

MSP for Wireless Routers and Access Points

GENERAL

The MSP2006 belongs to a full family of Multi-Service Processors designed to meet the performance, QoS and security needs of communications equipment used within the customer premise. The MSP2006 is an ideal solution for wireless routers and access points. As shown below, it includes a powerful MIPS processor, two 10/100 Ethernet MACs, and a PCI interface.

The MSP2006 provides a new level of price/performance for wireless routers. Its unique systems architecture includes a 4.25 Gbit/s bus, and intelligent context aware DMA engines. Integration of

802.11a, b, and g wireless LANs is easily facilitated through the PCI interface.

To reduce time-to-market, PMC-Sierra offers comprehensive support for the MSP2006, including evaluation boards, software, application engineering support, training, and documentation that together accelerate the product development process. In addition, the MSP2006 supports Linux, VxWorks, or custom operating systems.

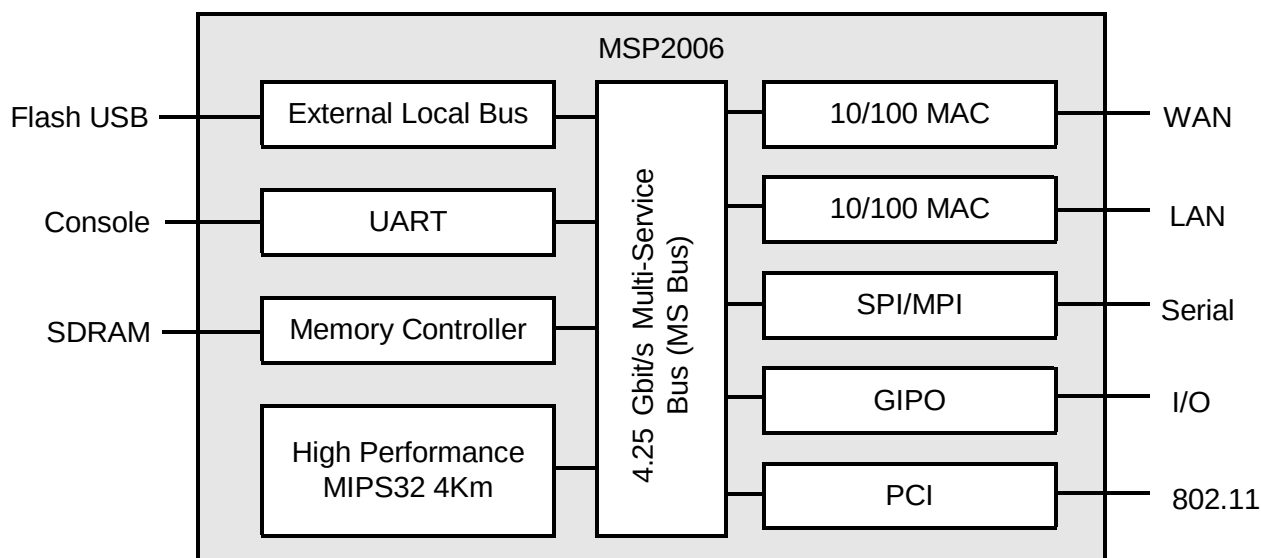
FEATURES

- Industry leading price/performance
- Versatile PCI and ELB Buses provide seamless integration to all flavors of 802.11 chipsets
- 2 10/100 Ethernet MACs
- Easy porting of customer and third party software and protocol stacks

APPLICATIONS

- Ethernet Router
- Wireless Ethernet Router
- Wireless Access Points

BLOCK DIAGRAM



MSP for Wireless Routers and Access Points

ELECTRICAL

- 276 pin PBGA
- Vcc 3.3V I/O, 1.8V core
- Power consumption 1.0W

SYSTEM PROCESSOR

- High performance MIPS32 4Km processor at
- 170 MHz
- 16 KB instruction cache, 16 KB data cache
- Ultrafast Multi-Service Bus (MS Bus)
- Peak bandwidth of 4.25 Gbit/s
- True parallel processing

LAN INTERFACE

- 2 Independent 10/100 Ethernet MACs
 - MII/RMII
- VLAN support

HIGH-PERFORMANCE BUSES

- Flexible external local bus interface
 - Up to 25 Mbit/s data throughput
- PCI interface (32-bit, 33MHz)
 - PCI V2.1 and V2.2 compatible

SYSTEM CONTROL

- Four interrupt inputs
- 40 GPIOs
- MIPS timer, 2 system timers, and watchdog timer
- Block copy engine

MISCELLANEOUS INTERFACES

- 2 UARTs
- SPI/MPI
- Two-wire serial

MEMORY CONTROLLER

- Glueless interface to 256 MB of SDRAM
- Glueless interface to 32 MB of flash

SOFTWARE

- APIs: Block copy
- Board support package
- 802.11 Drivers

DEVELOPMENT TOOLS

- Support for Linux and VxWorks
- Evaluation boards
- Third party tool chains

THIRD PARTY SUPPORT

- WLAN Applications
 - Instant 802 Networks
- EJTAG Debuggers
 - EPI - MAJIC probe
 - WindRiver - visionICE II

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