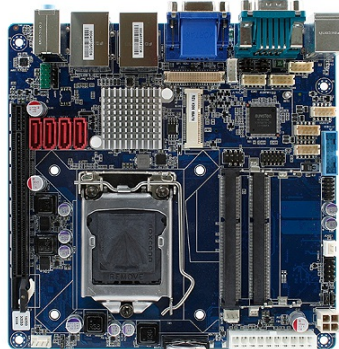




## EMX-Q87R

Intel® 4th Generation Core™ Refresh i7/i5/i3 Mini ITX Motherboard with Intel® Q87 Chipset

- > Intel® LGA1150 Socket Supports 4<sup>th</sup> Generation Core™ Refresh i7/i5/i3, Pentium® and Celeron® Processors (Max. TDP at 95W)
- > Intel® Q87 Chipset
- > 2 x 204-pin DDR3 1333/1600 MHz SO-DIMM supports up to 16 GB
- > VGA, HDMI, DP, Dual-channel 18/24-bit LVDS
- > 1 x Intel® I217LM PCIe Gigabit Ethernet PHY
- > 1 x Intel® I211AT PCIe Gigabit Ethernet
- > Realtek ALC892 Supports 5.1-CH HD Audio Codec
- > TI TPA2012D2RTJT Stereo Class-D 2W x2 Audio Amplifier
- > 1 x Mini PCIe Supported mSATA, 1 x PCIe x 16, 1 x CFast
- > 4 x SATA III, 6 x USB 3.0, 6 x USB 2.0
- > 3 x RS-232, 1 x RS-232/422/485, 1 x 8-bit GPIO
- > Supports RAID 0, 1, 5, 10, iAMT 9.0

### + Spec

| System                     |                                                                                                                          |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Processor                  | Intel® LGA1150 Socket Supports 4th Generation Core™ Refresh i7/i5/i3, Pentium® and Celeron® Processors (Max. TDP at 95W) |
| System Chipset             | Intel® Q87 Chipset                                                                                                       |
| System Memory              | 2 x 204-pin DDR3 1333/1600 MHz SO-DIMM supports up to 16 GB                                                              |
| I/O Chip                   | Nuvoton NTC6106D                                                                                                         |
| BIOS                       | AMI uEFI BIOS, 64Mbit SPI Flash ROM; iAMT 9.0 Supported                                                                  |
| Watchdog Timer             | H/W Reset: 1sec. ~ 65535sec./min. and 1sec. or 1min./step                                                                |
| H/W Status Monitor         | Monitoring System Temperature and Voltage with Auto Throttling Control                                                   |
| Expansion                  |                                                                                                                          |
| Expansion                  | 1 x PCIe x 16<br>1 x Mini PCIe Supports mSATA (Switch Through Jumper)<br>1 x CFast                                       |
| I/O                        |                                                                                                                          |
| USB                        | 6 x USB 3.0<br>6 x USB 2.0                                                                                               |
| SATA                       | 4 x SATA III                                                                                                             |
| COM Port                   | 3 x RS-232<br>1 x RS-232/422/485                                                                                         |
| DIO                        | 1 x 8-bit GPIO                                                                                                           |
| MIO                        | 1 x PS/2 Keyboard<br>1 x PS/2 Mouse                                                                                      |
| Other                      | TPM 1.2 SLB9635 (optional)                                                                                               |
| Display                    |                                                                                                                          |
| Chipset                    | Intel® 4th Generation CPU integrated                                                                                     |
| Resolution                 | VGA: 1920 x 1200 @ 60Hz<br>HDMI: 4096 x 2160 @ 24Hz<br>LVDS: 1920 x 1080 @ 60Hz<br>DP: 3840 x 2160 @ 60Hz                |
| Multiple Display           | Triple Display                                                                                                           |
| Audio                      |                                                                                                                          |
| Chipset                    | Realtek ALC892 supports 5.1-CH                                                                                           |
| Audio Interface            | Mic-in, Line-out, Line-in                                                                                                |
| Audio Amplifier            | TI TPA2012D2RTJT Stereo Class-D 2W x2 Audio Amplifier                                                                    |
| Ethernet                   |                                                                                                                          |
| Chipset                    | 1 x Intel® I217LM<br>1 x Intel® I211AT                                                                                   |
| Ethernet Interface         | 10/100/1000 Base-Tx GbE compatible                                                                                       |
| LAN Port                   | 2 x RJ-45                                                                                                                |
| Mechanical & Environmental |                                                                                                                          |
| Power Requirement          | +12V/+5V/5Vsb/+3.3V/-12V                                                                                                 |
| Power Type                 | AT/ATX                                                                                                                   |
| Operating Temp             | 0°C ~ 60°C (32°F ~ 140°F)                                                                                                |
| Storage Temp               | 0°C ~ 60°C (32°F ~ 140°F)                                                                                                |
| Operating Humidity         | 0% ~ 90% Relative Humidity, Non-condensing                                                                               |
| Dimension (L x W)          | 6.69" x 6.69" (170mm x 170mm)                                                                                            |
| Weight                     | 1.03lbs (0.47kg)                                                                                                         |

### + Ordering

EMX-Q87R-A1R  
Intel® 4<sup>th</sup> Generation Core™ Refresh i7/ i5/ i3 Mini ITX Motherboard with Intel® Q87 Express Chipset

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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