

# EBC 545

5.25" Intel® Core™ 2 Quad/ Core™ 2 Duo/ Celeron® Embedded CPU Board  
with Dual Display/ 1 x PCI/ 1 x PC/104+/ 2 x GbE



## Main Features

- Support Intel® Core™ 2 Quad, Core™ 2 Duo, Celeron® Processor
- Intel® GM45 with GMA4500MHD Graphic Engine
- 2x 240-pin DDR3 DIMM socket, up to 8 GB non-ECC 1066 MHz DRAM
- 2x Intel® 82574L PCI Express Gigabit Ethernet
- 1 x Realtek ALC888 HD CODEC
- 6 x USB 2.0, 4 x Serial port, 2 x SATA
- 1 x PCI Slot/ 1 x PC /104+ slot

## Product Overview

The EBC 545 is a 5.25" form factor embedded utilizing Intel® Core™ 2 Quad, Core™ 2 Duo and Celeron® 575 Processor. EBC 545 features Intel® GM45 and ICH9-M chipsets, which supports DDR3 1066 MHz DRAM. The multi expansion features via PCI and PC/104+ for different application at your system device.

The EBC 545 embedded board supports a various operation systems such as Windows7 embedded, Windows XP embedded, Win CE and Linux.

## Specifications

### CPU Support

- Intel® Core™ 2 Quad (Q9100 2.26GHz) (non longevity CPU)
- Intel® Embedded Processor List (Intel® Longevity CPU):  
Intel® Core™ 2 Duo (T9400 2.53GHz)  
Intel® Celeron® 575 2.0GHz

### Main Memory

- 2 x 240-pin DDR3 DIMM Socket, up to 8GB non-ECC1066 MHz DRAM

### Chipset

- Intel® GM45
- Intel® ICH9-M

### BIOS

- Award System BIOS
- PnP and ACPI support
- 8M bits SPI ROM

### On-board LAN

- 2 x Intel® 82574L PCI Express GbE
- Support PXE and Wake on LAN (When 5Vsb available) (LAN1 only)
- 2 x RJ45 (180°/ 90° option)

### Display

- Intel® GM45 integrated GMA4500MHD Graphic engine
- Analog VGA Interface:  
One 2 x 8.0mm box header

- Resolution up to 1600 x 1200 at 85 Hz, 2048 x 1536 at 75Hz
- LVDS1 Interface:  
2 x DF13 20-pin LVDS connector for internal connection support single (24bit) or dual pixel (48bit) LVDS panel
- LVDS2 (Through SDVOB w/ CH7308B) Interface:  
2 x DF13 20-pin LVDS connector for internal connection support single (24bit) or dual pixel (48bit) LVDS panel
- SDVO Interface (option, one 30-pin box header):  
EBK SDVO1 (SDVOC w/ CH7307C DVI transmitter w/ DVI-Single link output)
- CCFL Interface:  
2 x CCFL for Panel Backlight Inverter
- Composition:  
VGA+LVDS1  
VGA+DVI  
LVDS+DVI  
LVDS1+LVDS2

