The MPC837x Modular Development System (MDS) assists designers by providing a platform for system development based on the MPC837x family. This platform enables designers to bring up silicon, develop new software applications and do performance benchmarking. It can also be used for customer evaluation and demonstration purposes in a wide variety of applications, such as networking, printing and storage.

The MPC837x MDS is built on Power Architecture™ technology and supports the MPC8377, MPC8378 and MPC8379. The MPC837x family has an e300 core that ranges from 400-667 MHz with 32K data and instruction cache, and supports two Gigabit Ethernets, USB 2.0, PCI, 64-/32-bit DDR1/2 and a Security Engine. The MPC8377 also supports x2 PCI Express® and 2 SATA controllers, while the MPC8378 supports x2 PCI Express and 2 SGMII, and the MPC8379 supports 4 SATA controllers. The MPC837x MDS provides a flexible modular development system that allows system designers to take advantage of the highly integrated, high-performance MPC837x family.

The MPC837x MDS comes complete with a processor board and high-speed serial interface (HSSI) cards that support PCI Express, SATA and/or SGMII. The MPC837x MDS also has the ability to be connected to a PowerQUICC® platform I/O board (PIB) or a PCI extender board that allows it to act as either a PCI host or device.

Along with hardware support, the MPC837x MDS comes with a software board support package (BSP) that includes both the u-boot and Linux kernel 2.6 support. The BSP also supports the Linux Target Image Builder (LTIB), a suite of tools that leverages existing open source configuration scripts and source code packages and bundles them all into a single BSP generation bundle.
Features

• Memory
  - 512 MB DDR2 up to 400 MHz data rate
• Local Bus Flash Memory
  - 32 MB NOR Flash
  - 32 MB NAND Flash
  - 4 Mb SPI Flash
• SD Card Connector
• PCI
  - PCI edge connector carried for 32-bit for agent
  - High-Speed Riser Connectors that allow the board to connect the PowerQUICC platform I/O board (PIB) or PCI extender to act as a PCI host.
• Ethernet
  - Dual 10/100/1000 Gigabit Ethernet transceivers supporting RGMII, RTBI, MII and SGMII
  - USB 2.0
    - USB 2.0 transceiver ULPI for high speed (480 MB/s) and full speed (12 Mb/s)
    - Serial USB transceiver for low speed (1.5 Mb/s) and full speed (12 Mb/s)
  - RS232
    - Dual RS232 transceiver connected to DUART
  - I²C Buses
    - Supports 256K EEPROM, real time clock, 1Kb BRD EEPROM
  - High-Speed Serial Interfaces (HSSI)
    - 2 SATA HSSI (MPC8379)
    - 1 SATA and 1 PCI Express HSSI (MPC8377)
    - 1 PCI Express and 1 SGMII HSSI (MPC8378)
  - Power Options
    - Can be powered by 5V external power supply
    - Can be powered from PCI edge connector as a PCI add-in card
    - Can be powered from PIB when IO and processor boards are combined

The MPC837x MDS is available with the following documentation:
- HW Getting Started Guide
- MPC837x-MDS-PB Spec

For additional information regarding documentation or board availability, please contact your local Freescale sales office.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPC8377E-MDS-PB</td>
<td>Includes 1 processor board, 1 SGMII card</td>
</tr>
<tr>
<td>MPC8378E-MDS-PB</td>
<td>Includes 1 processor board, 1 PCI Express card</td>
</tr>
<tr>
<td>MPC8379E-MDS-PB</td>
<td>Includes 1 processor board, 2 SATA cards</td>
</tr>
</tbody>
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Learn More: For current information about Freescale products and documentation, please visit www.freescale.com.