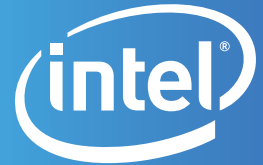


# Intel® Desktop Board DB85FL

Support for 4th generation Intel® Core™ processors

Superior BIOS experience with Intel® Visual BIOS

Intel® Small Business Advantage



## PRECISION POWER

Intel® Desktop Board DB85FL, featuring 4th generation Intel® Core™ processor with Intel® Small Business Advantage, simplifies your maintenance and security tasks with built-in IT support. Supporting the 4th generation Intel® Core™ i7, Intel® Core™ i5 and other Intel® processors in the LGA1150 package, DB85FL features include flexible dual independent video outputs with HDMI\* + DVI-I ports for processors with Intel® HD Graphics, two USB 3.0 ports with up to 5 Gb/s signaling rate for high-speed connections to peripherals, one USB 3.0 header for two front panel USB 3.0 ports, and eight-channel Intel® High Definition Audio with multi-streaming capability.

## BUILT-IN IT SUPPORT

The 4th generation Intel® Core™ processor with Intel® Small Business Advantage simplifies your maintenance and security tasks with built-in IT support. Once configured, these hardware-based security features continually monitor your security software and alerts you if it's been compromised by viruses or malware.

## COMPLETE CONTROL = COMPLETE POWER

Control is all about the BIOS and only genuine Intel® Desktop Boards have the most advanced BIOS interface available today: Intel® Visual BIOS. Easily configure your system with a completely graphical interface to meet your specific computing needs. With new features like intelligent search, file explorer, profile management and favorites option, Intel Visual BIOS makes configuring your BIOS fast and simple.





# Intel® Desktop Board DB85FL

## Features and Benefits



**HDMI®**  
HIGH-DEFINITION MULTIMEDIA INTERFACE

## B85 Series

- 1 **Support for the 4th Generation Intel® Core™ i7, Intel® Core™ i5 and other Intel® processors in the LGA 1150 package:** Features Intel® Turbo Boost Technology, Intel® Hyper-Threading Technology for exceptional performance and scalability, and 8 MB Shared Intel® Smart Cache, enabling dynamic and efficient allocation of cache
- 2 **Intel® B85 Express Chipset:** Features Intel® Small Business Advantage and Intel® Smart Connect Technology
- 3 **Four DIMM slots:** Support DDR3 1600/1333 MHz memory, delivering up to 32 GB /s memory bandwidth. 1.2V to 1.8V memory voltage control for maximum DIMM compatibility
- 4 **Four Super-Speed USB 3.0 ports (2 external, 2 via internal header), and Eight Hi-Speed USB 2.0 ports (4 external, 4 via internal headers)**
- 5 **One PCI Express 3.0\* x16 connector and Two PCI Express 2.0\* x1 slots**
- 6 **One DVI-I connector and One HDMI connector:** Supports dual independent display
- 7 **Four SATA 6.0 Gb/s ports and Two SATA 3.0Gb/s ports**
- 8 **Intel® Rapid Start Technology:** Enables your system to get up and running faster from even the deepest sleep states
- 9 **8-channel Intel® High Definition Audio<sup>7</sup> with multi-streaming capability**
- 10 **Intel® Gigabit Ethernet LAN:** Features onboard 10 /100 /1000 Mb /s Ethernet LAN connectivity
- 11 **100% Solid state capacitors**
- 12 **Intel® Express BIOS update support, Fast Boot BIOS:** Optimized POST for almost instant-on access to PC from power on
- 13 **uATX (9.6" x 9.6" (24.38 cm x 24.38 cm) Form Factor**
- 14 **Lead-free:** Meets all worldwide regulatory requirements for lead-free manufacturing
- 15 **TPM Header:** Supports version 1.2 TPM modules

# Intel® Desktop Board DB85FL

## Technical Specifications

### PROCESSOR

#### Processor Support

- Supports the 4th generation Intel® Core™ i7, Intel® Core™ i5 and other Intel® processors in the LGA1150 package
- Intel® Turbo Boost Technology<sup>4</sup>
- Intel® Hyper-Threading Technology<sup>5</sup>
- Support Intel® 64 architecture<sup>3</sup>

### CHIPSET

- Intel® B85 Express Chipset
- Intel® Small Business Advantage<sup>6</sup>
- Intel® Smart Connect Technology

### INTEL® PRO 10/100/1000 NETWORK CONNECTION

- Intel® Pro 10/100/1000 LAN on the back panel

### USB PORTS

- Two Super-Speed USB 3.0 ports (blue) via back panel
- Two Super-Speed USB 3.0 ports via one internal header
- Four Hi-Speed USB 2.0 ports (black) via back panel
- Four Hi-Speed USB 2.0 ports via two internal headers

### EXPANSION CAPABILITIES

- Two PCI Express\* 2.0 x1 slots
- Four SATA 6.0Gb/s ports
- Two SATA 3.0Gb/s ports
- One TPM v1.2 header

