

Chapter 1 Product Specifications

model	170mm (L) *170mm (W) *26mm (H)	
CPU processor	Supports Intel laptop 4th generation M full series laptop CPUs i3, i5, and i7	
Chip set	Intel® 8-series chipset HM86	
Memory	1 * NB-DDR3L SODIMM memory slot, supports 1333/1600MHz memory, low voltage 1.35V, maximum support 8GB	
Power supply	1*DC_IN	Supports 12V voltage, with a DC head inner diameter of 2.5mm The motherboard has a full load power consumption of about 70W, and it is recommended to use a 12V7A or higher power supply
display function	Intel HD Graphics 4600 Graphics controller, supporting single display, dual display/triple display replication, dual display/triple display expansion, single display under DOS	
	1*VGA DB15interface	Support resolution1920 * 1080@60Hz
	1*VGA OUT pin	Support resolution1920 * 1080@60Hz (12Pin, 1*12Pin, 2.0mm)
	1*HDMI 1.4interface	Support 4K resolution 4096/3840*2160@30Hz
	1*HDMI CON pin	Support 4K resolution 4096/3840*2160@30Hz (16Pin, 2*8Pin, 2.0mm)
	1*LVDS/EDP pin	Support resolution1920*1080@60Hz (30Pin, 2*15Pin, 2.0mm)
	The motherboard LVDS and EDP have either option, sharing a common pin	
	1*LVDS_PWR pin	LVDS Working voltage control pin (6Pin, 2*3Pin, 2.0mm)
	1*INVERT pin	LVDSbacklight control pin (6Pin, 1*6Pin, 2.0mm)
	1*PCI-E X16interface	Standard PCI-E X16 interface, can connect to independent graphics card
Network functions	1/2*RJ45 LAN interface	Optional 100Mbps and Gigabit network cards, supporting network wake-up and PXE diskless startup functions (Gigabit: single network 8111H, dual network 8111H+8111H) (100Mbps: single network 8106E, dual network 8106E+8106E)
	1*Mini-PCIE interface	Supports WIFI/3G/4G/Bluetooth modules
Disk functions	1*MSATA interface	Supports MSATA disks and SATA 3.0
	1*SATA1interface	Standard SATA3.0 hard disk interface with a maximum transfer speed of 6.0 Gbps
	1*SATA2interface	Standard SATA2.0 hard disk interface with a maximum transfer speed of 3.0 Gbps
	2*SATA-PWR pin	Hard disk power supply pin, can be powered by 5V or 12V (4Pin, 1*4Pin, 2.54mm)
Sound functions	Integrated C media HS-100B high fidelity USB audio chip; Can be modified to support sound card chips such as Realtek 662/892	
	1*LIN_OUT interface	Support audio output (green)
	1*MIC_INinterface	Support microphone input (red)
	1*INT_SPK pin	The amplifier supports dual channel output of 8-ohm 5-watt speakers (4Pin, 1*4Pin, 2.0mm)
USB functions	2*USB3.0 interface	Post standard USB3.0interface
	2*USB2.0interface	Post standard USB2.0interface
Switch functions Other I/O	1*F_USB1 pin	Prepose USB2.0pin, A group with 2*USB2.0 (9Pin, 2*5Pin, 2.0mm)
	1*F_USB2 pin	Prepose USB2.0pin, A group with 2*USB2.0 (9Pin, 2*5Pin, 2.0mm)
	1*F_PANEL pin	Switch, power light, hard drive light, restart pin (9Pin, 2*5Pin, 2.54mm)
	1*COM1pin	Support Standard RS232/RS422/RS485 optional (9Pin, 2*5Pin, 2.54mm)
	1*COM2pin	Support Standard RS232 (9Pin, 2*5Pin, 2.54mm)
	1*COM3~6pin	Support Standard RS232 (39Pin, 2*20Pin, 2.0mm)
	1*JCOM1/2pin	COM1/2 pin 9 set 0V/5V/12V (6Pin, 2*3Pin, 2.0mm)
	1*SIM_CARD slot	Support SIM card, requires SIM card when using 3G/4G
	1*CLR-CMOS pin	Clear motherboard and discharge pin (3Pin, 1*3Pin, 2.0mm)
	1*FAN1pin	Fan pin, temperature control not supported (3Pin, 1*3Pin, 2.54mm)
	1*FAN2pin	Fan pin, temperature control supported (3Pin, 1*3Pin, 2.54mm)
	1*J-GPIO1pin	GPIO control pin (10Pin, 2*5Pin, 2.0mm)
Operating environment	operation temperature: -10°C~60°C; Working humidity: 5%~95% relative humidity, non condensing	
BIOS	AMI BIOS, Supports power on, timed power on, and intelligent recognition of remote on/off devices	
Watch Dog	Watchdog programming, supporting hardware reset function (256 levels, 0-255 seconds)	
operating system	Support Windows 10, Windows 8, Windows7, Linux etc.	