

FACT SHEET

MPC2604GA MPC2605

Integrated Secondary Cache for PowerPC[™] Microprocessor Applications

The Secondary Cache Solution For PowerPC Microprocessors:

4–WAY

DATA RAM

The MPC2604GA and MPC2605 are the highest performing secondary cache solutions available for use in PowerPC 60x buses. The MPC2604GA and MPC2605 are four-way set associative integrated look-aside caches with copy-back or optional write-through capability. An increase in system performance is achieved by integrating the data, tag, host interface and least recently used (LRU) memory with a cache controller in a single chip. These solutions offer minimum latency and zero wait state burst performance – burst reads occur at 2-1-1-1 clock rates.

The multi–way set associativity feature increases cache hit rates which makes the cache behave like a direct–mapped cache twice its size. This yields a higher performance system solution at 256KB prices.



MPC2604GA/MPC2605 BLOCK DIAGRAM

COMPARE

BUS INTERFACE AND CACHE CONTROLLER 32 32 4 ADDR CTRL DATA

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PRODUCTS

Each MPC2604GA and MPC2605 groups together all the functions required to implement a level 2 cache design integrated into one chip, eliminating the need for glue logic.

The MPC2604GA and MPC2605 are members of the

PowerPC family components which consists of the MPC601, MPC603, MPC604 microprocessors and MPC106 chipset which ensures complete compatibility and ease of system design.

SUMMARY

FUNCTION	MPC2604GA	MPC2605
Supply Voltage	5 V	3.3 V
Speed	66 MHz	75 MHz
Burst Read	2-1-1-1	2-1-1-1
Data Bus Size	32 + Parity	64 + Parity
Write Policy	Copy Back or WT	Copy Back or WT
Associativity	4–way	4–way
Scan	IEEE 1149.2 JTAG	IEEE 1149.1 JTAG
Number of Chips for 256KB	2	1
Number of Chips for 512KB	4	2
Number of Chips for 1MB	_	4



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