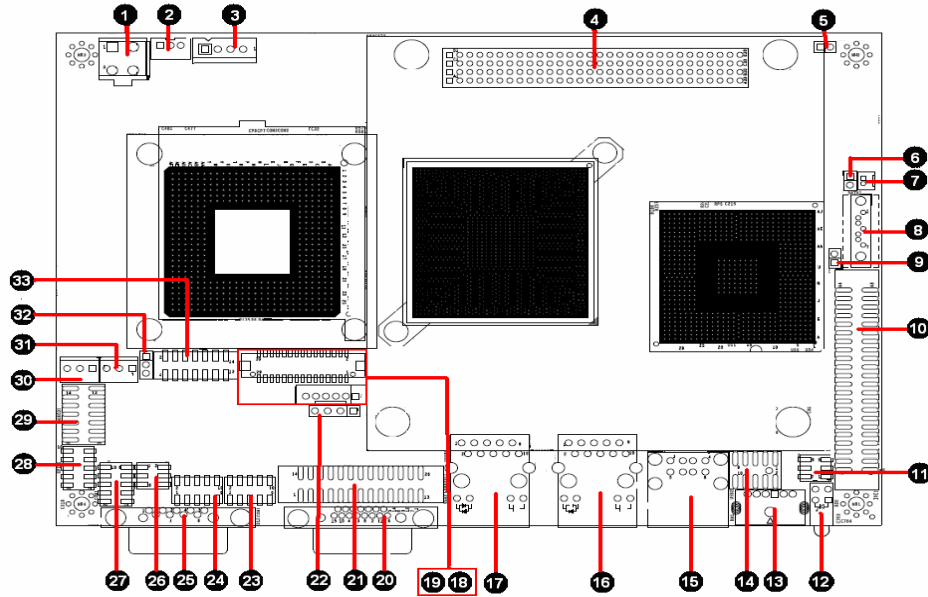


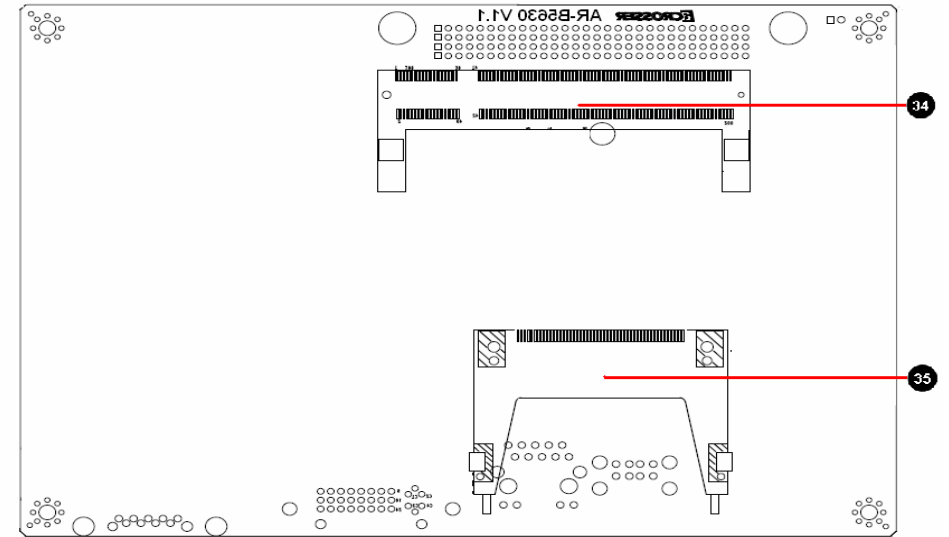
AR-B5631 Quick Manual V2.0

1. Main board illustration (Top Side)






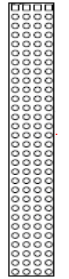





1	PWR2	13	KM1	25	COM1*
2	CON2	14	USB2	26	JP1
3	CON3	15	USB1	27	COM2*
4	J10	16	LAN2	28	GPIO1
5	JP2	17	LAN1	29	AUDIO1
6	J5	18	LCD1	30	FAN2
7	BAT1	19	LCDPW1	31	FAN1
8	SATA1	20	VGA1	32	J1
9	J8	21	DVI1	33	TVCON1
10	IDE1	22	J9		
11	J12	23	COM3*		
12	D20	24	COM4*		

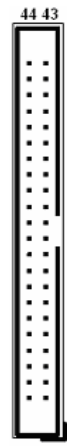



Main board illustration (Bottom Side)



34	SODIMM1
35	CF1

2. Connectors and Jumper settings

1. PWR2: External +12V DC power input connector.	2. CON2: ATX function connector.	3. CON3: Extra +12V and +5V DC power output connector (for SATA device).																												
 <table border="1" data-bbox="190 438 324 614"> <thead> <tr> <th>PIN</th> <th>SETTING</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GND</td> </tr> <tr> <td>2</td> <td>GND</td> </tr> <tr> <td>3</td> <td>+12V</td> </tr> <tr> <td>4</td> <td>+12V</td> </tr> </tbody> </table>	PIN	SETTING	1	GND	2	GND	3	+12V	4	+12V	 <table border="1" data-bbox="470 454 660 598"> <thead> <tr> <th>PIN</th> <th>SETTING</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GND</td> </tr> <tr> <td>2</td> <td>PS_ON</td> </tr> <tr> <td>3</td> <td>+5V_SUS</td> </tr> </tbody> </table>	PIN	SETTING	1	GND	2	PS_ON	3	+5V_SUS	 <table border="1" data-bbox="840 438 974 614"> <thead> <tr> <th>PIN</th> <th>SETTING</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+12V</td> </tr> <tr> <td>2</td> <td>GND</td> </tr> <tr> <td>3</td> <td>+3.3V</td> </tr> <tr> <td>4</td> <td>+5V</td> </tr> </tbody> </table>	PIN	SETTING	1	+12V	2	GND	3	+3.3V	4	+5V
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4. J10: PCI-104 connector.	5. JP2: Signal SERIRQ connects to PCI-104 pin #B2 selection.	6. J5: CMOS data retention/clear.																												
 <p style="text-align: center; color: blue;">PCI-104 connector.</p>	 <table border="1" data-bbox="470 877 660 1013"> <thead> <tr> <th>STATUS</th> <th>SETTING</th> </tr> </thead> <tbody> <tr> <td>Open</td> <td>Disconnected. (Default)</td> </tr> <tr> <td>Short</td> <td>Connected.</td> </tr> </tbody> </table>	STATUS	SETTING	Open	Disconnected. (Default)	Short	Connected.	 <table border="1" data-bbox="795 877 985 1013"> <thead> <tr> <th>STATUS</th> <th>SETTING</th> </tr> </thead> <tbody> <tr> <td>Open</td> <td>Disconnected. (Default)</td> </tr> <tr> <td>Short</td> <td>Connected.</td> </tr> </tbody> </table>	STATUS	SETTING	Open	Disconnected. (Default)	Short	Connected.																
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7. BAT1: CMOS battery holder.	8. SATA1: SATA device connector #2.	9. J8: CF master or slave select.																												
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10. IDE1: PATA connector.  <table border="1" data-bbox="1310 271 1624 853"> <thead> <tr> <th>PIN</th> <th>SIGNAL</th> <th>PIN</th> <th>SIGNAL</th> </tr> </thead> <tbody> <tr><td>1</td><td>RESET</td><td>2</td><td>GND</td></tr> <tr><td>3</td><td>D7</td><td>4</td><td>D8</td></tr> <tr><td>5</td><td>D6</td><td>6</td><td>D9</td></tr> <tr><td>7</td><td>D5</td><td>8</td><td>D10</td></tr> <tr><td>9</td><td>D4</td><td>10</td><td>D11</td></tr> <tr><td>11</td><td>D3</td><td>12</td><td>D12</td></tr> <tr><td>13</td><td>D2</td><td>14</td><td>D13</td></tr> <tr><td>15</td><td>D1</td><td>16</td><td>D14</td></tr> <tr><td>17</td><td>D0</td><td>18</td><td>D15</td></tr> <tr><td>19</td><td>GND</td><td>20</td><td>NC</td></tr> <tr><td>21</td><td>DREQ</td><td>22</td><td>GND</td></tr> <tr><td>23</td><td>IOW#</td><td>24</td><td>GND</td></tr> <tr><td>25</td><td>IOR#</td><td>26</td><td>GND</td></tr> <tr><td>27</td><td>IRDY</td><td>28</td><td>GND</td></tr> <tr><td>29</td><td>DACK#</td><td>30</td><td>GND</td></tr> <tr><td>31</td><td>IDEIRQ</td><td>32</td><td>NC</td></tr> <tr><td>33</td><td>A1</td><td>34</td><td>PDIAG</td></tr> <tr><td>35</td><td>A0</td><td>36</td><td>A2</td></tr> <tr><td>37</td><td>DCS1#</td><td>38</td><td>CS3</td></tr> <tr><td>39</td><td>IDE_LED#</td><td>40</td><td>GND</td></tr> <tr><td>41</td><td>+5V</td><td>42</td><td>+5V</td></tr> <tr><td>43</td><td>GND</td><td>44</td><td>NC</td></tr> </tbody> </table>	PIN	SIGNAL	PIN	SIGNAL	1	RESET	2	GND	3	D7	4	D8	5	D6	6	D9	7	D5	8	D10	9	D4	10	D11	11	D3	12	D12	13	D2	14	D13	15	D1	16	D14	17	D0	18	D15	19	GND	20	NC	21	DREQ	22	GND	23	IOW#	24	GND	25	IOR#	26	GND	27	IRDY	28	GND	29	DACK#	30	GND	31	IDEIRQ	32	NC	33	A1	34	PDIAG	35	A0	36	A2	37	DCS1#	38	CS3	39	IDE_LED#	40	GND	41	+5V	42	+5V	43	GND	44	NC	11. J12: Front panel connector. (NOTE 1)  <table border="1" data-bbox="1814 454 2094 694"> <thead> <tr> <th>STATUS</th> <th>SETTING</th> </tr> </thead> <tbody> <tr> <td>1, 2</td> <td>External buzzer. 1: Buzz + 2: Buzz -</td> </tr> <tr> <td>3, 4</td> <td>Hardware reset</td> </tr> <tr> <td>5, 6</td> <td>Power button for ATX mode; jumper shorted for AT mode.</td> </tr> </tbody> </table>	STATUS	SETTING	1, 2	External buzzer. 1: Buzz + 2: Buzz -	3, 4	Hardware reset	5, 6	Power button for ATX mode; jumper shorted for AT mode.
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12. D20: System standby power and HDD access indicators.  <p style="color: blue;">Green: Standby power indicator. Yellow: HDD access indicator.</p>	13. KM1: Keyboard/Mouse CONNECTOR  <p style="color: blue;">Keyboard/Mouse connector.</p>																																																																																																				

