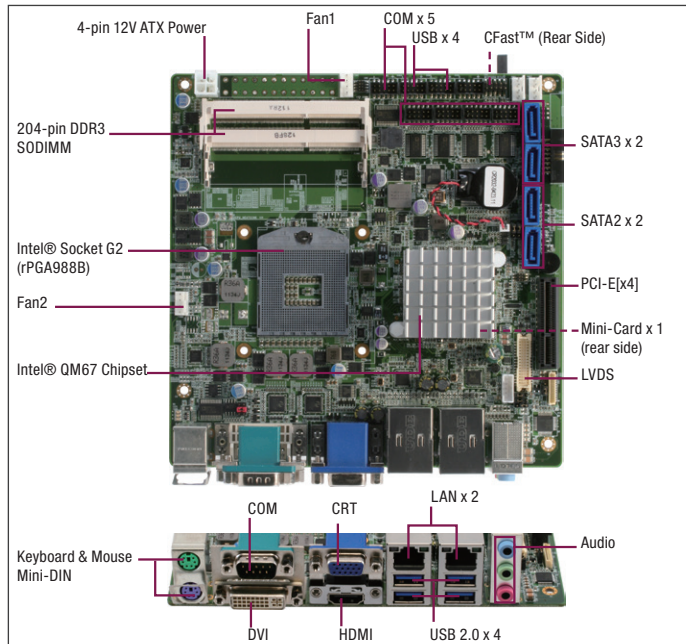


Embedded Motherboard with Socket G2 (rPGA988B) 2nd Generation Intel® Core™ i7/i5/Celeron® QC/ DC Processor



## Features

- Socket G2 (rPGA988B) for 2<sup>nd</sup> Generation Intel® Core™ i7/i5/Celeron® QC/ DC Processor
- Intel® QM67
- 204-pin Dual-Channel DDR3 1066/1333/1600 MHz SODIMM x 2, Up to 16 GB
- Gigabit Ethernet x 2
- Intel® Integrated Graphics Engine Supports Dual View by VGA, DVI, HDMI, 24b, 2CH LVDS
- HD Audio
- SATA 3.0 Gb/s x 2, Supports RAID 0,1,5,10
- USB 2.0 x 8, COM x 6
- PCI-Express [x4] x 1, Mini-PCIe x 1, CFast™ x 1, TPM x 1 (Optional)



|                                |  |
|--------------------------------|--|
| LAN I/O                        | RJ-45 x 2  |
| Serial Port                    | RS-232/422/485 x 1   |
| PS/2 Port                      | Mini-Din PS/2 K/B and Mouse x 1  |
| Others                         | —  |
| <b>Internal I/O Connectors</b> |  |
| Storage                        | SATA 3.0 Gb/s x 2, Supports RAID 0,1,5,10                              |
| USB                            | USB 2.0 x 4  |
| Display I/O                    | LVDSx1   |
| Audio I/O                      | —  |
| Serial Port                    | RS-232 x 5   |
| PS/2 Port                      | —  |
| Parallel Port                  | —  |
| DIO                            | 8-bit programmable (4-in/4-out)  |
| FAN                            | CPU Fan connector(s) (4-pin) x 1, Chassis Fan connector(s) (4-pin) x 1 |
| Power                          | 4-pin connector x 1  |
| Others                         | —  |
| <b>OS</b>                      |  |
| OS Support                     | Windows® XP, Windows® 7 32/64-bit, Linux Fedora                        |

