

高端金融自助类工控整机

RA-F2310 产品规格书



编制： 刘富刚

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Changelist

版本	日期	变更内容	修订人
V1.0	2018-06-12	首次发行	刘富刚

一、产品概述

RA-F2310 是锐宝开发的一款高端金融自助类工控机。整机采用 Intel 最新的 H110 芯片组，支持 Skylake LGA1151 i7/i5/i3/Pentium/Celeron 系列 CPU, 支持 2 根 DDR4 DIMM 内存槽，最大支持 32G 内存，支持 10 个 COM 口，12 个 USB 接口（其中 8 个 USB2.0, 4 个 USB3.0），支持双千兆网卡，支持 2*VGA+1*HDMI 三选二显示输出，支持 1 个 3.5 寸硬盘位，可广泛应用于各种金融自助类设备中。

二、产品特点

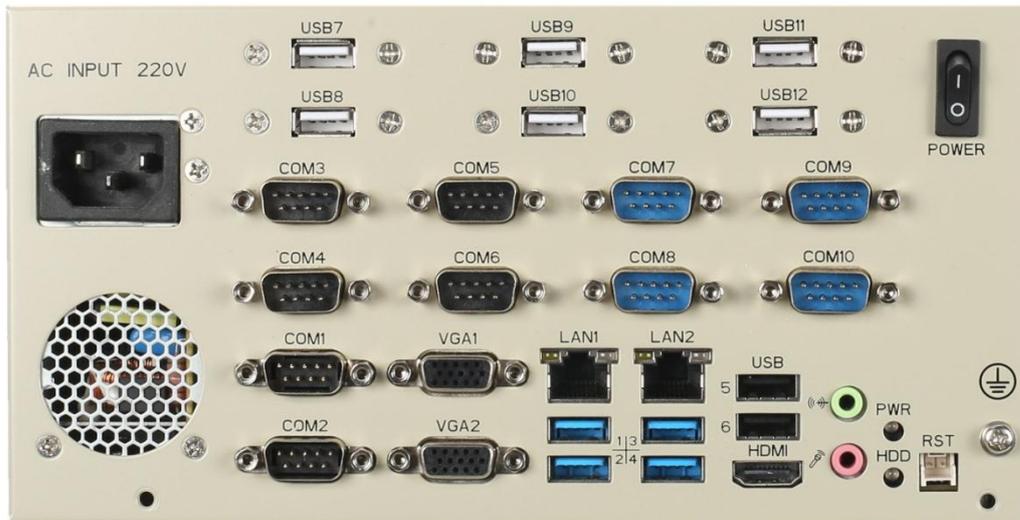
1. 采用 Intel Skylake i7/i5/i3/Pentium/Celeron 系列 CPU;
2. 支持 2 个 DDR4 DIMM 内存槽，最大支持 32G;
3. 支持 10 个 COM，8 个 USB2.0, 4 个 USB3.0，2 个千兆网卡;
4. 支持 VGA+VGA，VGA+HDMI 两种双显输出;

三、产品规格

序号	种类	项目	描述
1	平台	CPU	Intel Skylake i7/i5/i3/Pentium/Celeron
		芯片组	H110
2	内存	类型	DDR4 2133MHz
		插槽	2X 288pin DIMM
		容量	Max 32G
3	网络	网络接口	2X RJ45 Ports
		控制芯片	2X Realtek 8111F
4	显示	显卡	HD530
		VGA	2X VGA 接口，最大分辨率 3840X2160
		DVI	/
		HDMI	1X HDMI 接口，最大分辨率 3840X2160
5	存储	显示模式	双显，VGA+VGA /HDMI+VGA
		SATA	1X 3.5 寸硬盘位
6	I/O 接口	SSD	1X M.2 接口
		USB	8X USB2.0, 4X USB3.0
		COM	10X COM
		LAN	2X 1000M RJ45
		PS2	/
		Audio	1X Mic in+ Line out
		Button	1X 船型电源开关
7	电源	光驱	/
		单电	1X 150W ATX 电源

