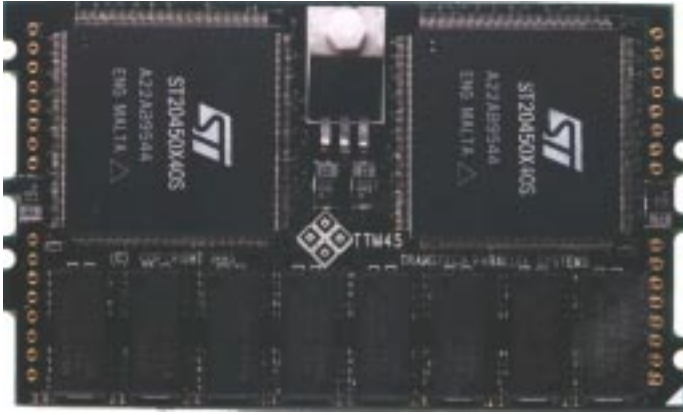


TTM45



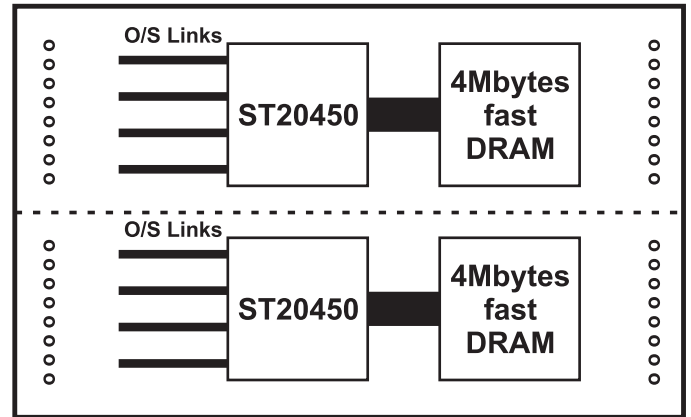
The TTM45 is a size 2 TRAM with two ST20450 processors each with 4Mbytes of fast page mode DRAM. Electrically the TTM45 is two independent size 1 TRAMs, i.e. there are no link connections on the module between the two processors.

The ST20450 is a high performance 32-bit micro-controller based on the ST20C4 macrocell core. It provides 16Kbytes of on-chip memory for fast access to local code, a vectored interrupt controller, four OS-Links and a multi-bank external memory controller.

The CPU contains instruction processing logic, instruction and data pointers and an operand register. It directly accesses the 16Kbyte on-chip memory, which can store data or program code. The on-chip SRAM provides 160Mbytes/s internal data bandwidth, supporting pipelined 2-cycle internal memory accesses at 25ns cycle times. Sustained transfer rates into external page mode DRAM are up to 80Mbytes/s.

The ST20450 has an OS-Link based serial communications subsystem. OS-Links use an asynchronous bit-serial (byte stream) protocol, each received bit is sampled five times, hence the term *over-sampled links* (OS-Links). Each OS-Link provides a pair of channels, one in and one out. The four full duplex OS-Links on the ST20450 are driven by individual DMA engines independent of the CPU. The links have programmable unidirectional data rates of 10 or 20 Mbits/s, giving a bidirectional bandwidth approaching 3Mbytes/sec.

ST20450 Processing TRAM



- ❖ Industry standard size 2 TRAM format
- ❖ Dual ST20450 Processors
- ❖ High performance, up to 80 MIPs
- ❖ Compatible with T2, T4 and T8 TRAMs

TECHNICAL DATA

Number of OS-Links:	8 (4 per processor)
Subsystem Logic:	No
Memory Speed:	60ns
Dimensions:	
TRAM Size:	2
Length:	93mm
Width:	53.1mm
Height:	4.5mm (Above top face of PCB)
Mass:	60g
Operating Temp:	0-50 °C
Power Supply:	
Voltage:	4.75 - 5.25V
Dissipation:	TBA (maximum)

ORDERING INFORMATION

TTM45-1-40	TTM45 with single ST20450 CPU
TTM45-2-40	TTM45 with two ST20450 CPUs

Please note: The SGS Thomson 4th generation toolsets are required to use the TTM45 as this supports ST20450 code