## Specifications

| System                   |   |
|--------------------------|---|
| Processor                | Socket 2nd Generation Intel® rPGA988 Processor                          |
| Chipset                  | Intel® QM67   |
| Memory                   | Dual-Channel with 204-pin SDRAM x 2, DDR3 1600/1333/1066, up to 16GB    |
| Graphics                 | Intel® HD Graphics  |
| I/O Chipset              | ITE IT8728F+Fintek F81216DG   |
| Ethernet                 | Intel® PHY WG82579LM / Realtek RTL 8111E, Gigabit LAN x 2               |
| Audio                    | Realtek® ALC892/886/662   |
| TPM                      | Infineon SLB9635TT 1.2(Optional)  |
| Expansion Slots          | PCIe [x4] x 1, Mini-PCIe x 1, CFast x 1                                 |
| BIOS                     | AMI BIOS - 64MB ROM   |
| H/W Monitor              | Supports System temperature, Voltage, and Cooling fan status monitoring |
| WatchDog Timer           | 1~255 steps by software program   |
| Smart Fan Control        | CPU Fan/Chassis Fan   |
| Wake On LAN/ PXE         | Yes   |
| Power State              | S3,S4,S5  |
| Graphics                 |   |
| Graphics Chipset         | Intel® Core™i7/i5/Celeron® + QM67                                       |
| Graphics Multi Display   | VGA+HDMI, VGA + LVDS, VGA+DVI, HDMI+DVI, HDMI+LVDS, DVI+LVDS            |
| VGA                      | 1   |
| DVI                      | 1   |
| HDMI                     | 1   |
| Display Port             | —   |
| LVDS                     | 1   |
| eDP                      | —   |
| Backlight Control        | Voltage   |
| Environment & Power & ME |   |
| Battery                  | Lithium Battery   |
| Power Requirement        | 12V DC  |
| Operating Temperature    | 32°F ~ 140°F (0°C ~ 60°C)   |
| Storage Temperature      | -40 °F ~ 176 °F (-40 °C ~ 80 °C)  |
| Operating Humidity       | 0% ~ 90% R/H, non-condensing  |
| Certificate              | CE/FCC  |
| Form Factor              | Mini-ITX: 6.7" x 6.7" (170mm x 170mm)                                   |
| Weight                   | 1.32 lb (0.6 kg)  |
| MTBF                     | 70,000  |
| Rear Panel I/O Ports     |   |
| USB                      | USB 2.0 x 4   |
| Display I/O              | HDMI x 1, DVI-D x 1, VGA x 1  |
| Audio I/O                | Line-in, Mic-in, Line-out   |

