DFI-ACP
○ *Revision Control* ○ *Long Life Cycle*

RoHS

CA331-NR
Intel® GM45 microATX Board

PROCESSOR
- Intel® Core™2 Penryn processor
- 1066/800/667MHz FSB
- Intel® 45nm transistor technology
- Intel® Trusted Execution Technology (Intel® TXT)
- Intel® Virtualization Technology (Intel® VT) DMA
- Supports Data Bus Inversion (DBI)
- Supports Message Signaled Interrupt (MSI)
- Supports Intel® architecture with Intel® Wide Dynamic Execution
- Processor socket: Socket P 478-pin Micro FCPGA

CHIPSET
- Intel® chipset
  - Intel® GM45 Express chipset
  - Intel® ICH9M-E I/O Controller Hub

SYSTEM MEMORY
- Two 204-pin SODIMM sockets
- Supports 1066MHz DDR3 SDRAM
- Supports maximum of 8GB system memory
- 64-bit wide per channel
- 256Mb, 512Mb, 1Gb and 2Gb memory technologies
- Supports non-ECC x8 and x16 DIMMs
- Supports DDR3 On-Die Termination (ODT)
- Supports partial writes to memory using data mask signals (DM)

EXPANSION SLOTS
- 1 PCI Express x16 slot
- 1 PCI Express x4 slot
- 2 PCI slots

ONBOARD GRAPHICS FEATURES
- Intel® GMA4500 integrated graphics engine
  - Supports 3D, 2D and video capabilities, DX10 and OpenGL 2.1

ONBOARD AUDIO FEATURES
- Realtek ALC262 2-channel High Definition Audio
- Three stereo ADCs support 16/20-bit PCM format for multiple input streaming
- High quality analog differential CD input
- 16/20/24-bit S/PDIF-OUT supports 44.1K/48K/96K/192kHz sample rate
- 16/20/24-bit S/PDIF-IN supports 44.1K/48K/96K/192kHz sample rate

ONBOARD LAN FEATURES
- Intel 82567 and Realtek RTL8111C-GR PCI Express Gigabit controllers
- Integrated 10/100/1000 transceiver
- Supports Full Duplex flow control (IEEE 802.3x)
- Fully compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab
- Supports power down / link down power saving

SERIAL ATA INTERFACE
- Four Serial ATA ports
- Data transfer rate up to 3Gb/s
- Integrated Advanced Host Controller Interface (AHCI) controller
- Supports RAID 0 or RAID 1 (cannot coexist)

IDE INTERFACE
- JMicron JMB368 PCI Express to PATA host controller
- Supports Native Mode operation
- Supports PIO Modes 0, 1, 2, 3, 4
- Supports Multiword DMA Modes 0, 1, 2
- Supports Ultra DMA 33/66/100/133
- Supports ATA/ATAPI command

INTEL ACTIVE MANAGEMENT TECHNOLOGY (AMT)
- Out-of-band system access
- Remote troubleshooting and recovery
- Hardware-based agent presence checking
- Proactive alerting
- Remote hardware and software asset tracking

REAR PANEL I/O PORTS
- Mini-DIN-6 PS/2 mouse port and PS/2 keyboard port
- 2 DB-9 serial ports
- 1 DB-15 VGA port
- 1 DVI-I port (DVI-D signal only)
- 2 RJ45 LAN ports
- 4 USB 2.0/1.1 ports
- Mic-in, line-in and line out jacks

I/O CONNECTORS
- 4 connectors for 8 additional external USB 2.0/1.1 ports
- 1 LCD brightness control connector
- 1 LVDS LCD panel connector
- 1 LCD/inverter power connector
- 1 Digital I/O connector
- 1 front audio connector for line-out and mic-in jacks
- 1 CD-in internal audio connector
- 1 S/PDIF connector
- 4 Serial ATA connectors
- 1 34-pin FDD connector and 1 40-pin IDE connector
- 1 25-pin parallel connector
- 1 24-pin ATX power connector
- 1 front panel connector
- 2 fan connectors

BIOS
- AMI BIOS
- 32Mbit SPI BIOS

ENERGY EFFICIENT DESIGN
- Supports ACPI specification and OS Directed Power Management
- Supports ACPI STR (Suspend to RAM) function
- Wake-On-Events include:
  - Wake-On-PS/2 KB/Mouse and Wake-On-USB KB/Mouse
  - Wake-On-LAN and Wake-On-Ring
  - RTC timer to power-on the system
- System power management supported
- CPU stopped clock control
- Microsoft®/Intel® APM 1.2 compliant
- Soft Power supported - ACPI v2.0 specification
- AC power failure recovery

DAMAGE FREE INTELLIGENCE
- Monitors CPU/system temperature and overheat alarm
- Monitors Vcore/12V/1.5V/1.05V/5V/5VSB voltages and failure alarm
- Monitors CPU/chassis fan speed and failure alarm
- Read back capability that displays temperature, voltage and fan speed
- Watchdog timer function

TEMPERATURE
- 0oC to 60oC

HUMIDITY
- 10% to 90%

PCB
- 6-layers, microATX form factor
- 24.4cm (9.6") x 24.4cm (9.6")

REAR PANEL I/O PORTS

PS/2 Mouse | COM 2 | VGA | LAN 1 | LAN 2 | Mic-in | Line-in | Line-out

PS/2 K/B | COM 1 | DVI-I (DVI-D signal only) | USB 0-1 | USB 2-3