### GRAPHICS

- One PCI Express\* 3.0 x16 connector
- One DVI-I connector via back panel
- One HDMI connector via back panel
- Supports dual independent display

### AUDIO

- 8-channel Intel® High Definition Audio<sup>7</sup> codec
- 6-channel audio via back panel
- 2-channel audio via front panel
- Front panel mic/headphone via internal header

### SYSTEM BIOS

- Intel® Visual Bios
- 96 Mb Flash EEPROM with Intel® Platform Innovation Framework for EFI Plug and Play
- Advanced configuration and power interface V3.0b, SMBIOS 2.5
- Intel® Express BIOS update support
- Fast Boot BIOS – Optimized POST for almost instant-on access to PC from power on

### HARDWARE MANAGEMENT FEATURES

- Processor fan speed control
- System chassis fan speed control
- Voltage and temperature sensing
- Fan sensor inputs used to monitor fan activity
- Power management support for ACPI 3.0b

### SYSTEM MEMORY

#### Memory Capacity

- Four 240-pin DIMM connectors supporting dual-channel memory. Two double-sided DIMMs per channel.
- Maximum system memory up to 32GB<sup>2</sup> using 8 GB double-sided DIMMs

#### Memory Types

- DDR3 1600/1333 SDRAM memory support
- Non-ECC memory

#### Memory Voltage

- 1.2V to 1.8V memory voltage control
- Support for Intel® Extreme Memory Profile (Intel® XMP)

### JUMPERS AND FRONT PANEL CONNECTORS

#### Jumpers

- Single configuration jumper design
- Jumper access for BIOS maintenance and security

#### Front Panel Connectors

- Reset, HDD LED, Power LED, Power on/off
- One front-panel Super-Speed USB 3.0 header (2 ports)
- Two front-panel High-Speed USB 2.0 headers (4 ports)
- Front-panel audio header

### MECHANICAL

#### Board Style

- uATX

### Board Size

- 9.6" x 9.6" (24.38 cm x 24.38 cm)

### Baseboard Power Requirements

- ATX 12V

### ENVIRONMENT

#### Operating Temperature

- 0°C to +55°C

#### Storage Temperature

- -20°C to +70°C

### COMPLIANCE WITH REGULATIONS AND STANDARDS

#### Safety Regulations

- UL/CSA 60950-1
- EN 60950-1
- IEC 60950-1

#### EMC Class B Regulations

- CISPR 22
- CIPSR 24
- FCC 47 CFR Part 15, Subpart B
- ICES-003
- EN 55022
- EN 55024
- EN 61000-3-2
- EN 61000-3-3
- IEC/EN 61000-4 Series
- VCCI V-3
- KN-22
- KN-24
- CNS 13438

### Environmental Compliance

- Europe RoHS
- China RoHS

1 WARNING: Altering PC memory frequency, voltage and/or latency may: (i) reduce system stability and useful life of the system, memory and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional heat or other damage; and (v) affect system data integrity. Intel has not tested, and does not warrant, the operation of the memory beyond its specifications. Intel assumes no responsibility that the memory, including if used with altered clock frequencies and/or voltages, will be fit for any particular purpose. Check with memory manufacturer for warranty and additional details.

2 System resources and hardware (such as PCI and PCI Express\*) require physical memory address locations that can reduce available addressable system memory. This could result in a reduction of as much as 1 GB or more of physical addressable memory being available to the operating system and applications, depending on the system configuration and operating system.

3 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. See <http://developer.intel.com/technology/intel64/index.htm> for more information.

4 Intel® Turbo Boost Technology requires a PC with a processor with Intel Turbo Boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel Turbo Boost Technology. See [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost) for more information.

5 Intel® Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS, and operating system. Performance will vary depending on the specific hardware and software you use. For more information including details on which processors support HT Technology, see [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading).

6 Requires an Intel® Small Business Advantage-enabled system and proper configuration. Availability of features will depend upon the setup and configuration of your PC. Please visit [www.intel.com/content/www/us/en/small-business/small-business-collection.html](http://www.intel.com/content/www/us/en/small-business/small-business-collection.html) for more details.

7 Intel® High Definition Audio requires a system with an appropriate Intel® chipset and a motherboard with an appropriate codec and the necessary drivers installed. System sound quality will vary depending on actual implementation, controller, codec, drivers, and speakers. For more information about Intel® HD Audio, refer to [www.intel.com/design/chipsets/hdaudio.htm](http://www.intel.com/design/chipsets/hdaudio.htm).

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Actual Intel® Desktop Board may differ from the image shown.

Requires an Intel® WiDi enabled system and Intel WiDi enabled receiver device. 1080p and Blu-ray\* or other protected content playback only available on 2nd or 3rd gen Intel® Core™ processor-based PCs with built-in visuals enabled, a compatible receiver device and media player, and supporting Intel WiDi software and graphics driver installed. Consult your PC manufacturer. For more information, see [www.intel.com/go/widi](http://www.intel.com/go/widi).

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