8	物理参数	尺寸	224mm*215mm*115mm
		温度	工作温度：-15-50℃；存储温度：-40-70℃
		湿度	5%-95%，无冷凝
9	系统	操作系统	Windows, Linux

四、产品后 IO 接口正视图



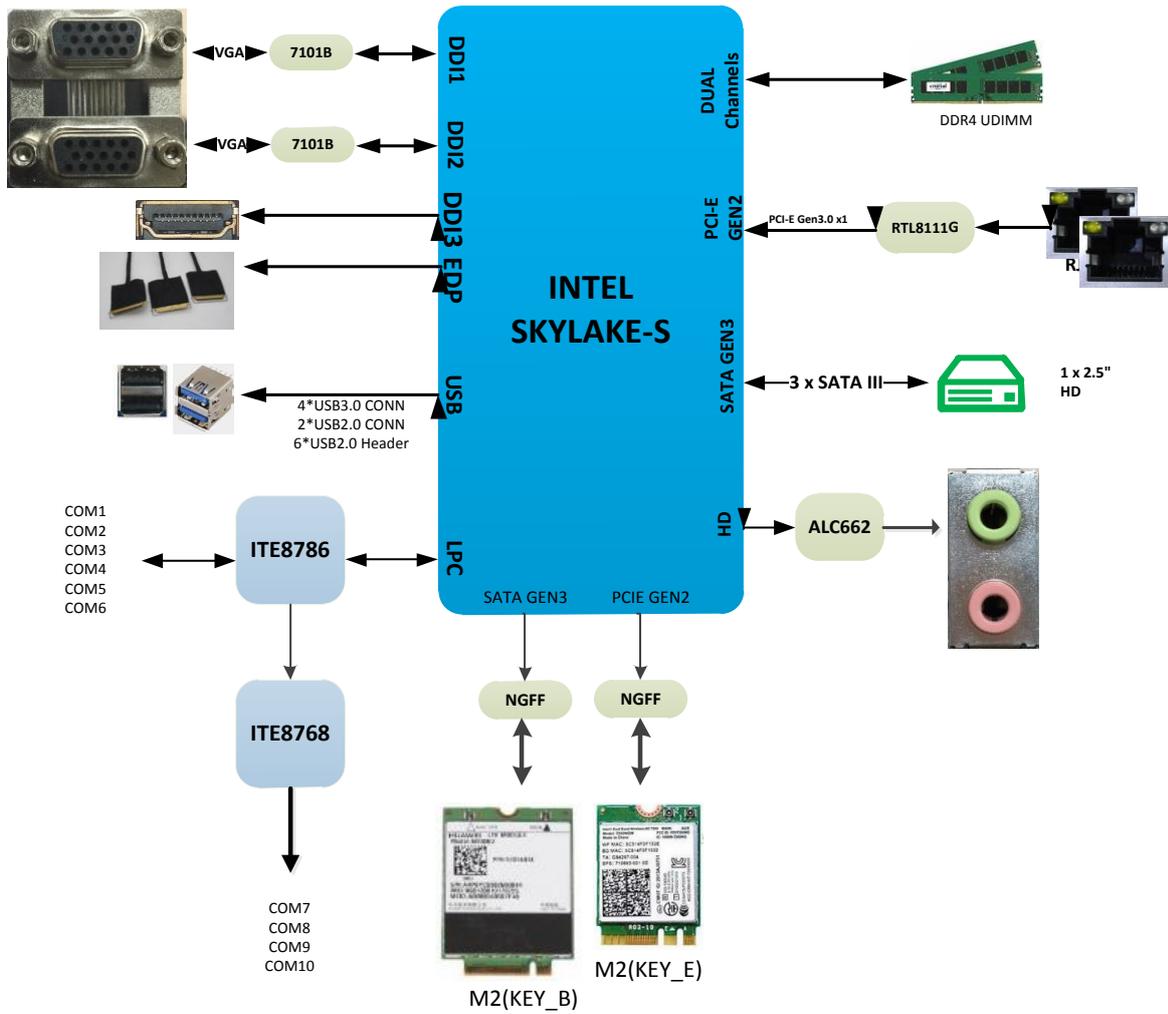
五、订购信息

产品名称	简述
