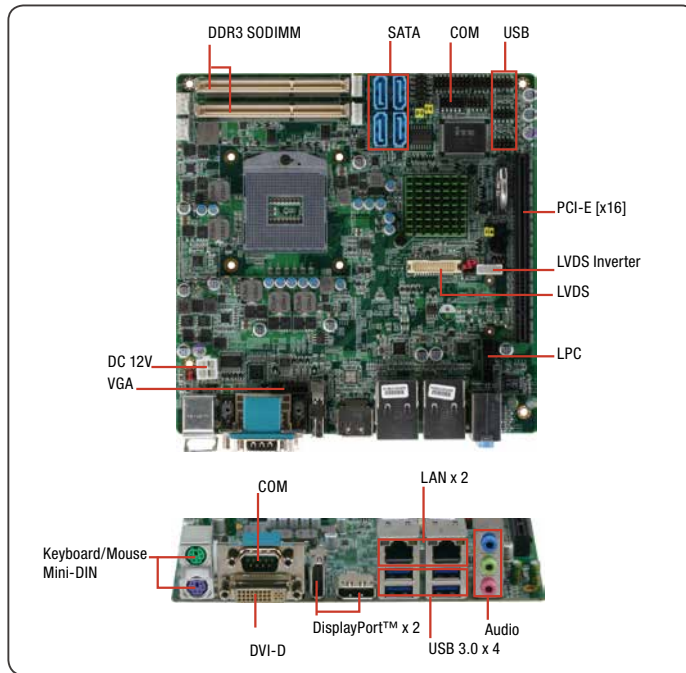


10 EMB-QM77

Industrial Motherboards

Embedded Motherboard with Intel® 3rd Generation Core™ i7/i5/Celeron® Quad Core/Dual Core Processor



Specifications

| System | |
|--------------------------|---|
| Processor | Socket Intel® 3rd generation rPGA988 Processor |
| Chipset | Intel® QM77 |
| 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 |
| Expansion Slots | PCIe [x16] x 1, Mini-PCIe x 1, CFast x 1 |
| BIOS | AMI BIOS - 128MB ROM |
| H/W Monitor | Supports System temperature, Voltage, and Cooling fan status monitoring |
| WatchDog Timer | System Reset: 1~255 steps programmable |
| Smart Fan Control | CPU Fan/Chassis Fan |
| Wake On LAN/PXE | Yes |
| Power State | S3,S4,S5 |
| Graphics | |
| Graphics Chipset | Intel® Core™ i7/i5/i3 + QM77 |
| Graphics Multi Display | DP x 2+VGA, DP x 2+LVDS, HDMI+DP, HDMI+VGA, HDMI+LVDS |
| VGA | 1 |
| DVI | 1 |
| HDMI | 1 (by SKU) |
| Display Port | 2 (by SKU) |
| LVDS | 1 |
| eDP | — |
| Backlight Control | Voltage/PWM |
| 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 (Hours) | 60,000 |

Features

- Socket rPGA988, Intel® 3rd Generation Core™ i7/i5/Celeron® Processor
- Intel® Core™ i7/i5 + QM77
- 204-pin Dual-channel DDR3 1066/1333/1600 MHz SODIMM x 2, Up to 16 GB
- Gigabit Ethernet x 2
- Dual Display Version: CRT, Dual 24-bit LVDS, DVI-D, HDMI, DisplayPort™
- Three Display Version: CRT, Dual 24-bit LVDS, DVI-D, DisplayPort™ x 2 (Optional)
- SATA 6.0 Gb/s x 2, SATA 3.0 Gb/s x 2, Support RAID 0,1,5,10
- USB 2.0 x 6, USB 3.0 x 4, COM x 2
- PCI-Express [x16] x 1, Mini-Card x 1, CFast™ x 1, TPM x 1



| Rear Panel I/O Ports | |
|-------------------------|---|
| USB | USB 3.0 x 4 |
| Display I/O | DP x 2 or DP x 1+HDMI x 1, DVI-D x 1 |
| Audio I/O | Line-in, Mic-in, Line-out |
| 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 | — |
| Internal I/O Connectors | |
| Storage | SATA 6.0 Gb/s x 2, SATA 3.0 Gb/s x 2, Support RAID 0,1,5,10 |
| USB | USB 2.0 x 6 |
| Display I/O | VGAx 1, LVDSx 1 |
| Audio I/O | — |
| Serial Port | RS-232 x 1 |
| 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 | — |
| OS | |
| OS Support | Windows® XP, Windows® 7 32/64-bit, Windows® 8.1 32/64-bit, Linux Fedora |

