

# EBC-GF81

## Intel® B85/H81 with Intel Core™ i7/i5/i3 ATX Motherboard



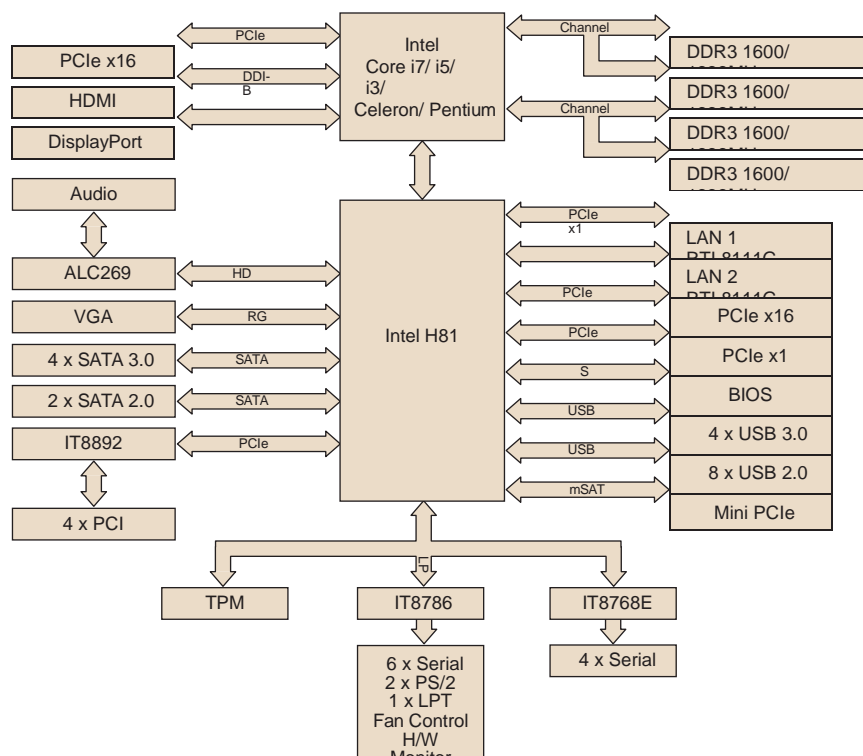
### Features

- Supports the 4th Generation Intel Core i7/ i5/ i3, Celeron® and Pentium® Processor family
- Supports up to 4 DIMM slots, 32GB DDR3 1600/ 1333 MHz SDRAM
- Supports triple/ dual independent display configuration by multiple display interface : VGA, HDMI and DisplayPort
- Supports DirectX 11.1, OpenGL 3.x, OpenCL 1.2 and outstanding 3D graphics performance
- Supports 4 x PCI, 1 x Mini PCIe and 3 x PCIe extension slots
- Supports 1 powered serial rear I/O and 1 powered serial internal connectors

