

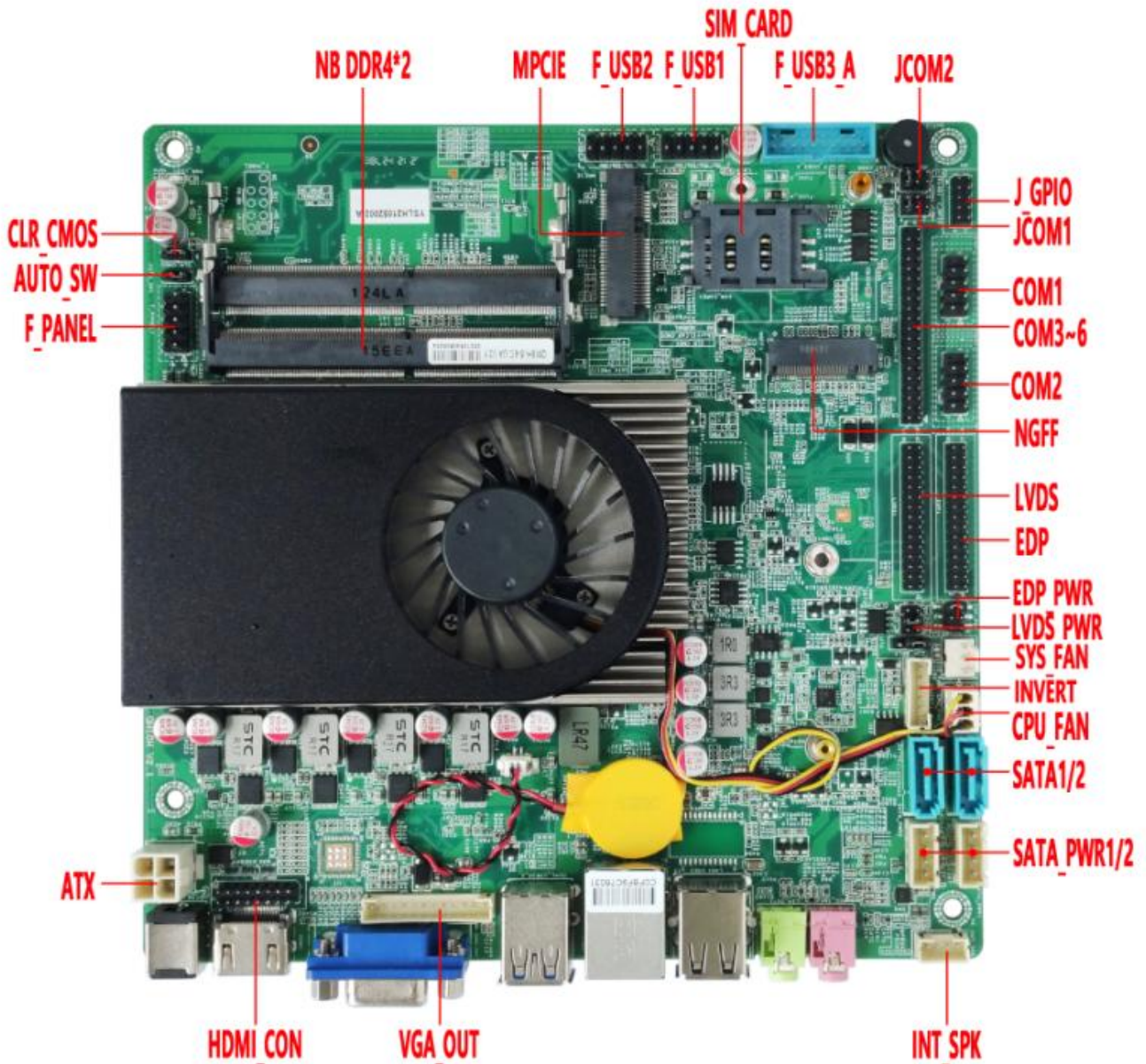


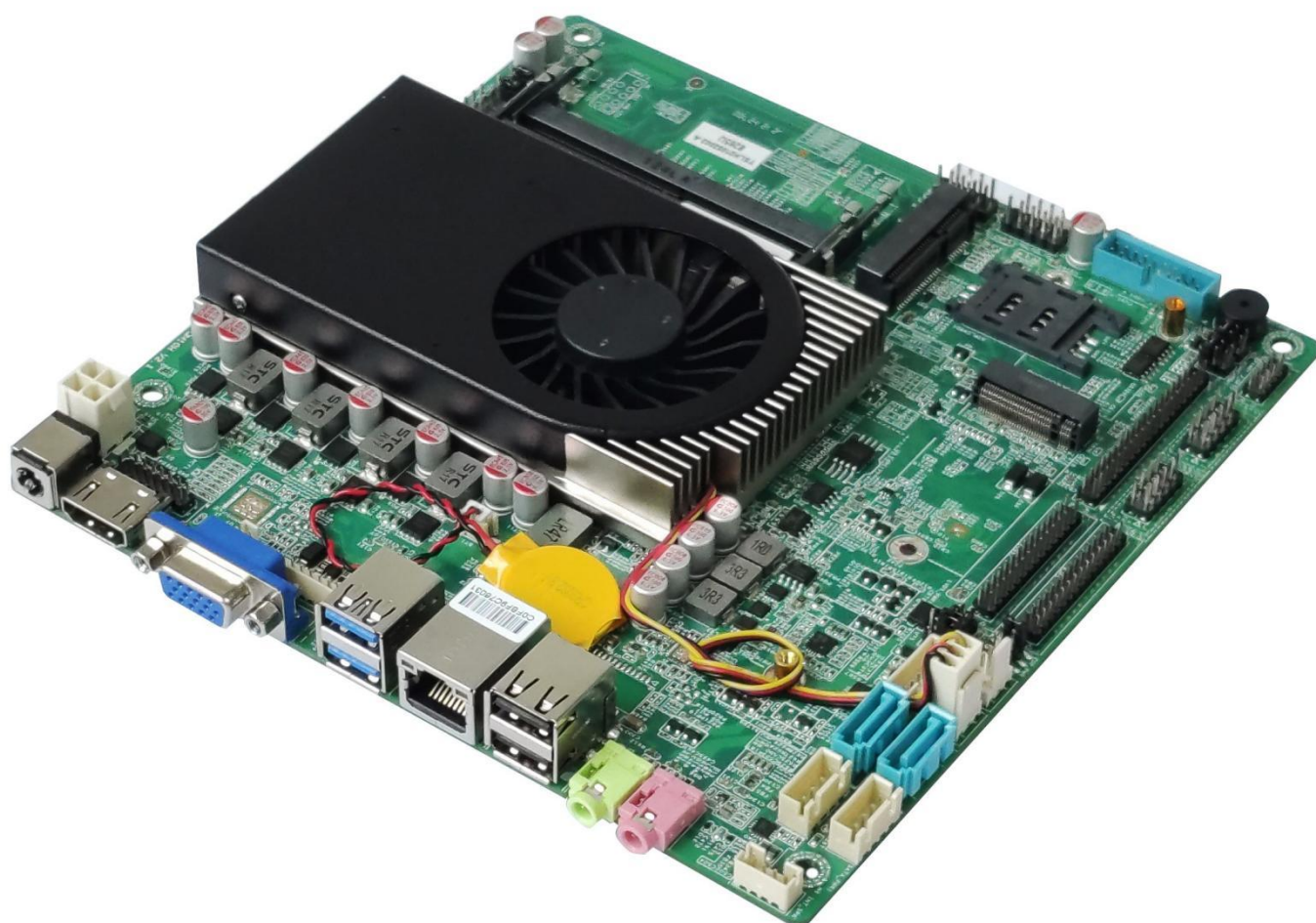
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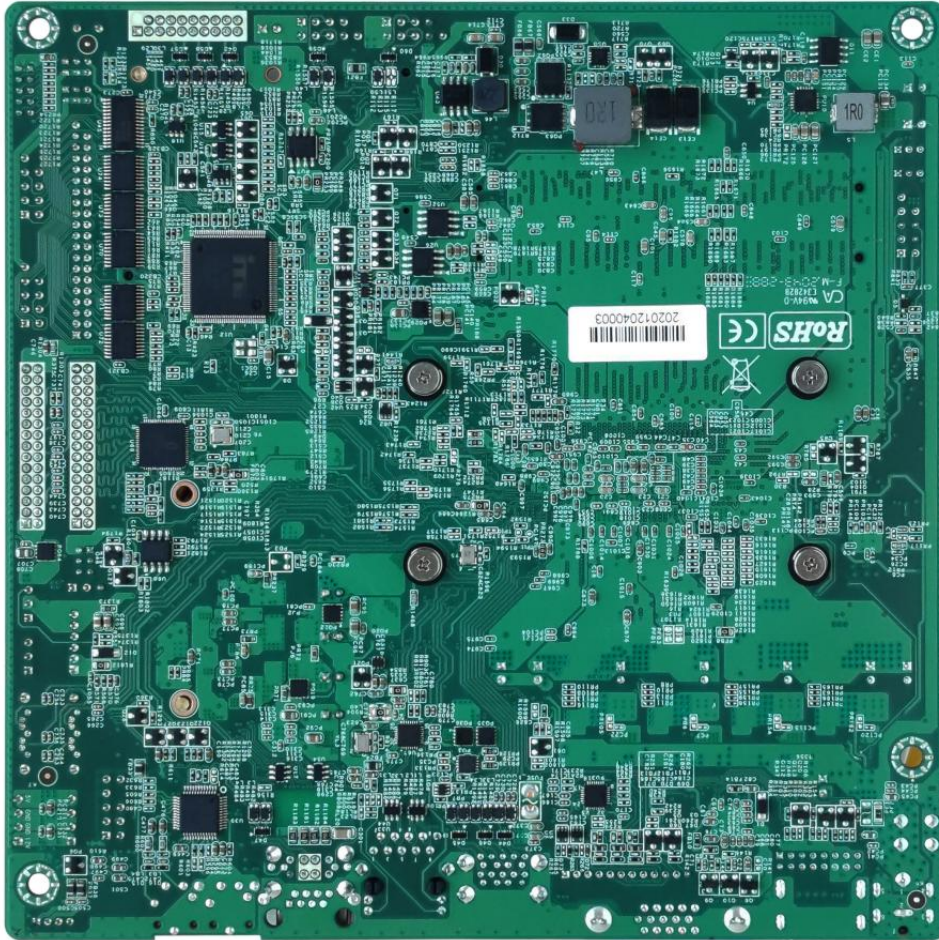
# QM10H-UA V2.1 User Manual