RA-F2310	工控机箱，RB-F211，150W ATX 电源，10XCOM, 12XUSB

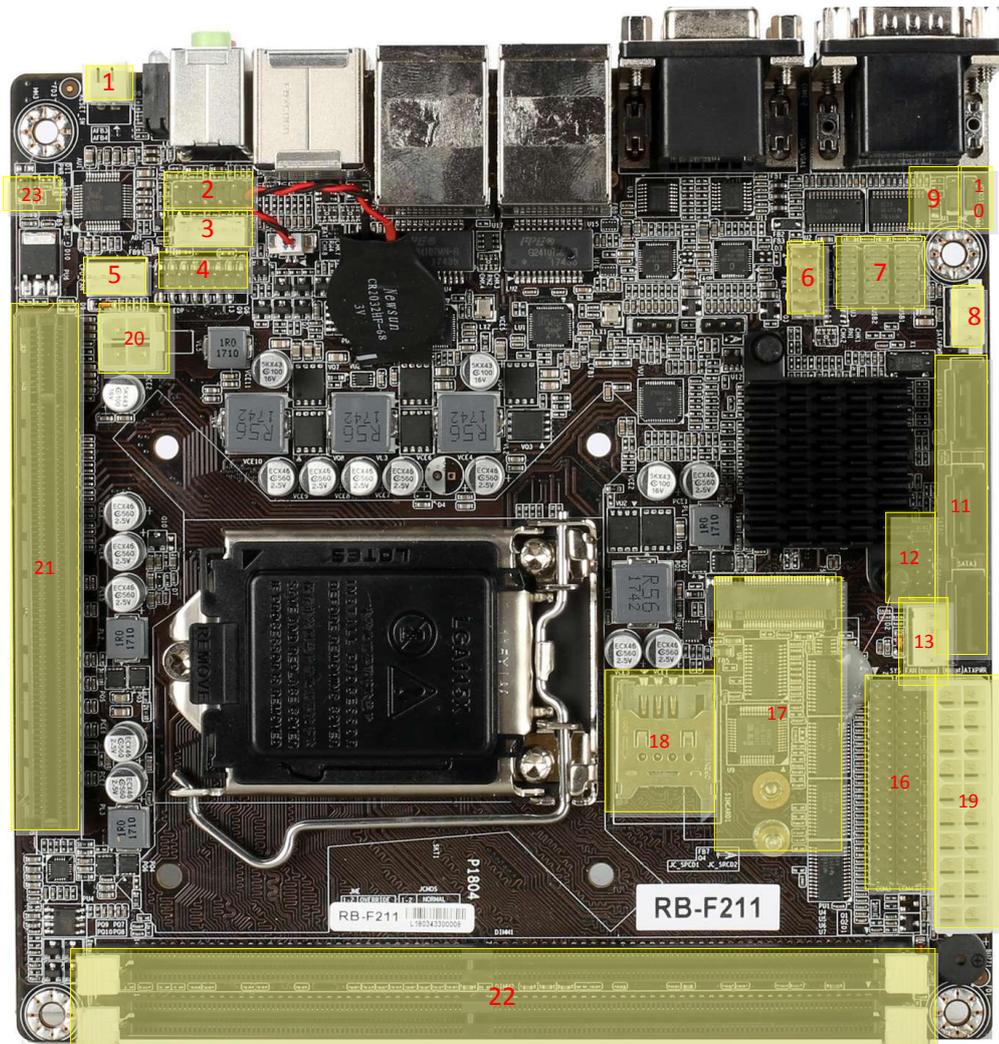
配件

类别	型号	规格
处理器	I7-6700	4核 8线程，3.4GHz, 65W
	I5-6500	4核 4线程，3.2GHz, 65W
	I5-6400	4核 4线程，2.7GHz, 65W
	I3-6100	2核 4线程，3.7GHz, 51W