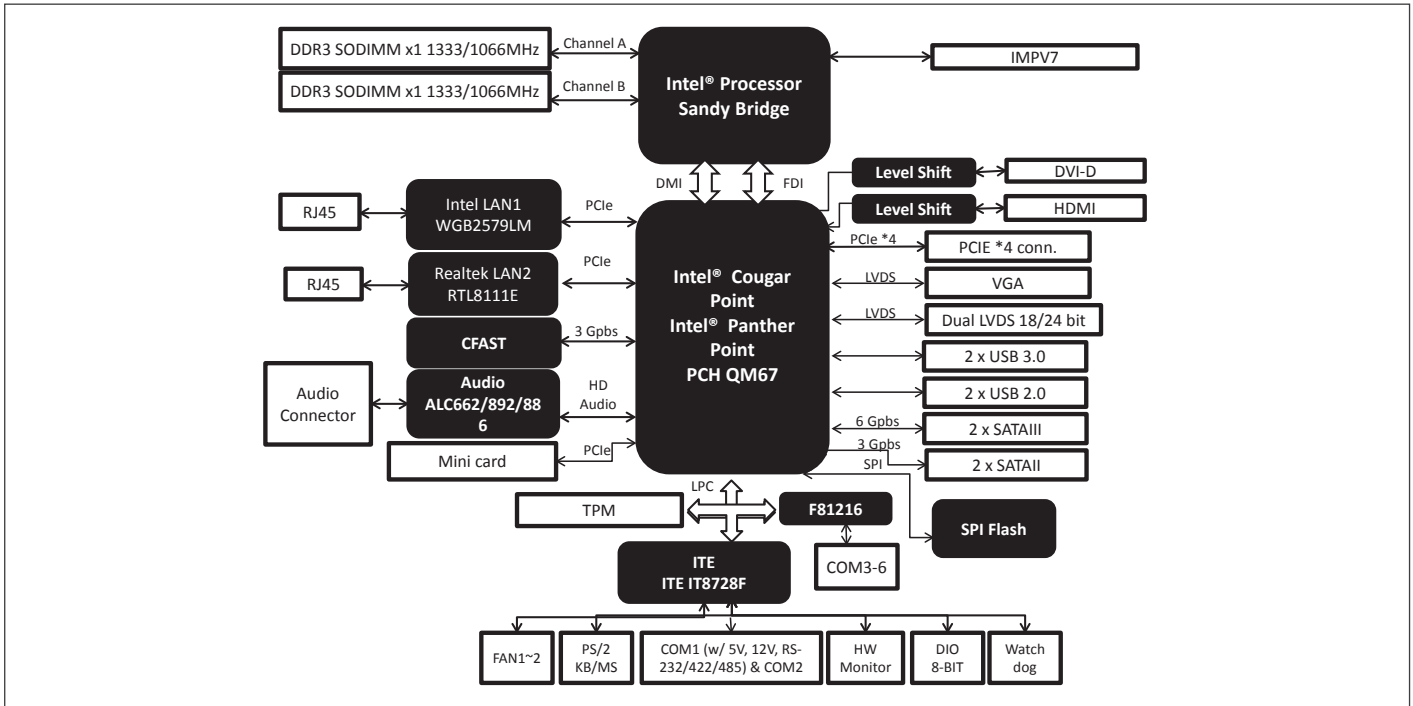
## Packing List

- 1709070800  
SATA Cable
- 1702151201  
SATA Power Cable
- M200QM6700  
Metal I/O Bracket
- 1701100206  
COM Cable
- Product DVD
- EMB-QM67

## Optional Accessories

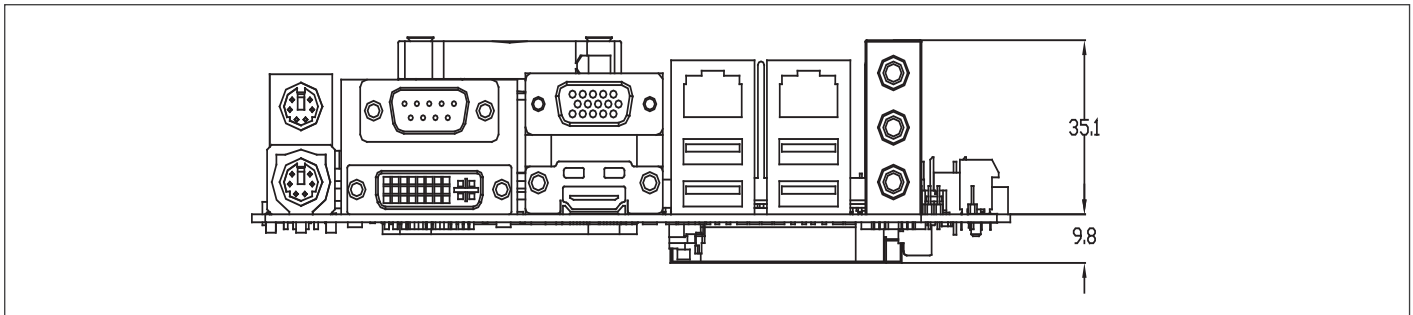
- 17592QM671  
CPU Cooler, Fan + Heatsink, 3P, 60 x 60 x 27 mm for EMB-QM67
- 1709100208  
USB Cable
- 17592QM672  
CPU Cooler, Fan + Heatsink, 4P, 60mm x 60mm x 27mm

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

| Part Number        | CPU    | RAM       | Fan/Fanless | Display                 | Storage                         | LAN     | USB         | RS-232 | RS-232/422/485 | Expansion Slot           | Power   | TPM | Temp.                        |
|--------------------|--------|-----------|-------------|-------------------------|---------------------------------|---------|-------------|--------|----------------|--------------------------|---------|-----|------------------------------|
| TF-EMB-QM67-A12    | Socket | DDR3 16GB | Fan         | VGA/DVI-D/<br>LVDS/HDMI | SATA2 x 2, SATA3 x 2, CFAST x 1 | GbE x 2 | USB 2.0 x 8 | 5      | 1              | PCIe [x4] x 1, mPCIe x 1 | +12V DC | —   | 32°F ~ 140°F<br>(0°C ~ 60°C) |
| TF-EMB-QM67-A12-01 | Socket | DDR3 16GB | Fan         | VGA/DVI-D/<br>LVDS/HDMI | SATA2 x 2, SATA3 x 2, CFAST x 1 | GbE x 2 | USB 2.0 x 8 | 5      | 1              | PCIe [x4] x 1, mPCIe x 1 | ATX     | —   | 32°F ~ 140°F<br>(0°C ~ 60°C) |