Update on August 6, 2021





Bottom of the motherboard:



**⚠ Important notice:**

(1) The motherboard only supports DC 12V power supply,its full load power consumption is about 80~90W;Recommend 12V 10A and above power adapter.

(2) The VGA,HDMI,EDP/LVDS support single display, dual/triple display copy, dual/triple display expansion,single display under DOS.

(3) The LVDS,EDP pins cannot exist at the same time.By default,the motherboard supports LVDS,does not support EDP. If you need EDP,please inform us in advance.

(4) The EDP pin uses our EDP-C cable and supports 4K resolution 4096/3840\*2160@60Hz;

(5) By default,the HDMI interface and built-in HDMI pin are HDMI 1.4 ; They support 4K resolution 4096/3840\*2160@30Hz.

Option HDMI 2.0(Support 4K resolution 4096/3840\*2160@60Hz). If you need HDMI 2.0 ,please inform us in advance.

(6) By default,M.2 slot supports 2280,SATA,NVME(PCI-E) signals;  
Option M.2 2242 size,If you need,please inform us in advance.

(7) By default,the Mini PCI-E slot supports PCI-E,USB signals.

By default,the 2nd,4th,6th,8th,10th pins of the F\_USB2 have no signals.Because the USB signal of Mini PCI-E and the 2nd,4th,6th,8th,10th pins of the F\_USB2 cannot exist at the same time.

The Mini PCI-E slot supports changing the PCI-E signal to the SATA signal.Please note that the PCI-E signal of Mini PCI-E and SATA1 will not exist after changing.If you need SATA signal,please inform us in advance.

(8) The motherboard supports optional 2\*COM,6\*COM.

By default,all COM pins support RS232.

The COM1 supports optional RS232/422/485 through BIOS setting.

(9) The 9th pin of COM1/2 supports output optional 0V,5V,12V by JCOM1/2 jumper pin setting.

By default,the COM1/2 has 0V.

(10)

◆ A power: After turning off the motherboard, the USB pins/interfaces are still with electricity.

◆ S power: After turning off the motherboard, the USB pins/interfaces have no electricity.

By default,the USB interfaces and built-in USB pins have A power.

Option S power. If you need S power,please inform us in advance.

(11) By default,the motherboard supports Cmedia HS\_100B USB Audio chip.

The USB signal of the Audio chip and an USB2.0 signal of F\_USB3\_A cannot exist at the same time.By default,the F\_USB3\_A pin lacks a USB2.0 signal .

(12) The motherboard does not support Realtek Audio chip.

(13) By default,the motherboard supports 1\*LAN port; Option 2\*LAN. Do not support POE.

(14) Updating BIOS of QM8H, QM9H in DOS OS;

Updating QM10H's BIOS in SHELL OS;

(15) All product specifications are subject to change without notice.

## Motherboard Specifications

Form Factor	Thin Mini-itx	
Physical Dimension	170*170*23mm(L*W*H)	
CPU	Support 10th generation Comet Lake Core CPU:I7-10510U	
Memory	2*NB-DDR4 2133/2400/2666MHz Memory slots,up to 64GB RAM.	
Power Supply	1*DC_IN	DC port size: 5.5*2.5MM; Support DC 12V.
	1*DC_ATX	Full load power consumption of the motherboard is about 80~90W; Recommend 12V 10A and above power adapter.
Display Function	Integrated Intel UHD 630 Graphics in CPU; Support single display, dual/triple display copy, dual/triple display expansion,single display under DOS.	
	1*VGA DB15 interface	Support resolution 1920*1080@60Hz
	1*VGA_OUT pin	Support resolution 1920*1080@60Hz (12Pin,1*12Pin,2.0mm)
	1*HDMI 1.4 interface	Support 4K resolution 4096/3840*2160@30Hz
	1*HDMI_CON pin	Support 4K resolution 4096/3840*2160@30Hz (16Pin,2*8Pin,2.0mm)
	<b>Option HDMI 2.0 (Support 4K resolution 4096/3840*2160@60Hz). If you need HDMI 2.0 ,please inform us in advance.</b>	
	1*LVDS pin	Support resolution 1920*1080@60Hz (30Pin,2*15Pin,2.0mm)
	1*LVDS_PWR pin	LVDS voltage control pin (6Pin,2*3Pin,2.0mm)
	1*INVERT pin	LVDS Backlight switch, backlight brightness adjustment control pin (6Pin,1*6Pin,2.0mm)
	1*BKLT-PWR1	LVDS Backlight voltage control pin
	<b>The above three pins only work on LVDS.</b>	
	1*EDP pin	Support 4K resolution 4096/3840*2160@60Hz (30Pin,2*15Pin,2.0mm)
	1*EDP_PWR pin	EDP voltage control pin (6Pin,2*3Pin,2.0mm)
	<b>The LVDS,EDP pins cannot exist at the same time; Support LVDS (Default); Option EDP.</b>	
Ethernet	1*LAN interface	Option 1: Realtek 8111G 1000Mbps LAN chip; Option 2: Realtek 8105E/8106E 100Mbps LAN chip; Support Wake on LAN,PXE function. Option 2*LAN.
	1*Mini-PCIE interface	Support WIFI/3G/4G/GPS/Bluetooth,etc; Option MSATA.
Hard Disk	1*M.2 interface	By default,M.2 slot supports 2280,SATA,NVME(PCIE) signals; Option M.2 2242 size,If you need,please inform us in advance.
	1*SATA1 interface	Standard SATA3.0 hard disk interface. Its maximum transmission speed 6Gbps.
	<b>The SATA1,MSATA slots cannot exist at the same time; Support SATA1 (Default); Option MSATA.</b>	
	1*SATA2 interface	Standard SATA3.0 hard disk interface. Its maximum transmission speed 6Gbps.
	1*SATA_PWR1 pin	It is hard disk power supply pin and can take the 5V,12V electricity. (4Pin,1*4Pin,2.54mm)
	1*SATA_PWR2 pin	It is hard disk power supply pin and can take the 5V,12V electricity. (4Pin,1*4Pin,2.54mm)