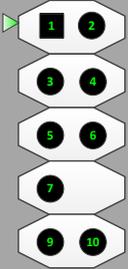
六、产品框图

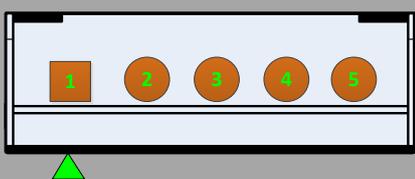


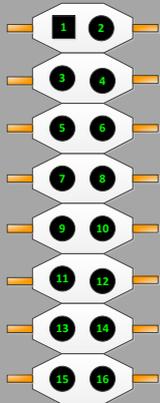
七、主板定义



RESET_SW	RESET_SW(①)
PIN Define	
Type	1X2 Header Box, PH=2.54mm
MEMO	Short 1-2,RESET

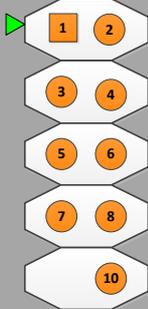
F-Audio	Audio header (②)																				
PIN Define	 <table border="1" data-bbox="710 481 1149 705"> <tr> <td>1</td> <td>MIC2-L</td> <td>2</td> <td>AGND</td> </tr> <tr> <td>3</td> <td>MIC2-R</td> <td>4</td> <td>3.3V</td> </tr> <tr> <td>5</td> <td>LINE2-R</td> <td>6</td> <td>MIC2-JD</td> </tr> <tr> <td>7</td> <td>AGND</td> <td>8</td> <td></td> </tr> <tr> <td>9</td> <td>LINE2-L</td> <td>10</td> <td>LINE2-JD</td> </tr> </table>	1	MIC2-L	2	AGND	3	MIC2-R	4	3.3V	5	LINE2-R	6	MIC2-JD	7	AGND	8		9	LINE2-L	10	LINE2-JD
1	MIC2-L	2	AGND																		
3	MIC2-R	4	3.3V																		
5	LINE2-R	6	MIC2-JD																		
7	AGND	8																			
9	LINE2-L	10	LINE2-JD																		
Type	2x5 DuPont Header, PH=2.54mm																				

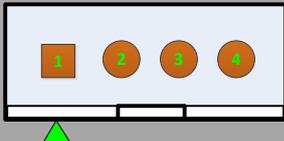
ICVN_EDP	EDP Power and control(③)										
PIN Define	 <table border="1" data-bbox="1029 952 1356 1176"> <tr> <td>1</td> <td>+V12S</td> </tr> <tr> <td>2</td> <td>GND</td> </tr> <tr> <td>3</td> <td>EDP_BKLT_ON</td> </tr> <tr> <td>4</td> <td>EDP_BKLT_PWM</td> </tr> <tr> <td>5</td> <td>+V5S</td> </tr> </table>	1	+V12S	2	GND	3	EDP_BKLT_ON	4	EDP_BKLT_PWM	5	+V5S
1	+V12S										
2	GND										
3	EDP_BKLT_ON										
4	EDP_BKLT_PWM										
5	+V5S										
Type	1X5 Header Box, PH=2.0mm										

