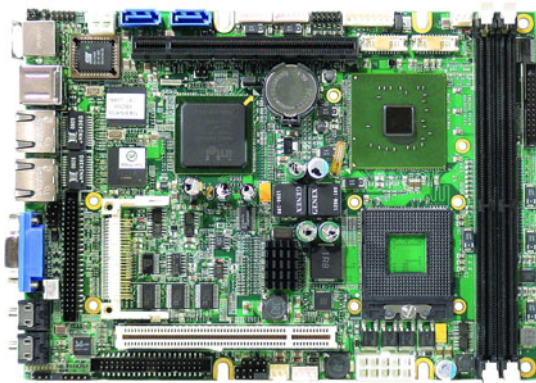


Single Board Computer 500

PBAS5302/-1/-2/-3



The SBC 500 is a 5.25" form factor embedded board computer utilizing the latest Intel® Core™ 2 Duo processor with Intel's 65-nanometer technology and new micro-architecture. The SBC 500 supports Intel® Core™ 2 Duo, Core™ Duo, Core™ Solo, and Celeron® M family processors up to 2.17GHz with 533/667MHz FSB and up to 4MB L2 cache. The incorporated mobile Intel® 945GME and ICH7-M DH chipset supports two 240-pin DDR2 DIMM socket up to 4GB un-buffered non-ECC DDR2 533/667MHz, one PCI express x16 slot for superb graphic display and two PCI express x1 Gigabit Ethernet LAN for fastest network connection. The SBC 500 also supports two SATA, IDE, CF, six USB 2.0, VGA & LVDS, four COM, and parallel port. The RoHS compliant SBC 500 embedded board computer consumes very low power and is designed to deliver higher processing power with greater performance-per-watt to fit in various environments for embedded applications. The new Intel® Core™ 2 Duo processor in the SBC 500 has a exible design that is able to create new solutions for various environments.



Main Features

- ❑ Support Intel® Core™ 2 Duo, Core™ Duo and Core™ Solo processor family
- ❑ Intel® 945GME chipsets
- ❑ 2x 240-pin DDR2 DIMM sockets support unbuffered non-ECC DDR2 400/533/667 up to 4GB
- ❑ 2x Intel® 82573L PCI express gigabit LAN
- ❑ Supports LVDS/VGA display and 16x PCIe slot
- ❑ CompactFlash socket

Technical Specifications

CPU Support

- Intel® Socket M
- Support Intel® Core™ 2 Duo, Core™ Duo, Core™ Solo family processors with 533/667MHz
- Intel® Embedded Processor List (Intel® Longevity CPU):
 - Core™ 2 Duo Processor (T7400 2.16GHz)
 - Core™ Duo Processor (T2500 2.0GHz)
 - Core™ Solo Processor (Celeron® M 440 1.86GHz)

Main Memory

- 2x 240-pin DDR2 DIMM socket, up to 4GB un-buffered non-ECC DDR2 533/667 SDRAM
- Note: Maximum 4GB. Actual memory size is dynamic based on the OS I/O resource allocation.

Chipset

- Intel® 945GME Graphics Memory Controller Hub (GMCH)
- Intel® 82801 GHM ICH7 Mobile Digital Home (ICH7-M DH)

BIOS

- Award system BIOS
- Supports Soft off, Wake on LAN, Power On by PS2 Keyboard Function Key, RTC alarm Power On
- Power on after power failure
- Plug and Play support
- 4M bits flash ROM

On-board LAN

- 2x Intel® 82573L PCI Express Gigabit Ethernet
- Supports Boot From LAN (PXE)
- Supports Wake on LAN (When 5Vsb power available). (LAN1 only)
- 2x RJ45 with LED

Audio

- Realtek ALC655 CODEC for AC97 v2.1 CODECI
- Interface: Mic in and Speaker out connector, Line in with pin header

Display

- Intel® 945GME chipset with integrated graphics controller, Max. 128MB by Intel® Dynamic Video Memory Technology (DVMT) 3.0
- Analog VGA interface:
 - 1x DB15 VGA port
 - Resolution up to 1.400x1.050 (Tested); Chipset supports up to 2.048x1.536
- LVDS interface:
 - 2x 20-pin LVDS connector for internal connection, supports single (18bit) or dual pixel (36bit) LVDS panel
- CCFL interface:
 - 1x CCFL for LCD Panel Backlight Inverter

Expansion

- 1x PCIe x16 slot
- 1x PCI slot

I/O Interface

- USB 2.0: 2 ports edge connector
- USB 2.0: 4 ports, by 1x6 2.5mm JST connector
- Serial ports: 4x SIO, with 2x20 box header (2.0mm) support RS-232 only 1x jumper to switch 5V and 12V power source
- Parallel port: 1 port, with 2x13 box header (2.0mm)
- PS/2: 1x Mini-Din Keyboard/Mouse
- GPIO: Support 4 sets of general purpose I/O each with TTL level (5V) interface
- FAN: Two 1x 3-pin connectors for system Fan, 1x 4 pin connector for CPU Fan
- 1x on-board 5-pin header for IrDA, TX, RX
- On-board buzzer/SMBus2.0/Reset/On off switch button

