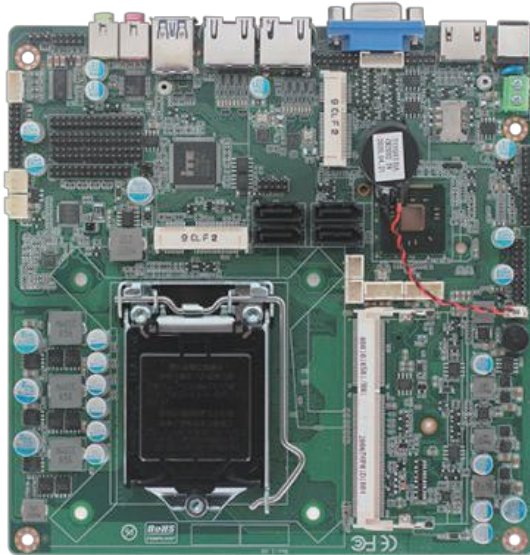


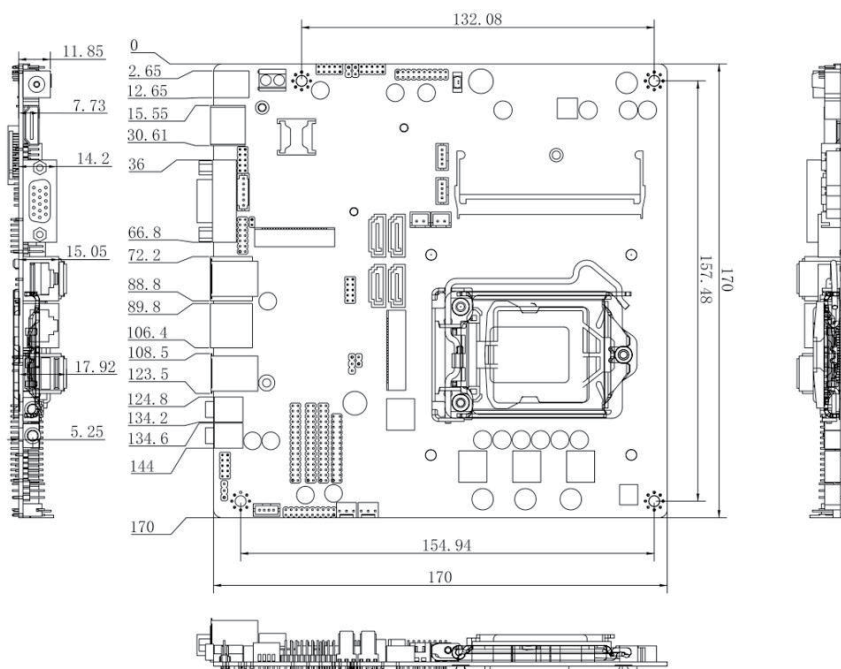


## Mini-ITX Motherboard based on Intel 4th Gen. i3/i5/i7 Celeron/Pentium Series CPU



### Main Features:

- Supports LGA1150 Intel 4th Gen. i3/i5/i7 Celeron/Pentium series CPU
- 1 x DDR3 SODIMM 204 Socket RAM, up to 16GB
- Onboard 2 x Gigabit Ethernet
- 1 x HDMI, 1 x VGA, 1 x LVDS/EDP (EDP or LVDS optional)
- 4 x RS-232, 2 x RS422/485 (6 x RS232 or 5 x RS232 and 1 x RS422/RS485 optional)
- 1 x PCIE 16X interface
- DC 12V voltage input
- Size: 170 x 170mm



## Specification:

Processor System	CPU	Supports LGA1150 Intel 4th Gen. i3/i5/i7/Celeron/Pentium Series CPU
	CPU Package	LGA1150
	Chipset	H81/B85high speed chipset
	BIOS	EFI BIOS
RAM	Technology Architecture	Single channel DDR3 1066/1333/1600MHz
	Capacity	1 x DDR3 SODIMM 204 Socket, up to 16GB DDR3 RAM, 1066/1333/1600MHz
Video	Graphic Controller	Intel HD Graphics 4400 (I3-4160 graphics card) ; graphics models related to CPU
	Dual LVDS and EDP	Supports dual-channel 24bits output, Max. resolution 1920 x 1200, EDP Max. resolution 3840 x 2160 ( LVDS or EDP for options )
	HDMI	HDMI Max. resolution 4096 x 2304 @30Hz
	VGA	VGA Max. resolution 2048 x 1536
	Dual Display	LVDS/EDP + VGA, LVDS/EDP + HDMI, HDMI + VGA synchronous or asynchronous display
	Triple Display	LVDS/EDP + VGA + HDMI synchronous or asynchronous display (H81 chip don't support triple display)
I/O Back Panel	Ports	1 x DC, 1 x VGA, 1 x HDMI, 2 x LAN, 2 x USB3.1, 1 x LINE OUT, 1 x MIC
Network	Controller	2 x RTL8111H Gigabit Ethernet, RJ45 Interface (When the I/O interfaces have 4 x USB, there's only 1 x network card)
Audio	Controller	Realtek HD ALC662 Audio decoding (left and right channels + microphone)
Super I/O	Controller	ITE8786E
Hardware Monitoring	Watchdog Timer	0-255 seconds, provides watchdog routine
	Cooler	Aluminum radiator with fan
Input/Output Interface	USB	8 x USB2.0, 2 x USB3.0 (8 x USB2.0 pin headers for dual network cards) 6 x USB2.0 for H81 screen and chipset, 2 x USB3.0
	COM	6 x serial ports (options: 5 x RS232 and 1 x RS485/RS422; 4 x RS-232 and 2 x RS422/485; 6 x RS232/RS485; supports automatic flow control)
	GPIO	8bit, sample code, free definition input or output, 3.3V@24mA
Expansion Bus	Mini-PCIe	1 x Mini-PCIe socket, support PCIe and USB device
	NGFF	1 x NGFF interface (KEY E)
Storage	SATA	Two standard SATAII interfaces on the H81 chipset, the maximum transfer rate is 3Gb/s, one SATAIII interface is SATA1, the maximum transfer rate is 6Gb/s, and the B85 chipset comes with four SATAIII interfaces, the maximum transfer rate is 6Gb/s
	M-SATA	1 x Mini-PCIe M-SATA Socket, supports SANDISK protocol, maximum transfer rate 6gb/s
Power Supply	Power Type	Single input DC power supply, DC12V, +/-5%
Working Environment	Operating Temperature	-20℃ ~ +60℃
	Storage Temperature	-40℃ ~ +85℃
	Working Humidity/Storage Humidity	0% ~ 90% relative humidity, no condensation
System Support		Windows 7, Windows 8.1, Windows 10, Linux
Physical Dimension	Size	170 x 170 mm
	N.W	0.6kg
Certification		CE, RoHS, FCC

## Order Information:

Item NO	Description	CPU Options
EMB-IH81P-MI2	Support LGA1150 Intel 4th Gen. i3/i5/i7/Celeron/Pentium CPU	Intel 4th Gen. i3/i5/i7/Celeron/Pentium CPU

### ABOUT POLYHEX

As a board level and system level designer and manufacturer, Polyhex, with 9 years' experience, always delivers best-in-class embedded computing solutions based on both ARM and X86 architecture, including hardware customization and software debugging etc. Partnered with silicon vendors like Intel, NXP, ST, Rockchip, Allwinners and so on, we have earned trust from clients worldwide in over 30 countries. Polyhex is also certified with ISO9001 and ISO13485 for the self-owned manufacture facility.