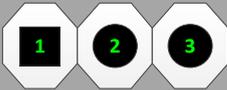
EDP	EDP Pin Define(④)																																
PIN Define	 <table border="1" data-bbox="861 1467 1300 1825"> <tr> <td>1</td> <td>VCC(3.3V)</td> <td>2</td> <td>VCC(3.3V)</td> </tr> <tr> <td>3</td> <td>GND</td> <td>4</td> <td>GND</td> </tr> <tr> <td>5</td> <td>EDP_TX0+</td> <td>6</td> <td>EDP_TX1+</td> </tr> <tr> <td>7</td> <td>EDP_TX0-</td> <td>8</td> <td>EDP_TX1-</td> </tr> <tr> <td>9</td> <td>GND</td> <td>10</td> <td>GND</td> </tr> <tr> <td>11</td> <td>EDP_AUX+</td> <td>12</td> <td>EDP_HPDP</td> </tr> <tr> <td>13</td> <td>EDP_AUX-</td> <td>14</td> <td>GND</td> </tr> <tr> <td>15</td> <td>NC</td> <td>16</td> <td>GND</td> </tr> </table>	1	VCC(3.3V)	2	VCC(3.3V)	3	GND	4	GND	5	EDP_TX0+	6	EDP_TX1+	7	EDP_TX0-	8	EDP_TX1-	9	GND	10	GND	11	EDP_AUX+	12	EDP_HPDP	13	EDP_AUX-	14	GND	15	NC	16	GND
1	VCC(3.3V)	2	VCC(3.3V)																														
3	GND	4	GND																														
5	EDP_TX0+	6	EDP_TX1+																														
7	EDP_TX0-	8	EDP_TX1-																														
9	GND	10	GND																														
11	EDP_AUX+	12	EDP_HPDP																														
13	EDP_AUX-	14	GND																														
15	NC	16	GND																														
Type	2x8 DuPont Header, PH=2.0mm																																

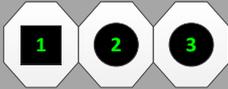
CPU_FAN	CPU FAN Power and Control(⑤)								
PIN Define	 <table border="1" data-bbox="1067 553 1359 725"> <tr> <td>1</td> <td>GND</td> </tr> <tr> <td>2</td> <td>+V12S</td> </tr> <tr> <td>3</td> <td>FAN_TAC</td> </tr> <tr> <td>4</td> <td>FAN_CTL</td> </tr> </table>	1	GND	2	+V12S	3	FAN_TAC	4	FAN_CTL
1	GND								
2	+V12S								
3	FAN_TAC								
4	FAN_CTL								
Type	1X4 DuPont Header, PH=2.54mm								

JVGA	VGA header Pin define(⑥)																				
PIN Define	 <table border="1" data-bbox="737 1023 1382 1330"> <tr> <td>1</td> <td>GND</td> <td>2</td> <td>VGA_SDA</td> </tr> <tr> <td>3</td> <td>ROUT</td> <td>4</td> <td>VGA_SCL</td> </tr> <tr> <td>5</td> <td>GOUT</td> <td>6</td> <td>VGA_VSYNC</td> </tr> <tr> <td>7</td> <td>BOUT</td> <td>8</td> <td>VGA_HSYNC</td> </tr> <tr> <td>9</td> <td>GND</td> <td>10</td> <td>5V</td> </tr> </table>	1	GND	2	VGA_SDA	3	ROUT	4	VGA_SCL	5	GOUT	6	VGA_VSYNC	7	BOUT	8	VGA_HSYNC	9	GND	10	5V
1	GND	2	VGA_SDA																		
3	ROUT	4	VGA_SCL																		
5	GOUT	6	VGA_VSYNC																		
7	BOUT	8	VGA_HSYNC																		
9	GND	10	5V																		
Type	2x5 DuPont Header, PH=2.0mm																				