Watchdog Timer

- Watchdog timeout is programmable by Software from 1 to 255 seconds (Tolerance 10% under room temperature 25°C)



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Storage

- 2x SATA II ports
- 1x IDE 44-pin connector
- 1x CF internal socket, supports One Type I and II Compact Flash Card (Primary Master)

System Monitor

- 5 voltage (For +3.3V, +5V, +12V, Vcore and +2.5V)
- 3 Temperatures (CPU, two external Temperature Sensor)
- 3 FANs speed (CPU and System FANs)

On-board RTC

- On-chip RTC with battery back up
- 1x External Li-ion Battery
- RTC Tolerance less than 2sec (24 hours) under 25 C environment

Dimensions

- 5.25" form factor
- 203 x 146 mm (L x W)

Power Requirements

- Supports both AT and ATX Mode (default setting is AT mode)

CPU: P-M 2.17GHz	+12V	+5V
Memory: 2x 1GB DDR2		
Full-Loading Mode	3.25A	4.97A
Light-Loading Mode	0.40A	2.97A

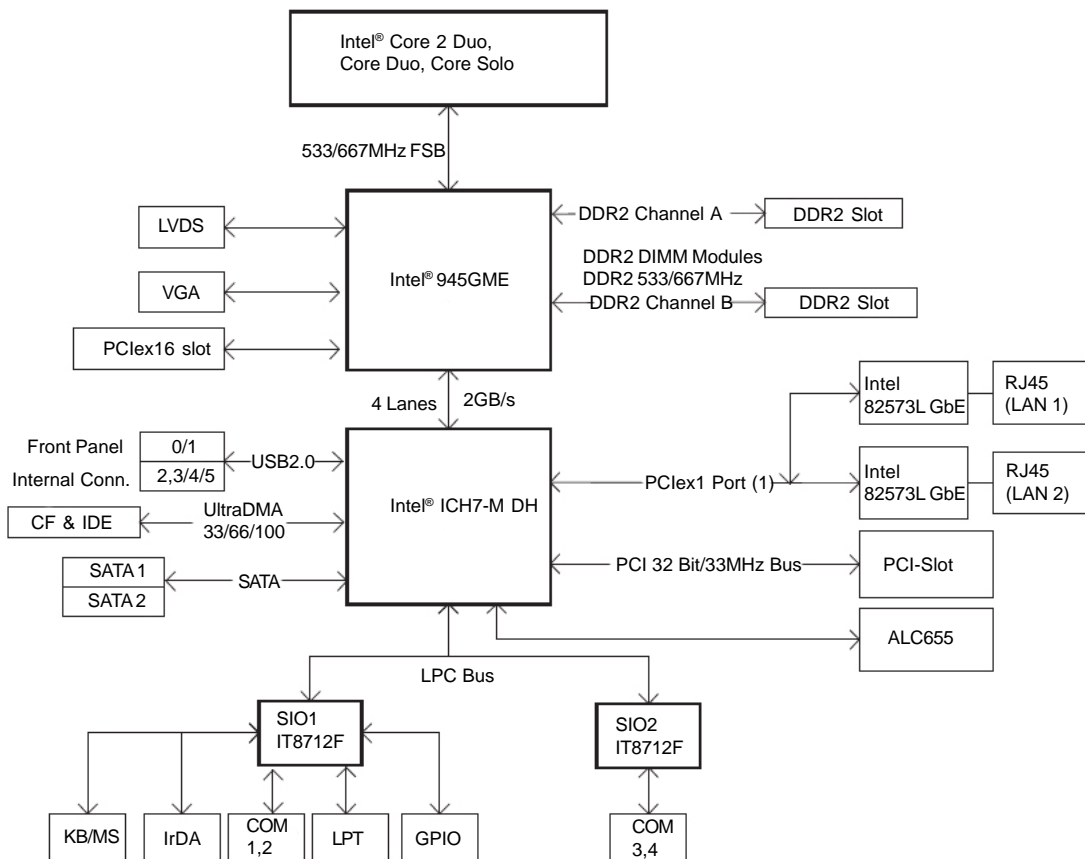
Environment

- Board Level operating Temp: 0°C to 60°C
- Storage Temp.: -20 C to 80 C
- Relative Humidity: 10% to 90%, non-condensing

Certification

- CE approval
- FCC Class A

Block Diagram



Ordering Information

PBAS5302 Singel Board Computer 500-SKT
Intel Core 2 Duo, Core Duo and Core Solo

PBAS5302-1 Singel Board Computer 500-T7400
w/Intel Core 2 Duo T7400 2.16GHz

PBAS5302-2 Singel Board Computer 500-T2500
w/Intel Core Duo T2500 2.0GHz

PBAS5302-3 Singel Board Computer 500-440
w/Intel Core Solo Celeron M 440 1.86GHz