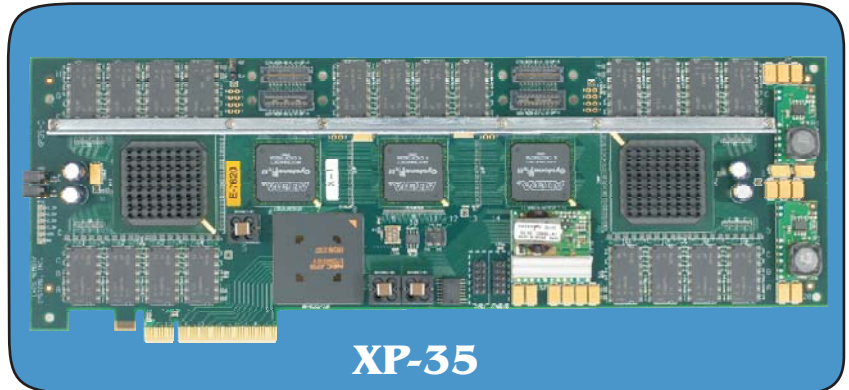


XP-35

16 GFLOPS DSP Accelerator

Turn your Server into
a DSP Supercomputer

- DSP at 16-GFLOPS
- Local RAM of 1 GB
- PCIe bus (x8, 1-GB/s)
- XMIDAS Compatible
- Fast intra XP-35 bus

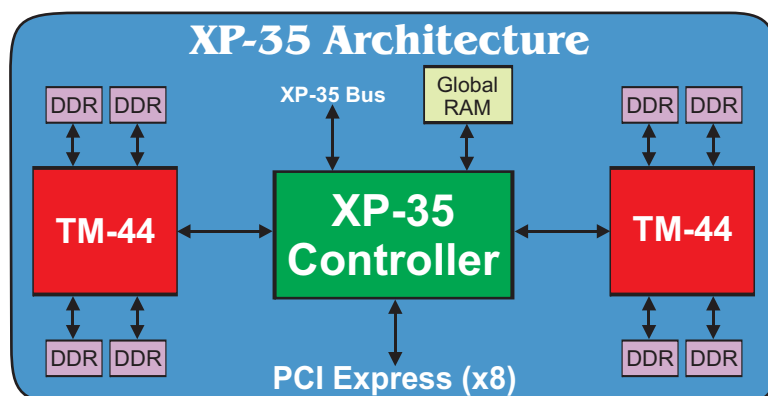


Based on the popular XP-30, the XP-35 has a 4x faster bus with the PCIe (x8) bus. With this increase in host/XP-35 bandwidth and an increase of global RAM, operation of the dual TM-44 nodes becomes more efficient and easier to program. The XP-35 is based on the popular TM-44 node that has proven effective in signal processing for years. With the increase of PCI bandwidth, DSP throughput should be increased by 10 to 20%.

Faster Bandwidth - The XP-35 has faster buses than the XP-30. The host bus PCIe is 4x faster. Global RAM has 2x faster buses to the TM-44 nodes. Also, the XP-35 has a new, dedicated intra XP-35 board bus to provide fast access (1.2 GB/s) to global RAM on either board by any of the four TM-44 nodes. Interim data is passed over the intra XP-35 bus, bypassing both PCIe buses. In a dual XP-35 configuration, input data can be received on one PCIe bus (1 GB/s), processed by four TM-44 nodes, and then the output data returned to another PCIe bus (1 GB/s).

TM-44 Architecture - The XP-35 is based on two TM-44 DSP nodes, developed by Texas Memory Systems, Inc., for their number crunching power. The TM-44 chip is comprised of 80 floating point processing units running at 100 Mhz, a high-bandwidth external memory bus (**8 GB/sec**), four special elementary function units (trigonometric, square root, divide), and on-chip program memory. High bandwidth and processing produces faster results.

TM-44 Math Library - The TM-44 math library contains 500+ scientific algorithms optimized to run efficiently on the TM-44 chip. Library coverage includes real and complex vector arithmetic and matrix arithmetic. It also includes 1-D and 2-D FFTs (powers of 2,3 and 5 vector sizes), DSP and image processing algorithms, as well as re-sampling, tuning, data comparison, packing and binary arithmetic utilities. Included are elementary function routines for executing trigonometric, square root, and division operations in a few nanoseconds instead of microseconds. Library documentation provides calling sequences, detailed algorithm descriptions, performance timings and examples. Programming the TM-44 is as easy as calling a math library function. Included XP-35 software is comprised of a driver and the math library of 500+ scientific algorithms.



FFT	64K Complex	0.66 msec
	1 million point Complex	13.20 msec
VATAN2	1 million point Arctan2	2.63 msec
VPOLAR	128K rectangular to polar	0.33 msec
Matrix	64x64 Complex	0.33 msec
Multiply	1Kx1K Complex	1.35 sec

www.superDSP.com

Texas Memory Systems, Inc.



10777 Westheimer, #600
Houston, TX 77042
(713) 266-3200