### Specification

|                     |                     |   |
|---------------------|---------------------|---|
| Processor           | CPU                 | Intel Core i7/ i5/ i3/ Celeron/ Pentium processor                   |
|                     | Max. Speed          | Up to 3.9 GHz   |
|                     | Socket              | LGA1150   |
|                     | Cache               | Up to 8MB   |
|                     | BIOS                | AMI EFI 64Mbit SPI  |
| Memory              | Technology          | Dual channel DDR3 1600/ 1333 MHz SDRAM (Non-ECC)                    |
|                     | Max. Capacity       | 8GB per socket  |
|                     | Socket              | Up to 4 x 240-pin DIMM  |
| Graphics            | Controller          | Integrated Intel HD Graphics engine                                 |
|                     | VRAM                | Shared memory up to 256MB   |
|                     | VGA                 | Up to SXGA 1920 x 1080 (@60Hz)                                      |
|                     | HDMI                | Up to 4096 x 2304 (@24Hz)   |
|                     | DisplayPort         | Up to 3840 x 2160 (@60Hz)   |
|                     | Dual Display        | VGA+HDMI, VGA+DisplayPort, HDMI+DisplayPort                         |
| Ethernet            | Triple Display      | VGA+HDMI+DisplayPort  |
|                     | Interface           | 10/100/1000 Mbps  |
|                     | LAN 1 Controller    | Realtek RTL8111G GbE LAN  |
|                     | LAN 2 Controller    | Realtek RTL8111G GbE LAN  |
| Expansion Slot      | Connector           | 2 x RJ-45   |
|                     | Mini PCIe           | Up to 1 for full-length   |
|                     | PCIe x1 (Gen2)      | Up to 1 (500MB/s per direction)                                     |
|                     | PCIe x1/x4 (Gen2)   | Up to 1 (2GB/s per direction, by PCIe x16 slot)                     |
|                     | PCIe x16 (Gen2/3)   | 1 (16GB/s per direction)  |
| Storage             | PCI                 | 4 (32-bit/33MHz)  |
|                     | SATA 3.0            | Up to 4 (600MB/s per port)  |
|                     | SATA 2.0            | 2 (300MB/s per port)  |
| Rear I/O Connector  | mSATA               | 1 (300MB/s per port, by Mini PCIe slot)                             |
|                     | VGA                 | 1   |
|                     | HDMI                | 1   |
|                     | DisplayPort         | 1   |
|                     | RJ-45               | 2   |
|                     | USB 3.0             | 2   |
|                     | USB 2.0             | 2   |
|                     | Serial              | 1 x RS-232, 1 x RS-232 with 5V/ 12V power                           |
|                     | Audio               | 3 (Line-in, Line-out, Mic-in)                                       |
| PS/2                | 2                   |   |
| Internal Connector  | USB 3.0             | Up to 1 for 2 x USB 3.0 ports                                       |
|                     | USB 2.0             | 3 for 6 x USB 2.0 ports   |
|                     | Serial              | Up to 6 x RS-232, 1 x RS-232 with 5V/ 12V power, 1 x RS-232/ RS-485 |
|                     | SATA 3.0            | Up to 4   |
|                     | SATA 2.0            | 2   |
|                     | TPM                 | 1   |
|                     | CPU Fan             | 1   |
|                     | System Fan          | 1   |
|                     | Front Audio         | 1   |
|                     | Front Panel         | 1   |
|                     | S/PDIF Out          | 1   |
|                     | Speaker             | 1   |
|                     | GPIO                | 1 (8-bit)   |
|                     | Case Open           | 1   |
|                     | LAN 1 LED Extension | 1   |
| LAN 2 LED Extension | 1                   |   |
| LPT                 | 1                   |   |

## Block Diagram



## Specifications Cont.

|                          |                       |  |          |       |            |       |
|--------------------------|-----------------------|--|----------|-------|------------|-------|
| Watchdog Timer           | Output Interval       | System reset<br>Programmable 1-255 sec/min |          |       |            |       |
| Power                    | Power Requirement     | +12V                                       | +5V (20) | +3.3V | -12V (0.1) | 5VS B |
|                          | Power Type            | ATX  |          |       |            |       |
| Environment              | Power Connector       | 1 x 24-pin ATX, 1 x 4-pin ATX 12V          |          |       |            |       |
|                          | Operation Temperature | 0 ~ 60° C (32 ~ 140° F)                    |          |       |            |       |
|                          | Non-Operation         | -40 ~ 85° C (-40 ~ 185° F)                 |          |       |            |       |
| Physical Characteristics | Operation Humidity    | 0% ~ 90% relative humidity, non-condensing |          |       |            |       |
|                          | Dimensions            | 304.8 x 244 mm (12" x 9.6")                |          |       |            |       |
|                          | Weight                | 0.65 Kg                                    |          |       |            |       |

## Ordering Information

| Part Number    | Chipset | Memory | VGA | DP | HDMI | LAN | SATA | PClex1 | PClex16 | USB | COM |
|----------------|---------|--------|-----|----|------|-----|------|--------|---------|-----|-----|
| EBC-GF81-00A1E | H81     | 2      | 1   | 1  | 1    | 2   | 4    | 1      | 2       | 10  | 6   |

## Packing List

| Description    | Qty              |
|----------------|------------------|
| I/O shield     | 1                |
| Startup manual | 1 (per 20 units) |
| Driver CD      | 1 (per 20 units) |

## Optional Accessories

| Part Number   | Description                           |
|---------------|---------------------------------------|
| 1700003195    | USB2.0 cable for 1-to-2 ports, 17.5cm |
| 1700008809    | Printer cable w/ bracket, 25cm        |
| 1700003194    | SATA cable, 60cm, 180degree           |
| 1700020942-01 | Serial cable, 26cm                    |
| 1700020277-01 | USB3.0 cable for ports, 30cm          |

## I/O View