### Audio

- Realtek ALC888 HD CODEC
- 1 x Mic-in/1x Line-out

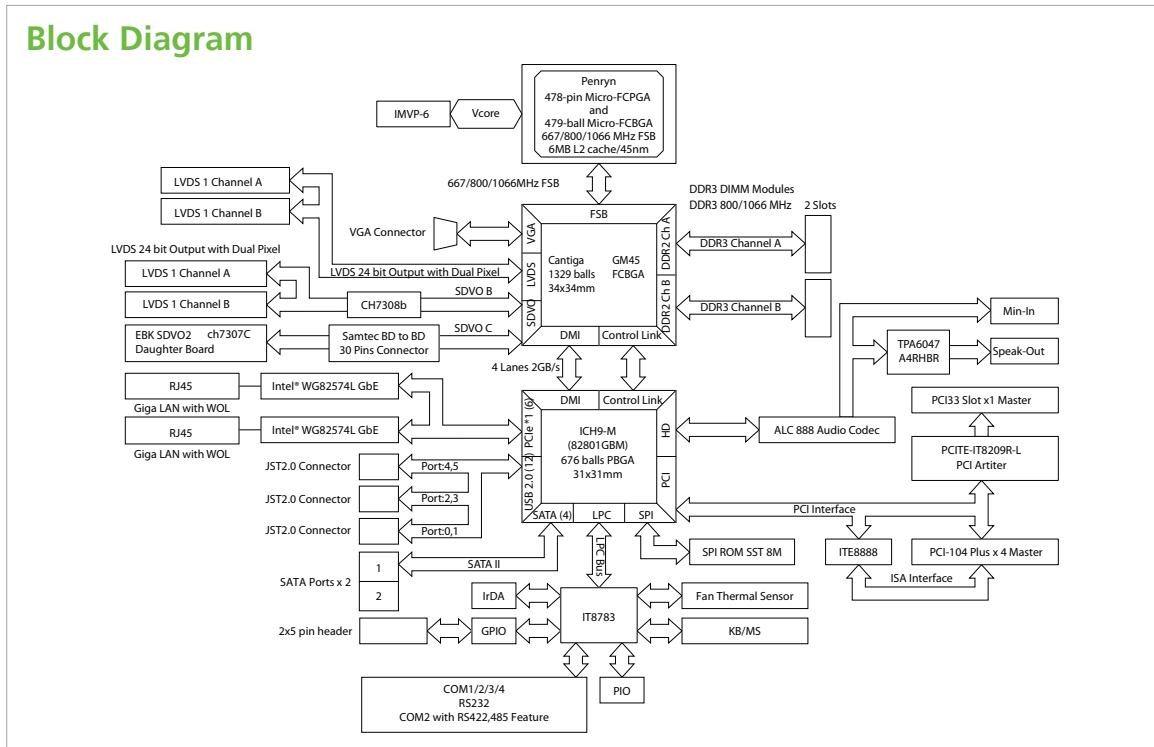
### Expansion

- 1 x PCI
- 1 x PC/104+



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## Block Diagram



### I/O Interface

- Serial port: 3 x COM support RS232 and 1 x COM support RS232/RS422/RS485 (BIOS setting)
- Parallel port: 1 x 26-pin box header
- USB 2.0: 6 x ports by JST connector x 3
- 8 GPIO lines via header (GPI 0~3 and GPO0~3) TTL Level (0/5 V)
- 2 x 2-pin 2.54mm header for Power LED/HDD Active LED
- 1 x 4-pin and 1 x 3-pin Fan connector
- 1 x PS/2 KB/MS via pin header
- On board Buzzer/SMBus2.0 /Reset SW
- 1 x 5-pin header for IrDA

### Watchdog Timer

- WDT can be programmable by Software from 1 sec to 255 sec and from 1 min to 255 minutes (Tolerance 15% at 25°C)

### Storage

- 2 x SATA port
- 1 x CF socket

### System Monitor

- Monitoring of 5 voltages and 2 temperatures and 2 fan speed monitor
- 5 voltage (+5V, Vcore, +12V, +3.3V, +1.5V)
- 2 temperatures (CPU, external temperature)
- 2 fan speed monitor (CPU, system)

### Power Requirements

- Supports both AT and ATX Mode (default setting is ATX mode)
- ATX mode:  
2x5pin ATX power connector w/ +12V/-12V/+5V/5Vsb Power In  
2x2pin power connector +12V Power In  
At ATX Mode, the BIOS setting is as follow:  
POWER -SUPPLY TYPE: [ATX]  
AUTO PWR-FAILURE RESUME: [ON]
- AT mode:  
2x5pin ATX power connector w/ +12V/-12V/+5V Power In

No Power On push Button, Software Shutdown function and LAN remote wake up

### Dimensions

- 5.25" form factor/203mm (L) x 146mm (W) (7.9" x 5.7")

### Environment

- Operation temperatures: 0°C to 60°C
- Storage temperatures: -20°C to 85°C
- Humidity: 10% to 90%, non condensing

### Certifications

- CE approval
- FCC Class A

## Ordering Information

- EBC 545 (P/N: 10E00054500X0)**  
5.25" Intel® Core™ 2 Quad, Core™ 2 Duo/Celeron® Embedded CPU Board with Dual Display/1x PCI/1 x PC/104+/2x GbE
- EBKSDVO1 (P/N: 10E05DVO100X0)**  
CH7307C daughter board w/ DVI-Single link for DVI output
- EBKSDVO2 (P/N: 10E05DVO200X0)**  
CH7308B daughter board for LVDS output
- Packing List**

Part No.	Description
60233USB59X00	USB CABLE
60233POW73X00	POWER CABLE (2x10 TO 2x5 )
60233MK202X00	PS2 Y CABLE
6023309402X00	COM CABLE L: 300mm
60233PRT15X00	PRINT CABLE
60233ATA17X00	SATA CABLE
60233POW22X00	POWER CABLE (BIG 4P)

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508  
Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050  
Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28  
Business Registration Number: 07699660