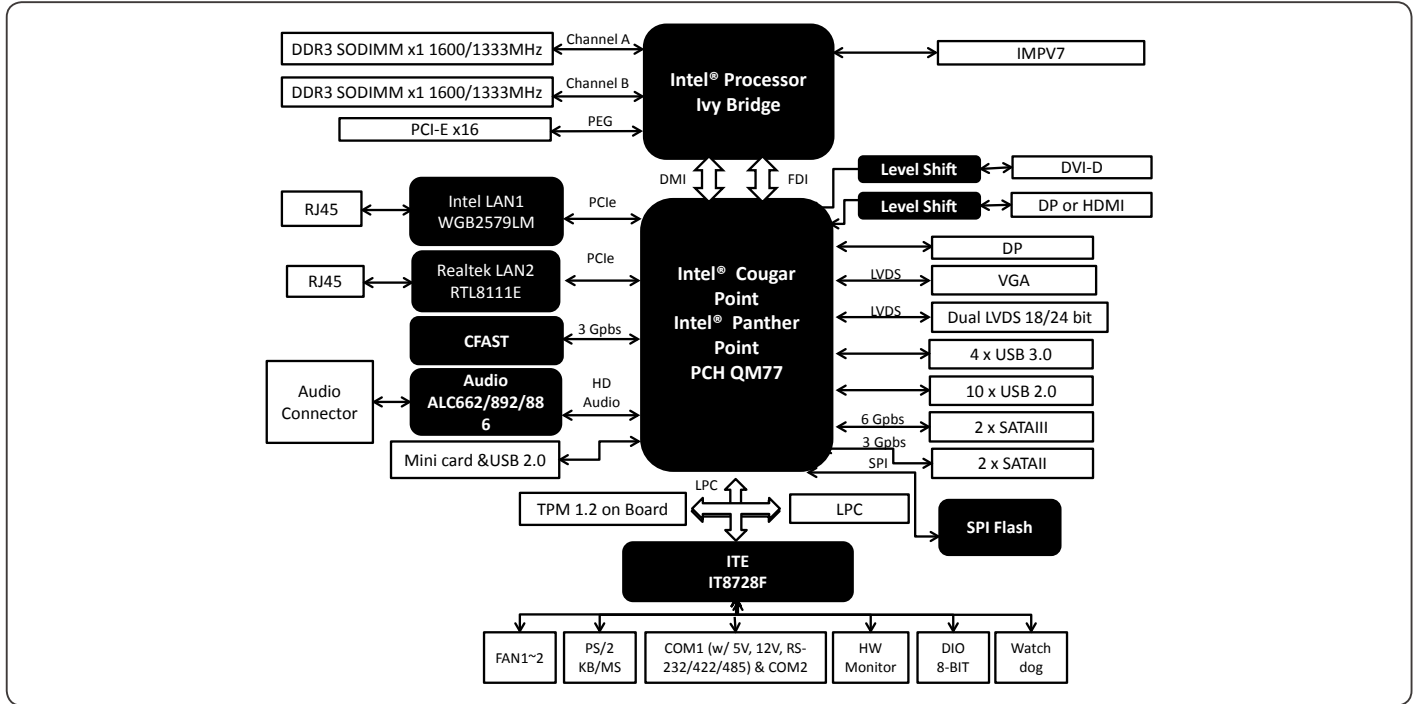
Packing List

- 1701160201
VGA Cable
- 1709100201
USB Cable w/ bracket
- 1701100206
COM Cable
- 1709070800
SATA Cable
- 1702151201
SATA Power Cable (4-pin)
- Metal I/O Bracket
- Product DVD
- EMB-QM77

Optional Accessories

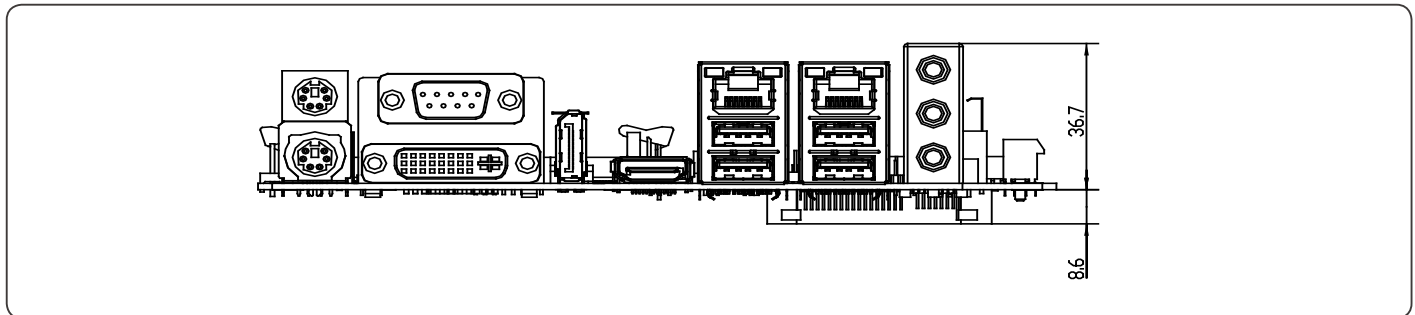
- 17592QM672
CPU Cooler 4P, 60mm x 60mm x 26.5mm

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-QM77-A10-OSP | Socket | DDR3 16GB | Fan | VGA/DVI-D/LVDS/DP | SATA2 x 2, SATA3 x 2, CFAST x 1 | GbE x 2 | USD3.0 x 4, USB 2.0 x 6 | 1 | 1 | PCIe [x16] x 1, mPCIe x 1 | +12V DC | 1.2 | 32°F ~ 140°F (0°C ~ 60°C) |
| TF-EMB-QM77-A10-01-OSP | Socket | DDR3 16GB | Fan | VGA/DVI-D/LVDS/DP/HDMI | SATA2 x 2, SATA3 x 2, CFAST x 1 | GbE x 2 | USB 2.0 x 8 | 1 | 1 | PCIe [x16] x 1, mPCIe x 1 | +12V DC | 1.2 | 32°F ~ 140°F (0°C ~ 60°C) |