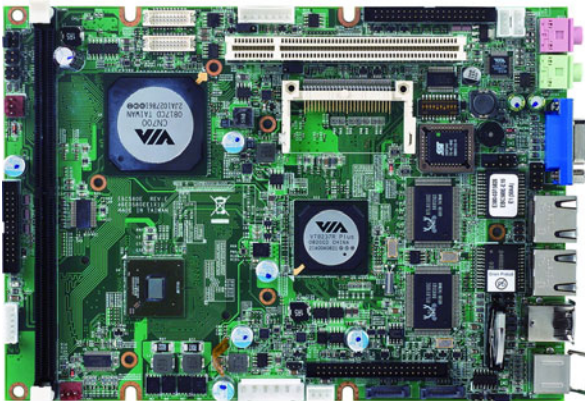


Single Board Computer 580E

PBAS5304/-1/-2



The 5.25" SBC 580E embedded board computer is Based on VIA's new generation of embedded CPUs featuring Eden™ (low power), C7 (high performance) and also new VIA Nano processor. The SBC 580E incorporates a VIA CN700 and 8327R+ chipset. The VIA CN700 supports un-buffered non-ECC DDR2 533/400 memory up to 1GB and offers a powerful integrated graphics engine. The South Bridge 8327 R+ chipset provides a standard 32-bit/33MHz PCI slot, parallel port, 44-pin IDE connector, SATA connector, CompactFlash socket, and numerous other I/O ports such as four serial ports, four USB 2.0 ports, two Gigabit Ethernet LAN ports, an audio interface, as well as others. The RoHS compliant SBC 580E is the enhancement version from SBC 580, keeping the same mechanical dimensions to share the same chassis with SBC 580 board. The SBC 580E has many enhancement compared to the SBC 580, utilizing DDR2 memory, support USB 2.0 and SATA storage, integrated dual Gigabit Ethernet, and supports AT and ATX power supplies. Additionally, the new SBC 580E supports single wide range of LVDS panel ranging from 18-bit to 48-bit panels for cost down purpose.



Main Features

- ❑ VIA Eden™/C7 with V4 Bus Processors On-board
- ❑ VIA CN700 and 8327 R+ Chipsets
- ❑ 1x 240-pin DDR2 DIMM Socket Supports Unbuffered Non-ECC DDR2 533/400 up to 1G
- ❑ 2x Realtek RTL8110SC Gigabit Ethernet Controller
- ❑ Supports Dual Display by LVDS and VGA
- ❑ CompactFlash Socket

Technical Specifications

CPU Support

- VIA Eden™ V4 500MHz
- VIA Eden™ V4 1GHz
- VIA C7 1.5GHz
- VIA Nano compatible

Main Memory

- 1x 240-pin DIMM Socket for up to 1GB un-buffered non-ECC DDR2 533/400

Chipset

- VIA® N700/VIA® 8327R+

BIOS

- Award system BIOS
- Supports Power On after power fail as a BIOS option
- Supports Wake on LAN
- 4 Mbit flash ROM

On-board LAN

- 2x 10/100/1.000 network connection Realtek RTL8110SC
- Each LAN port reserved with 2-pin header for extended LAN LED (Active, Link 100, and 1.000 LAN LED)
- Supports Wake on LAN (When 5 Vsb power available) (LAN1 is available for Wake up, LAN2 is not available for Wake up)

Audio

- VIA, VT1613 CODEC for AC97 V2.0
- MIC-in, Speaker-out, CD-in, Line-in

Storage

- 1x CF internal socket
- 1x 44-pin connector (secondary)

Watchdog Timer

- Watchdog timeout is programmable by software from 1 second to 64 seconds

Display

- VIA VT1636 transmitter
- Analog VGA Interface:
 - 1x DB15 connector
- LVDS Interface:
 - 2x 20-pin LVDS connector for internal connection, supports single (18bit) or dual pixel (36bit) LVDS panel
- CCFL: 1x CCFL for LCD panel backlight inverter power

I/O Interface

- Serial port: 4 ports, with 1x 40 pin header, COM 2 for RS232/422/485
- 4x USB 2.0
- Parallel port: 1 port, with 2x13 box header (2.0mm)
- PS/2: 1x Mini-Din for Keyboard/Mouse
- Digital I/O: 2x4 pin header (2.54mm)
- IrDA: on-board pin header for IrDA Tx/Rx
- SMBus 2.0 controller
- On-board header for reset SW and HD active LED
- I2C: On-board 3-pin header for I2C, one pin for GND
- 1x DB15 VGA port

On-board RTC

- On-chip RTC with battery back up
- 1x External Lithium battery

System Monitor

- Derived from Super I/O to support system monitor
- Monitoring of 5 voltages, 3 temperatures and 2 fan speeds.
- 5 voltage (For +3.3V, +5V, +12V, Vcore and +2.5V)
- 3 temperature (For CPU and two external for system)
- 2 fan speed (one for CPU and one for systems)

