

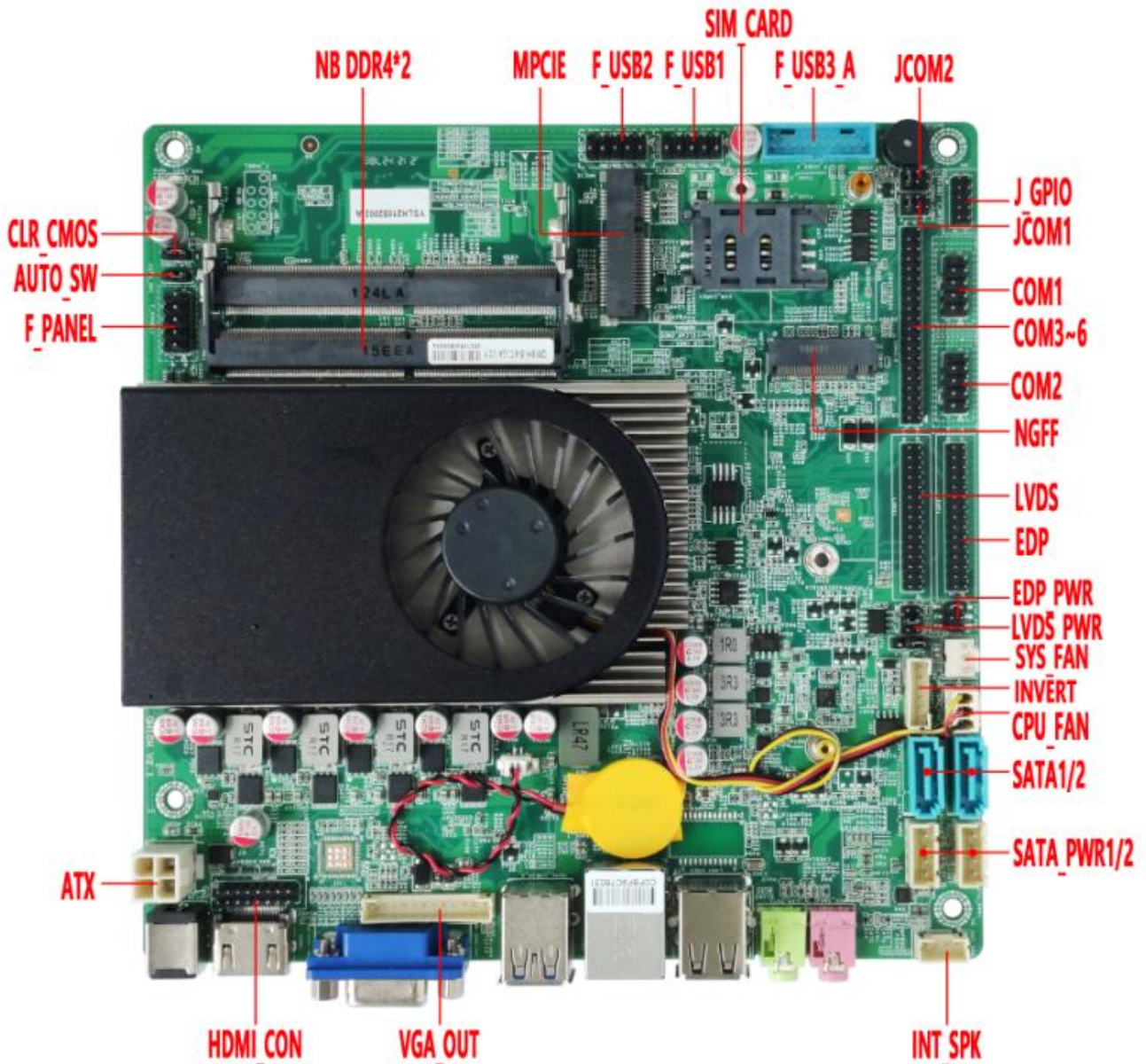


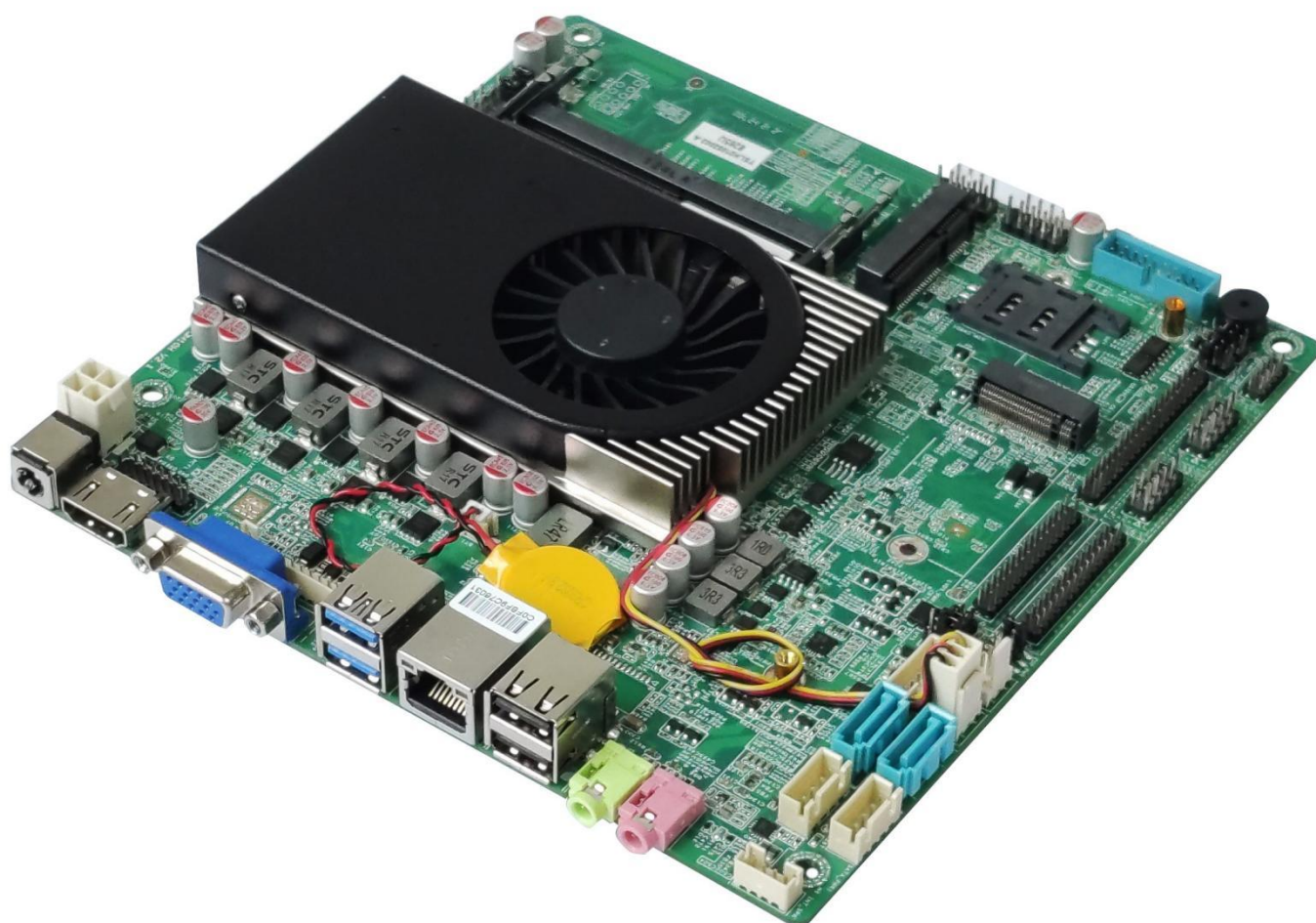
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# QM10H-UA V2.1 User Manual

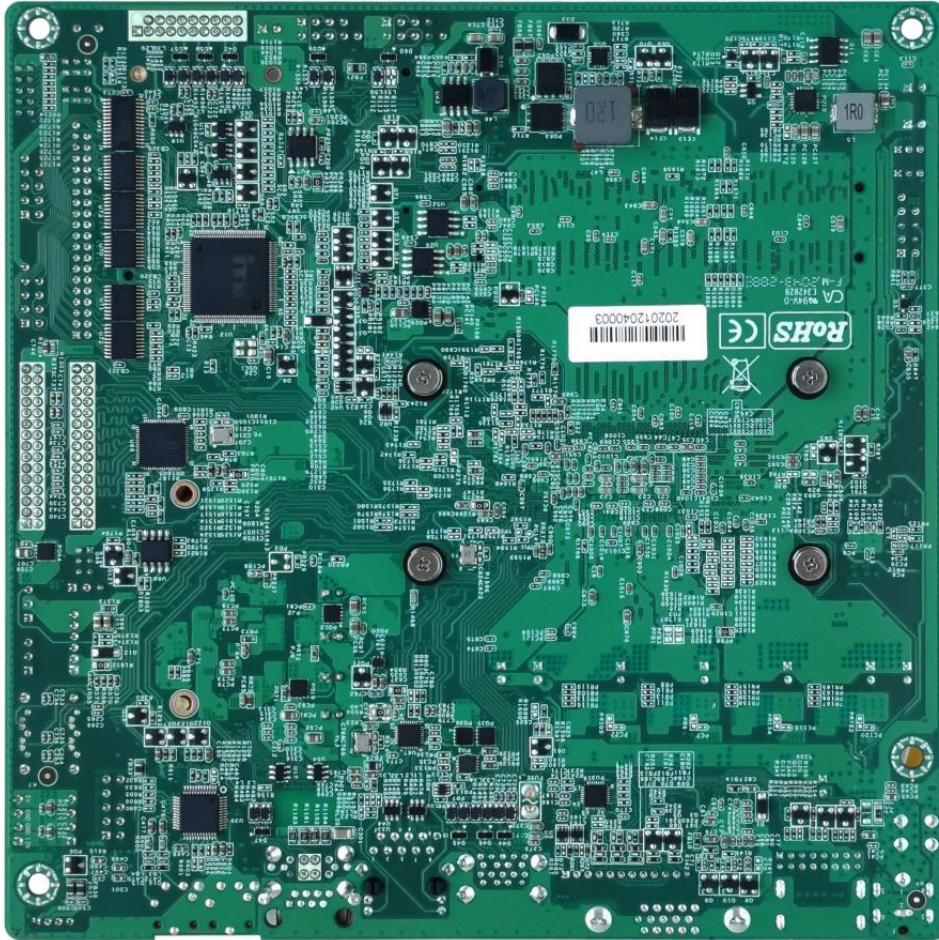
Update on August 6, 2021







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:I3-10110U	
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
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)
	Integrated Cmedia HS_100B USB Audio chip.	

Sound Function	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°C~60°C; Working humidity:5%~95% Relative humidity, no condensation.	
BIOS	AMI BIOS;Support power on,timing switch,remote switch,informigently 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:

