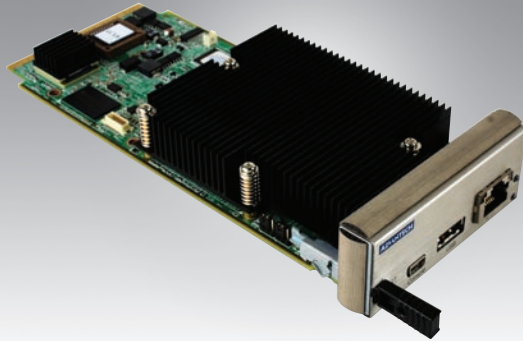


MIC-5602Rev2 Advanced Mezzanine Card Intel® 45 nm Core™ 2 Duo Processor AMC

NEW



Features

- Supports Intel® 45 nm Core™ 2 Duo Low Voltage processor
- Intel® 3100 chipset 400/533 MHz FSB
- Up to 4 GB DDRII 400 MHz SDRAM with ECC
- One Gigabit Ethernet (RJ-45), one USB 2.0 port, and one console port (mini-USB) to front panel
- AMC connector routes dual Gigabit Ethernet SerDes (x2), SATA (x2), USB (x2), dual PCIe x4, or single PCIe x8
- Boot from network, CompactFlash, SATA, USB or onboard flash disk
- Supports IPMI v1.5 and Serial-over-LAN function
- AMC.0, AMC.1, AMC.2 and AMC.3 compliant



Introduction

The MIC-5602Rev2 is a highly integrated single-width, full-size, processor AMC. Its design is based on the low-power, high-performance 45nm Intel® Core™2 Duo processors combined with the Intel 3100 chipset. The board includes 2 or 4 GB of soldered DDR2 400 MHz memory with ECC for higher MTBF and optimum cooling. To facilitate development, test and integration whilst offering typical network connectivity once deployed, the front panel provides a gigabit Ethernet connector, a serial port and a USB 2.0 host port.

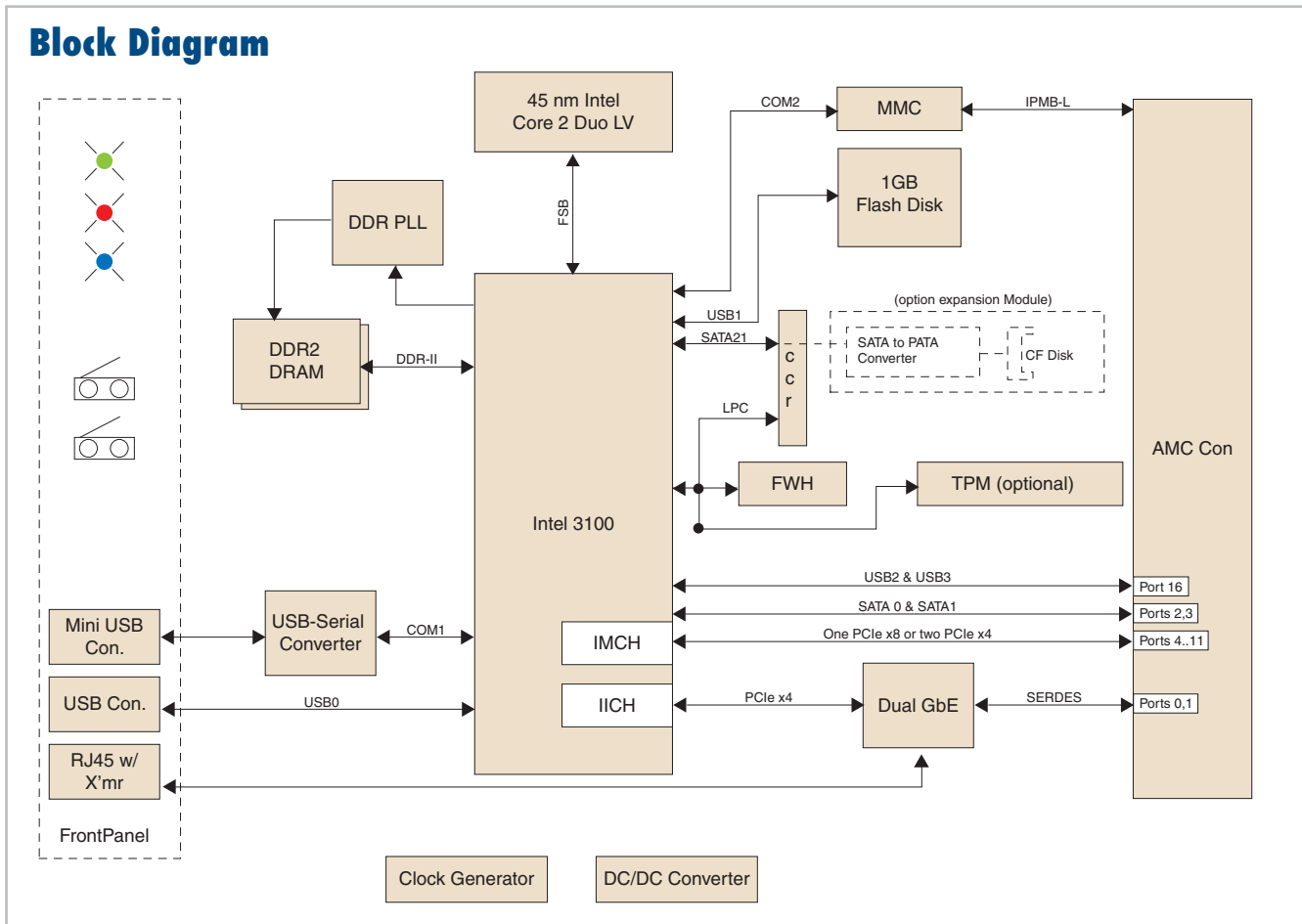
The board can be configured with two PCI Express x4 ports or a single PCI Express x8 port to the edge connector. Two gigabit Ethernet ports provide AMC.2 compliance and connect to the 3100 chipset via PCI Express for maximum data throughput. Dual SATA interfaces provide AMC.3-compliant storage and two USB ports offer further connectivity opportunities. A dedicated Module Management Controller (MMC) monitors onboard conditions and manages hot swap operation for field upgrades or module replacement without the need to power down the underlying system.

