

Media5200 Development Platform for MPC5200B

The Media5200 development platform for MPC5200B provides all the hardware needed for rich user and machine interfaces and the software tools to make effective use of them.

MPC5200B Single-Chip, Highly Integrated 32-bit PowerPC® Processor with Floating Point Unit (FPU) and PowerPC Core

- > 400 MHz, 760 MIPS MPC5200B processor containing a 603e PowerPC® core
- > 603e core includes FPU and hardware memory management unit (MMU) capable of supporting video image processing, voice recognition/text-to-speech, compressed audio/video decoding and other algorithmic intensive operations
- > Multi-serial UART for maximum design flexibility
- > SPI (useful for many applications including touch screen and ADC input)
- > Dual USB Master 1.1 with OHCI support
- > Dual CAN 2.0 A/B
- > 10/100 Base-T Ethernet
- > Dual I²C (to 520 kbps) for thermometer, interchip and DSP communication, EEPROM and other purposes
- > Version 4 5V ATA (Compact Flash with True IDE mode)
- > PCI Interface
- > AC97 Audio Codec Interface
- > Multiple, reconfigurable GPIO pins

Audio Subsystem

- > Audio subsystem based on Realtek ALC658 AC97 codec
- > Full connectivity to car radio
- > Two microphone inputs, Bluetooth™ technology, stereo, radio, phone, Media Oriented Systems Transfer (MOST®) video and aux and line inputs



- > 16-bit multichannel speaker outputs
- > Headphone out
- > Amplifier

Graphics Subsystem

- > Comprehensive 2-D and 3-D touch screen graphics display support based on the Fujitsu® Coral-P graphic ASIC MB86296S with 32 MB dedicated SDRAM memory
- > 8.4 inch TFT color NEC® LCD display; 1024 x 768 pixels; 24-bit color
- > LVDS LCD interface
- > VGA display connector

Memory Support

- > 128 MB double data rate (DDR) SDRAM
- > 64 MB Flash memory
- > 32 MB SDRAM for Fujitsu Coral-P Graphics Chip

Dimensions

- > Board enclosure: 186 mm x 180 mm x 84 mm
- > Main board: 172 mm (width) x 165 mm (depth), excluding connectors
- > Audio subsystem board: 172 mm (width) x 60 mm (depth), excluding connectors

- > Power subsystem board: 172 mm (width) x 60 mm (depth)
- > Touch screen graphics display head: 213 mm x 175 mm x 57 mm

Power and Onboard Power Management Requirements

- > Single 12VDC @ 2A direct automotive connection (designed to accommodate 6–20V); 120VAC power international adapters included
- > All required voltages derived from single source
- > 2.5 A fuse
- > ATX power supply connector (optional)
- > Support of MPC5200B sleep (real-time clock only) modes
- > Sequenced power-on (1.5, 2.5, 3.3 then 5V sequence)
- > SDRAM self refresh
- > Selective transceiver shutdown
- > DC/DC converters stay on with minimal load
- > ATA level shifters enabled only by ATA chip select

Processor Support

The Media5200 development platform is based on the 760 MIPS low-power MPC5200B processor, which contains a PowerPC core. It contains a wide variety of integrated I/O and has virtually all the hardware components you need to quickly develop scalable software solutions while saving valuable software integration time and development costs. The MPC5200B is capable of processing CPU- and DSP-intensive applications on a single, easy-to-manage core including voice recognition, acoustic echo cancellation, compressed audio decoding/encoding and video decoding.

Software Development Templates

The Media5200 development platform is self-configurable to your development environment through the use of scripts and utilities. A fully networked image using NFS, CIFS and TCP/IP is supplied, allowing you to compile on your host and run on your target, all through an Ethernet connection—easy and fast! System configuration examples along with build files for hardware supported configurations are included.

Target Applications and System Summary

Automotive entertainment and information systems, network gateways, network access storage, industrial controllers, audio systems, instrumentation systems, video and data interpretation systems, telematics devices, hands-free phone modules, lane departure warning systems and set-top boxes are just a sample of target systems the Media5200 may be used to develop and prototype.

The system may be powered directly with 12VDC (optional 120VAC adapter included) or via an ATX-style power supply. A DIN-sized main board offers comprehensive hardware utilities, including a repositionable touch screen graphics display with 3-D support, audio subsystem, GPS module, automotive networking including CAN and Media Oriented Systems Transfer (MOST), as well as connectivity to wireless subsystems (such as cellular, Bluetooth technology, or IEEE® 802.11 standard), WiFi® technology and a rich set of I/O to accommodate a wide variety of designs.



Ordering Information and Contents

Media5200 development platform with 30-day software evaluation license: MEDIA5200KIT1

The Media5200 development platform includes the Media5200 hardware, 120VAC international brick-type power supply, carrying case and all software and documentation for a comprehensive development environment. It includes a 30-day evaluation copy of a variety of board support packages. The Media5200 CD contains optimized MPC5200B-specific I/O drivers. Price: US\$7,500 each

For additional MPC5200B and supplied software information:

www.freescale.com/files/abstract/overview/SPSMPC5200.htm

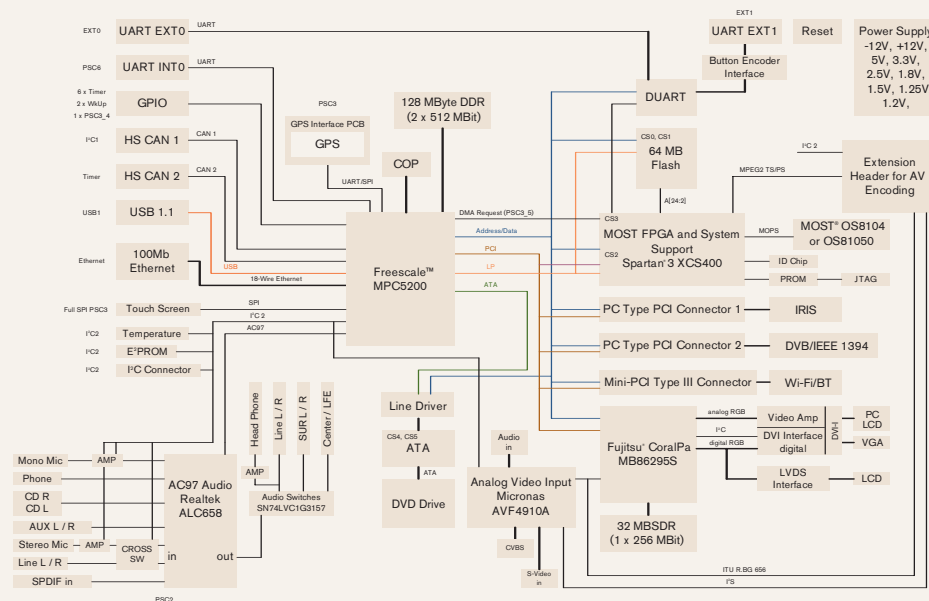
Technical Support

Various standard training courses and annual technical support contracts are available. For further product development, support contracts can be customized to meet specific training, consulting or custom engineering needs. Self-paced training for the MPC5200 is available at www.techonline.com.

Additional Documentation

- > 760 MIPS MPC5200B Lite5200B MPC5200LITEPB
- > mobileGT Media5200SDP Product Brief MOBILEGT5200PB
- > MPC5200 Technical Summary MPC5200TS

MEDIA5200 BLOCK DIAGRAM



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