Sound Function	Integrated Cmedia HS 100B USB Audio chip.	
	1*LINE_OUT interface	Support Audio output (Green)
	1*MIC_IN interface	Support Microphone input (Red)
	1*INT_SPK pin	This amplifier pin supports 8Ω 5W speaker dual channel output. (4Pin,1*4Pin,2.0mm)
USB Function	2*USB3.1 interfaces	Rear standard USB3.1 Gen2 interface. Maximum transmission bandwidth is 10Gbps.
	2*USB2.0 interfaces	Rear standard USB2.0 interface. Maximum transmission bandwidth is 480Mbps(60MB/s).
	1*F_USB1 pin	Front USB2.0 pin; One group has 2*USB2.0 (9Pin,2*5Pin,2.54mm)
	1*F_USB2 pin	Front USB2.0 pin; One group has 2*USB2.0 (9Pin,2*5Pin,2.54mm) <b>By default,the F_USB2 only has 1*USB2.0</b>
	1*F_USB3_A pin	Front USB3.1 Gen2 pin; One group has 2*USB3.1 (19Pin,2*10Pin,2.0mm)
Switch	1*F_PANEL pin	Switch, power supply light, hard disk light, restart pin (9Pin,2*5Pin,2.54mm)
	1*AUTO_SW pin	Support set "Power On " function (3Pin,1*3Pin,2.0mm)
Serial Port	COM1/COM2 pin	COM1: Option RS232/422/485 COM2: RS232 (9Pin,2*5Pin,2.54mm)
	COM3~COM6 pin	COM3, COM4, COM5, COM6: RS232; (39Pin,2*20Pin,2.0mm)
	1*JCOM1 pin	Control the 9th pin of the COM1 to choose 0V/5V/12V; (6Pin,2*3Pin,2.0mm)
	1*JCOM2 pin	Control the 9th pin of the COM2 to choose 0V/5V/12V; (6Pin,2*3Pin,2.0mm)
Other I/O	1*GPIO pin	GPIO control pin (10Pin,2*5Pin,2.0mm)
	1*CLR_CMOS pin	Motherboard discharges,clears pin (3Pin,1*3Pin,2.0mm)
	1*SIM_CARD slot	Support SIM card. A SIM card is required when using 3G/4G function.
	CPU-FAN pin	This CPU Fan pin. It supports temperature control (3Pin,1*3Pin,2.54mm)
	SYS-FAN pin	This is system Fan pin. It is full speed and does not support temperature control. (3Pin,1*3Pin,2.54mm)
Operating Environment	Operating temperature:-20℃~60℃; Working humidity:5%~95% Relative humidity, no condensation.	
BIOS	AMI BIOS;Support power on,timing switch,remote switch,ininformigently identify devices.	
Watch Dog	Watch Dog programming supports hardware reset function (256 levels, 0~255 seconds).	
Operating System	Support Windows 10 64bit, Linux,etc.	

1.1 The motherboard drawing:

