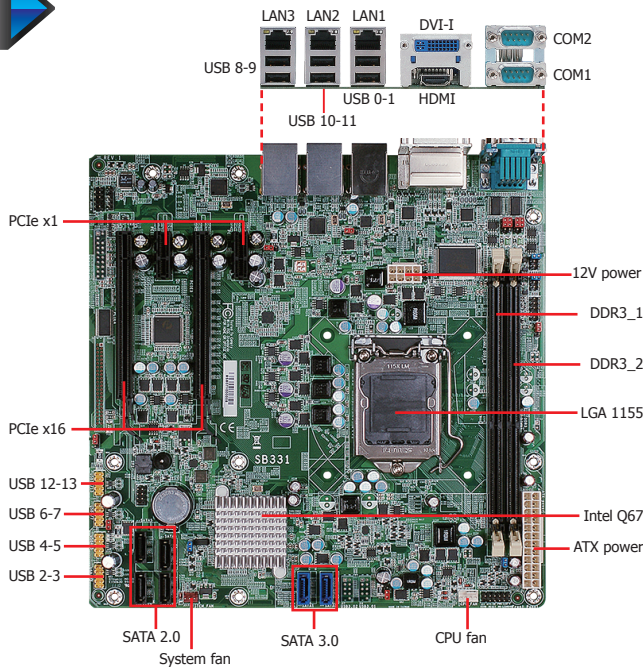




# SB331-IPM

Desktop

Q67



## Features

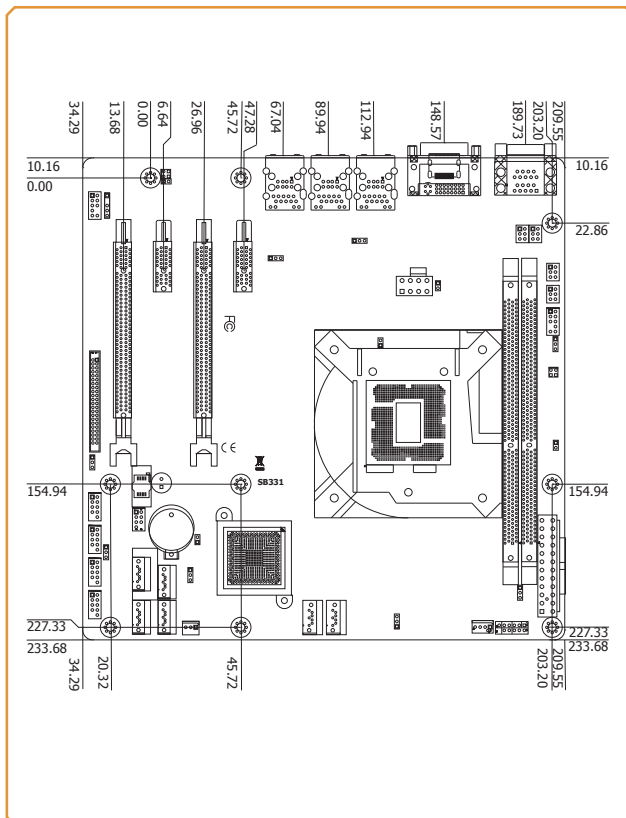
MEMORY	2 DDR3 DIMM up to 16GB
EXPANSION	2 PCIe x16 (1 x16 signal and 1 x4 signal) 2 PCIe x1
DISPLAY OUTPUTS	1 HDMI, 1 DVI-I
LAN	3 LAN
COM	2 COM
USB	14 USB 2.0
STORAGE	6 SATA: 2 SATA 3.0, 4 SATA 2.0
DIO	36-bit DIO

3 Gigabit LAN

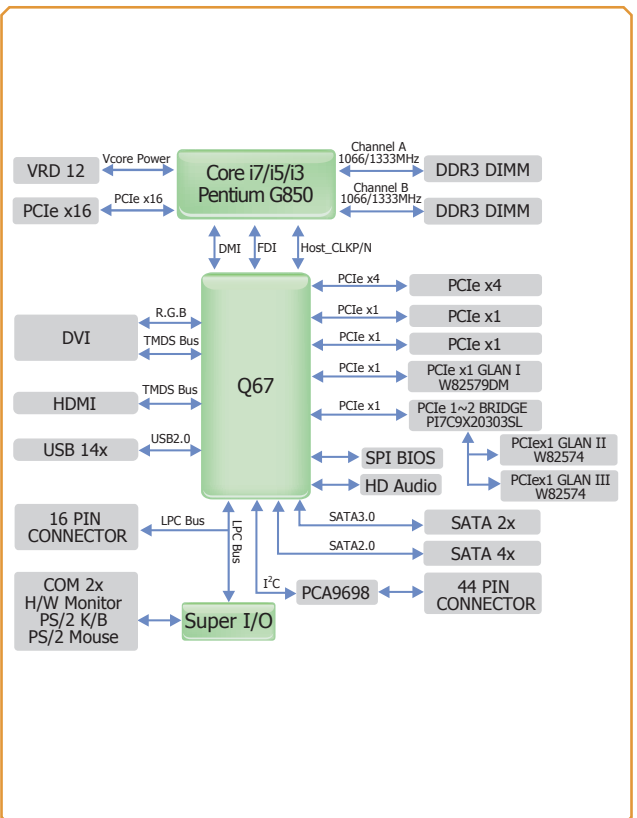
36-bit DIO



## Mechanical Drawing



## Block Diagram



# SB331-IPM

## Specifications

### PROCESSOR

- LGA 1155 socket for:
  - 3rd generation Intel® Core™ processors (22nm process technology) (Rev. AC0 or later)
    - : Intel® Core™ i7-3770 (8M Cache, up to 3.9GHz); 77W
    - : Intel® Core™ i5-3550S (6M Cache, up to 3.7GHz); 65W
    - : Intel® Core™ i3-3220 (3M Cache, 3.3GHz); 55W
    - : Intel® Pentium® G2120 (3M Cache, 3.1 GHz); 65W
  - 2nd generation Intel® Core™ processors (32nm process technology)
    - : Intel® Core™ i7-2600 (8M Cache, up to 3.8 GHz); 95W
    - : Intel® Core™ i5-2400 (6M Cache, up to 3.4 GHz); 95W
    - : Intel® Core™ i3-2120 (3M Cache, 3.3 GHz); 65W
    - : Intel® Pentium® G850 (3M Cache, 2.9 GHz); 65W
- Intel® Advanced Vector Extensions (Intel® AVX) Instructions
- Intel® Turbo Boost Technology

### CHIPSET

- Intel® Q67 Express chipset

### SYSTEM MEMORY

- Two 240-pin DDR3 DIMM sockets
- Supports DDR3 1333/1600MHz (3rd generation processors)
- Supports DDR3 1066/1333MHz (2nd generation processors)
- Supports dual channel memory interface
- Supports up to 16GB system memory
- DRAM device technologies: 1Gb, 2Gb and 4Gb DDR3 DRAM technologies are supported for x8 and x16 devices, unbuffered, non-ECC

### EXPANSION SLOTS

- 2 PCIe x16 slots
  - Supports Gen 3.0 (3rd generation processors)
  - Supports Gen 2.0 (2nd generation processors)
  - 1 x16 signal and 1 x4 signal
- 2 PCI Express x1 slots (PCIe 2.0)

### ONBOARD GRAPHICS FEATURES

- Intel® HD Graphics
- Display ports:
  - DVI-I (RGB and TMDS signals) - ASMedia 1442
  - HDMI (TMDS signal) - ASMedia 1442
- DVI and HDMI display resolution up to 1920x1200 @ 60Hz
- Supports 6 Graphics Execution Units (EUs)
- Intel® Clear Video Technology
- DirectX Video Acceleration (DXVA) support for accelerating video processing

### ONBOARD AUDIO FEATURES

- Realtek ALC262 2-channel High Definition Audio
- DACs with 100dB SNR; two stereo DACs support 24-bit PCM format for stereo audio playback
- ADCs with 90dB SNR; three stereo ADCs support 20-bit PCM format for multiple input streaming
- S/PDIF audio interface

### ONBOARD LAN FEATURES

- 1 Intel® W82579LM with iAMT8.0 Gigabit Ethernet Phy (LAN1)
- 2 Intel® W82574 PCI Express Gigabit Ethernet controllers (LAN2-3)
- Integrated 10/100/1000 transceiver
- Fully compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab

### SERIAL ATA (SATA) INTERFACE

- 6 Serial ATA ports
  - 4 SATA 2.0 ports with data transfer rate up to 3Gb/s
  - 2 SATA 3.0 ports with data transfer rate up to 6Gb/s
- Integrated Advanced Host Controller Interface (AHCI) controller
- Supports RAID 0/1/5/10

### INTEL ACTIVE MANAGEMENT TECHNOLOGY (AMT)

- Supports iAMT8.0
- Out-of-band system access
- Remote troubleshooting and recovery
- Hardware-based agent presence checking
- Proactive alerting
- Remote hardware and software asset tracking

### TRUSTED PLATFORM MODULE (TPM) - optional

- Infineon SLB9635
- Provides a Trusted PC for secure transactions
- Provides software license protection, enforcement and password protection

### REAR PANEL I/O PORTS

- 2 DB-9 serial ports
  - Supports RS232/422/485
  - Pins 1 and 9 of RS232 functions as RS232 signal or power (selectable via jumper)
- 1 DVI-I port
- 1 HDMI port
- 3 RJ45 LAN ports
- 6 USB 2.0/1.1 ports

### I/O CONNECTORS

- 4 connectors for 8 external USB 2.0/1.1 ports
- 1 PS/2 KB/Mouse connector
- 1 36-bit Digital I/O connector
- 1 front audio connector for line-out and mic-in jacks
- 1 S/PDIF connector
- 6 Serial ATA ports
- 1 24-pin ATX power connector
- 1 8-pin 12V power connector
- 1 chassis intrusion connector
- 1 front panel connector
- 2 fan connectors

### BIOS

- AMI BIOS
- 64Mbit SPI BIOS

### ENERGY EFFICIENT DESIGN

- Supports ErP Lot6 power saving (optional)
- Supports ACPI
- System Power Management
- Wake-On-Events include:
  - Wake-On-PS/2 KB/Mouse
  - Wake-On-USB KB/Mouse
  - Wake-On-LAN
  - RTC timer to power-on the system
- CPU stopped clock control
- AC power failure recovery

### DAMAGE FREE INTELLIGENCE

- Monitors CPU/system temperature and overheat alarm
- Monitors VCore/5V/3.3V/V\_DIMM/12V/5VSB voltages and failure alarm
- Monitors CPU/system fan speed and failure alarm
- Read back capability that displays temperature, voltage and fan speed
- Watchdog timer function

### POWER CONSUMPTION

- 81.87 W with i7-2600 at 3.40GHz and 1x 2GB DDR3 DIMM

### OS SUPPORT

- Windows XP Professional x86 & SP3 (32-bit)
- Windows XP Professional x64 & SP2 (64-bit)
- Windows 7 Ultimate x86 & SP1 (32-bit)
- Windows 7 Ultimate x64 & SP1 (64-bit)
- Windows 8 Enterprise x86 (32-bit)
- Windows 8 Enterprise x64 (64-bit)

### TEMPERATURE

- 0°C to 60°C

### HUMIDITY

- 10% to 90%

### DIMENSIONS

- microATX form factor
- 244mm (9.6") x 244mm (9.6")

### CERTIFICATION

- CE, FCC Class B, UL, RoHS

## Packing List

• 1 SB331-IPM motherboard
• 2 Serial ATA data cables
• 2 Serial ATA power cables
• 2 USB cables
• 1 PS2 cable
• 1 I/O shield

## Optional Items

• USB port cable
• Serial ATA data cable
• Serial ATA power cable
• I/O shield