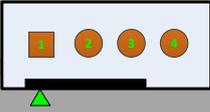
JUSB	3 组 JUSB(⑦)																				
PIN Define	 <table border="1" data-bbox="893 548 1284 761"> <tr> <td>1</td> <td>VBus</td> <td>2</td> <td>VBus</td> </tr> <tr> <td>3</td> <td>D0-</td> <td>4</td> <td>D1-</td> </tr> <tr> <td>5</td> <td>D0+</td> <td>6</td> <td>D2+</td> </tr> <tr> <td>7</td> <td>GND</td> <td>8</td> <td>GND</td> </tr> <tr> <td>9</td> <td>NC</td> <td>10</td> <td>GND</td> </tr> </table>	1	VBus	2	VBus	3	D0-	4	D1-	5	D0+	6	D2+	7	GND	8	GND	9	NC	10	GND
1	VBus	2	VBus																		
3	D0-	4	D1-																		
5	D0+	6	D2+																		
7	GND	8	GND																		
9	NC	10	GND																		
Type	2x5 DuPont Header,PIN9 NC, PH=2.0mm																				

SATAPWR	SATA POWER(⑧)								
PIN Define	 <table border="1" data-bbox="1037 1097 1332 1272"> <tr> <td>1</td> <td>+V12S</td> </tr> <tr> <td>2</td> <td>GND</td> </tr> <tr> <td>3</td> <td>GND</td> </tr> <tr> <td>4</td> <td>+V5S</td> </tr> </table>	1	+V12S	2	GND	3	GND	4	+V5S
1	+V12S								
2	GND								
3	GND								
4	+V5S								
Type	1X4 DuPont Header, PH=2.54mm								

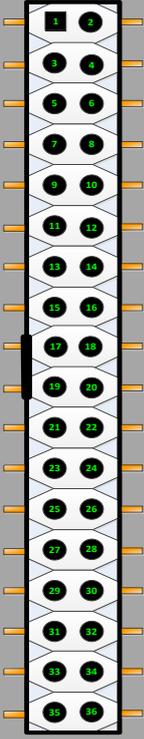
JME	JME header(⑨)									
PIN Define	 <table border="1" data-bbox="774 1556 1268 1691"> <thead> <tr> <th>Pin</th> <th>1-2</th> <th>2-3</th> </tr> </thead> <tbody> <tr> <td>Define</td> <td>Normal</td> <td>OVERWRITE</td> </tr> <tr> <td>Default</td> <td colspan="2">1-2</td> </tr> </tbody> </table>	Pin	1-2	2-3	Define	Normal	OVERWRITE	Default	1-2	
Pin	1-2	2-3								
Define	Normal	OVERWRITE								
Default	1-2									
Type	1X3 DuPont Header, PH=2.0mm									
Memo	Short 2-3 Take ME Flash									

JCMOS1	JCMOS header(⑩)			
PIN Define		Pin	1-2	2-3
		Define	Normal	Clear
		Default	1-2	
Type	1X3 DuPont Header, PH=2.0mm			
Memo	Short 2-3 Clear CMOS			

SATA	SATA 接口(⑪ ⑫ ⑬)
PIN Define	标准接口

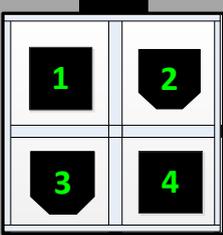
SYS_FAN	SYS FAN Power and Control(⑭)									
PIN Define		<table border="1"> <tr><td>1</td><td>GND</td></tr> <tr><td>2</td><td>+V12S</td></tr> <tr><td>3</td><td>FAN_TAC</td></tr> <tr><td>4</td><td>FAN_CTL</td></tr> </table>	1	GND	2	+V12S	3	FAN_TAC	4	FAN_CTL
		1	GND							
2	+V12S									
3	FAN_TAC									
4	FAN_CTL									
Type	1X4 DuPont Header, PH=2.54mm									

ATXPWR	ATXPWR(⑮)
PIN Define	标准 ATX 电源接口
Type	ATX Customized 20pin connector
Memo	Support standard ATX Power