Dimensions

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



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Power Input

- 3-pin header for AT/ATX mode switch
- +3.3 V is converted from +5 V
- 6-pin power input connector
- 3-pin Jst connector to receive the 5 Vsb input from power source
- Factory default setting is AT Mode

Power Requirements

CPU VIA C7 1.5GHz/400MHz, Memory: 1x DDR2 1GB	+12V	+5V
Full-Loading Mode	1.28A	4.17A
Light-Loading Mode	0.36A	1.71A

Note:

- Full Loading: Utilize CPU 100% with Burn-in test running
- Light Loading: Utilize CPU loading below 5% without application running

ATX Mode

- Power required: +12V/+5V/+5Vsb
- Supports Power On push Button, Software Shutdown function and LAN1 remote wake up only
- 2-pin Header for Power On Push Button

AT Mode

- Power Required: +5V/+12V
- No Power On push Button, No Software Shutdown function and No LAN1 remote wake up

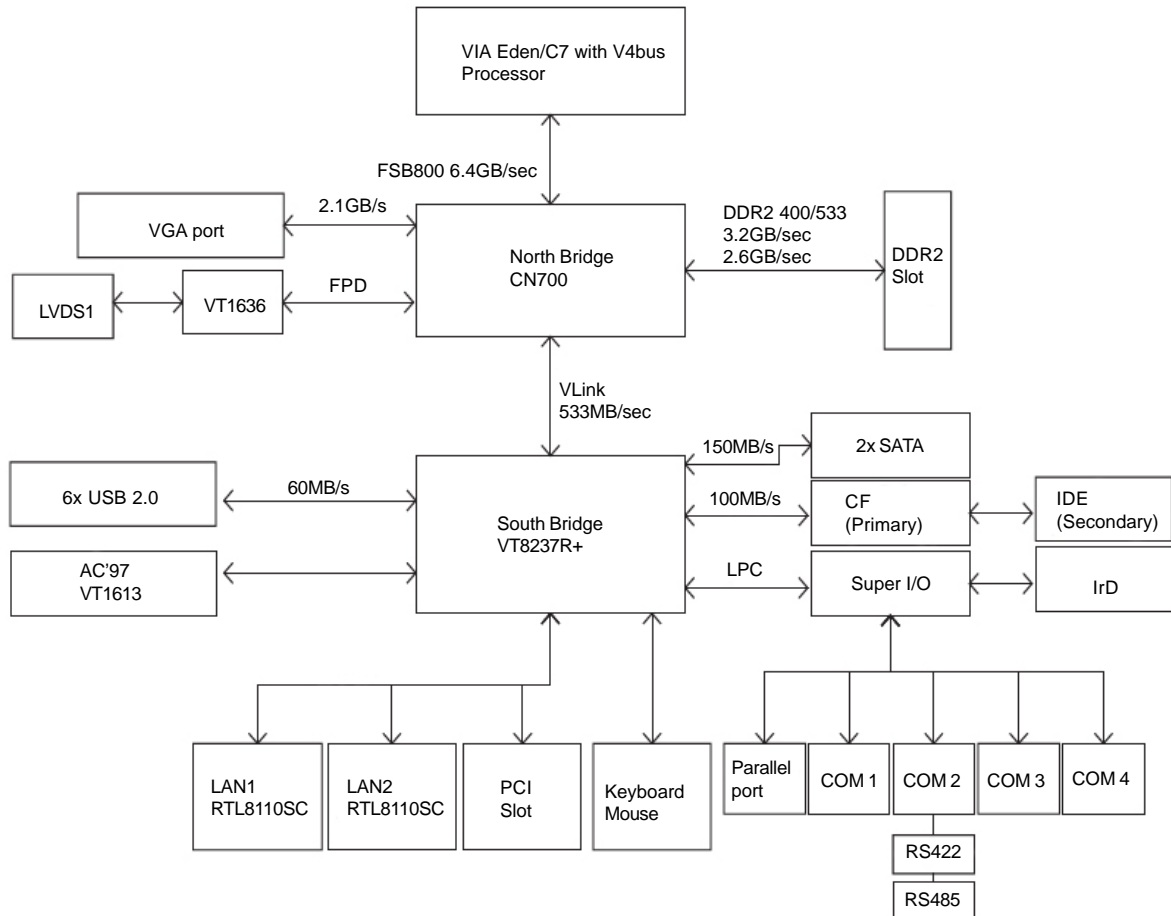
Environment

- 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

PBAS5304	Single Board Computer 580E w/VIA C7 1.5GHz
PBAS5304-2	Single Board Computer 580E w/VIA Eden V4 Bus 500MHz

PBAS5304-1	Single Board Computer 580E w/VIA Eden V4 Bus 1GHz
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