While maintaining the functional features of the original MIC-5602, the Rev2 series offers a significant performance increase and memory size upgrade for applications such as dense computing, host media processing and protocol offload.

Specifications

| | | |
|-------------------|--------------------|--|
| Processor System | CPU | Intel® Core™ 2 Duo SL9380 (1.8 GHz) |
| | Chipset | Intel 3100 |
| | BIOS | AMI (1. Dual images with update rollback, 2. CMOS settings can be changed over IPMI, and 3. CMOS backup works without battery) |
| Bus | Front Side Bus | 800 MHz |
| | PCI Express | PCI Express rev1.0a : one x8 and two x4 routed to AMC connector |
| Memory | Technology | DDRII 400 with ECC |
| | Max. Capacity | 4 GB |
| Ethernet | Controller | Intel 82571EB dual-port Gigabit Ethernet controller (support 802.3d compliant link aggregation) |
| | Interface | One GbE accessible on front panel via RJ-45 and two SerDes links to AMC common options region ports 0 and 1 |
| Mass Storage | CompactFlash | Optional expansion board with CF type-1 socket |
| | Onboard | 1GB industrial grade internal flash disk (used as NV storage, emergency boot disk or diagnostics boot media) |
| SATA Interface | AMC edge connector | Two SATA interfaces to common ports region 2-3 |
| | Other | One SATA routed to CF daughter board |
| Serial Interface | I/O | Routed to front panel as USB Slave interface through onboard USB to Serial converter |
| USB Interface | I/O | One USB2.0 compliant host port (standard USB Connector) on front panel |
| | AMC edge connector | Two USB2.0 ports connect to rear AMC edge connector |
| Watchdog Timer | | AMC compliant watchdog |
| Hardware Monitor | Controller | IPMI v1.5 compatible MMC |
| Firmware | Source Code | Pigeon Point System-based |
| | Update Standard | HPM.1 compliant |
| Operating System | Compatibility | Carrier Grade Linux (Wind River Platform for Network Equipment, Linux Edition 2.0) |
| Form Factor | AMC | Full-size, single width |
| | Interface | AMC.0 compliant |
| Miscellaneous | LEDs | x1 blue for hot swap, x1 red/amber for failure and OOS, x1 green for general purpose |
| Power Requirement | Configuration | Core™2 Duo SL9380 + 3100 + 2 GB on-board DDRII SDRAM |
| | Consumption | estimated 38.5 watts |
| Physical | Dimension | 180.6 mm x 73.5 mm |

Block Diagram



| | | | |
|-------------|------------------------|--|---|
| Environment | Temperature | Operating -5 ~ 55° C (23 ~ 122° F) | Non-operating -40 ~ 70° C (-40 ~ 140° F) |
| | Humidity | IEC60068-2-78 (95%RH @ 40° C) | |
| | Vibration (5 ~ 500 Hz) | IEC60068-2-6 (0.002G ² /Hz, 1Grms) | |
| | Shock | IEC60068-2-27 (10G, 11ms) | |
| | Altitude | sea level to 4,000 m above sea level | 10,000 above sea level |
| Regulatory | Conformance | UL94V0, FCC Class B, CE, RoHS & WEEE Ready | |
| | NEBS Level 3 | Designed for GR-63-CORE and GR-1089-CORE | |
| Compliance | Standards | PICMG AMC.0, AMC.1, AMC.2, AMC.3, IPMI v1.5, HPM.1 | |

Ordering Information

| Model Number | On-Board Option | |
|----------------|--------------------------------|--------------------|
| | CPU | Memory |
| MIC-5602A2-M2E | Core 2 Duo LV 1.8 GHz (SL9380) | 2 GB DDR2 with ECC |
| MIC-5602A2-M4E | Core 2 Duo LV 1.8 GHz (SL9380) | 4 GB DDR2 with ECC |

Notes:

1. TPM option is available on request.
2. CF module option is available on request.
3. MIC-5602A2-M4E builds will depend on the availability of the 4 GB DDR2 SDRAM from the manufacturers. Check with your local Advantech sales ahead of time for information.



Figure 1: MIC-5602A2-M2E with Full-Size Front Panel