COM	COM(3-10) (16 17)																																																																									
PIN Define		<table border="1"> <tr><td>1</td><td>DCD1</td><td>2</td><td>RXD1</td></tr> <tr><td>3</td><td>TXD1</td><td>4</td><td>DTR1</td></tr> <tr><td>5</td><td>GND</td><td>6</td><td>DSR1</td></tr> <tr><td>7</td><td>RTS1</td><td>8</td><td>CTS1</td></tr> <tr><td>9</td><td>RI1</td><td>10</td><td>DCD2</td></tr> <tr><td>11</td><td>RXD2</td><td>12</td><td>TXD2</td></tr> <tr><td>13</td><td>DTR2</td><td>14</td><td>GND</td></tr> <tr><td>15</td><td>DSR2</td><td>16</td><td>RTS2</td></tr> <tr><td>17</td><td>CTS2</td><td>18</td><td>RI2</td></tr> <tr><td>19</td><td>DCD3</td><td>20</td><td>RXD3</td></tr> <tr><td>21</td><td>TXD3</td><td>22</td><td>DTR3</td></tr> <tr><td>23</td><td>GND</td><td>24</td><td>DSR3</td></tr> <tr><td>25</td><td>RTS3</td><td>26</td><td>CTS3</td></tr> <tr><td>27</td><td>RI3</td><td>28</td><td>DCD2</td></tr> <tr><td>29</td><td>RXD4</td><td>30</td><td>TXD2</td></tr> <tr><td>31</td><td>DTR4</td><td>32</td><td>GND</td></tr> <tr><td>33</td><td>DSR4</td><td>34</td><td>RTS2</td></tr> <tr><td>35</td><td>CTS4</td><td>36</td><td>RI2</td></tr> </table>	1	DCD1	2	RXD1	3	TXD1	4	DTR1	5	GND	6	DSR1	7	RTS1	8	CTS1	9	RI1	10	DCD2	11	RXD2	12	TXD2	13	DTR2	14	GND	15	DSR2	16	RTS2	17	CTS2	18	RI2	19	DCD3	20	RXD3	21	TXD3	22	DTR3	23	GND	24	DSR3	25	RTS3	26	CTS3	27	RI3	28	DCD2	29	RXD4	30	TXD2	31	DTR4	32	GND	33	DSR4	34	RTS2	35	CTS4	36	RI2
1	DCD1	2	RXD1																																																																							
3	TXD1	4	DTR1																																																																							
5	GND	6	DSR1																																																																							
7	RTS1	8	CTS1																																																																							
9	RI1	10	DCD2																																																																							
11	RXD2	12	TXD2																																																																							
13	DTR2	14	GND																																																																							
15	DSR2	16	RTS2																																																																							
17	CTS2	18	RI2																																																																							
19	DCD3	20	RXD3																																																																							
21	TXD3	22	DTR3																																																																							
23	GND	24	DSR3																																																																							
25	RTS3	26	CTS3																																																																							
27	RI3	28	DCD2																																																																							
29	RXD4	30	TXD2																																																																							
31	DTR4	32	GND																																																																							
33	DSR4	34	RTS2																																																																							
35	CTS4	36	RI2																																																																							
Type	2x18 Header, PH=2.0mm																																																																									

4G	M. 2 (18)
PIN Define	标准 M.2 接口, 支持 4G 模块

SIM	SIM 卡槽 (19)
PIN Define	标准 SIM 卡槽, 支持 SIM 卡

DC-PWR	ATX 4Pin (20)				
PIN Define	 <table border="1" data-bbox="847 752 1015 837"> <tr> <td>1-2</td> <td>DC+</td> </tr> <tr> <td>3-4</td> <td>DC-</td> </tr> </table>	1-2	DC+	3-4	DC-
1-2	DC+				
3-4	DC-				
Type	ATX Standard 4 pin connector				

PCIE	PCIEX16 扩展槽 (21)
PIN Define	标准 PCIEX16 扩展槽，支持显卡

内存槽	DIMM 槽 (22)
PIN Define	标准 DDR4 DIMM 内存槽，最大支持 32G 内存

PWR_SW	PWR_SW (23)
PIN Define	
Type	1X2 Header Box, PH=2.54mm
MEMO	Short 1-2,Power on