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AMC-5301

The AMC-5301 is a highly integrated CPU board, which is implemented as a single-width, full-size, processor AdvancedMC module. The AMC-5301 module design is based on the low-power and high-performance Intel® Celeron® M and Pentium® M processors combined with the high-performance Intel 3100 chipset. The board supports Intel Celeron M and Pentium M processor versions with frequencies ranging from 1.0 GHz up to 2.0 GHz providing FSB speeds of 400 MHz. The initial mainstream version implements an Intel Pentium M Processor 738 running at 1.4 GHz to provide the most optimum performance per watt configuration. It supports Dual Channel DDR2 memory up to 2 GB running at 400 MHz with ECC support. One dual Gigabit Ethernet controller utilizes the PCI Express interconnection to the 3100 chipset for maximum data throughput between processor and memory.

The AMC-5301 has full hot swap capability, which enables the board to be replaced, monitored and controlled without having to shutdown the AdvancedTCA carrier board or the system. A dedicated Module Management Controller (MMC) is used to manage the board and support a defined subset of Intelligent Platform Management Interface (IPMI) commands and PICMG® (AdvancedTCA/AdvancedMC) command extensions. Localized AdvancedMC temperature, voltages, and power status are monitored and hot swap operations are all managed on board. The AdvancedMC module supports one USB 2.0 host interface to the front, and one EIA-232 serial interface via a 9-pin micro D-SUB connector. One of the two on-board Gigabit Ethernet ports can be directed to the front panel RJ-45 connector. The high-speed interconnect topologies to the carrier board include a Dual Gigabit SerDes connection, two USB ports, and Serial ATA storage interface to the common options region of the AdvancedMC port mapping. A PCI Express x8 or two x4 lanes from the MCH are connected to the carrier via the AdvancedMC fat pipe ports.

The Intel 3100 chipset was selected for the dual core version of the AMC-5301 which is currently under development. This will greatly facilitate board support package and driver reuse for integrators migrating to the dual core version.



FEATURES

- › Intel Pentium M Processor 738 (1.4 GHz) and Celeron M 373 (1 GHz) with 400 MHz FSB support; Intel 3100 chipset solution
- › 1 GB DDR2 onboard (2 GB optional) with ECC registered support
- › Supports Intel AMT Technology; Trusted platform management; Programmable watchdog timer
- › One optional expansion board for CompactFlash and one onboard 512 MB bootable USB storage flash
- › PigeonPoint-compatible MMC with COM2 debug
- › AMI BIOS, BIOS parameters stored in EEPROM, boot order defined via MMC Common
- › One single PCI Express x8 or dual PCI Express x4 to AdvancedMC connector Fat Pipes region
- › Intel 82571EB Dual Gigabit Ethernet Controller with pin-outs to AdvancedMC common options region port 0-1
- › Two SATA connect to rear AdvancedMC edge connector pin-outs to AdvancedMC common ports region 2-3
- › One Gigabit Ethernet accessible either at front panel via RJ-45 connector or rear AdvancedMC edge connector
- › COM1 to front panel as USB slave through onboard USB to serial converter and micro D-SUB connector
- › One USB 2.0 compliant host port on front panel and one USB 2.0 port to AdvancedMC edge connector