14. USB2: Internal USB2, USB3 connector.



PIN	SIGNAL	PIN	SIGNAL
1	+5V	2	+5V
3	USB_3-	4	USB_2-
5	USB_3+	6	USB_2+
7	GND	8	GND
9	GND	10	GND

15. USB1: External USB0, USB1 connector.



PIN	SIGNAL	PIN	SIGNAL
1	+5V	5	+5V
2	USB_1-	6	USB_0-
3	USB_1+	7	USB_0+
4	GND	8	GND

16. LAN2: RJ45 connector for Gigabit Ethernet port #2



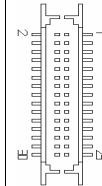
RJ45 connector for Gigabit Ethernet port #2.

17. LAN1: RJ45 connector for Gigabit Ethernet port #1



RJ45 connector for Gigabit Ethernet port #1.

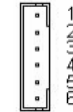
18. LCD1: LCD panel (LVDS, 18-bit/36-bit) connector.



PIN	SETTING	PIN	SETTING
1	LCD VDD	2	GND
3	E CLK-	4	E CLK+
5	GND	6	E Data2-
7	E Data2+	8	GND
9	E Data1-	10	E Data1+
11	NC	12	NC
13	E Data0+	14	E Data0-
15	GND	16	O CLK+
17	O CLK-	18	GND
19	O Data2+	20	O Data2-
21	I2C CLK	22	O Data1+
23	O Data1-	24	I2C Data
25	O Data0+	26	O Data0-
27	NC	28	NC
29	LCD VDD	30	LCD VDD

E: Even for dual channel.
O: Odd for single channel.

19. LCDPW1: LCD panel inverter power connector.



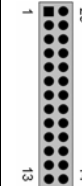
PIN	SETTING
1	+12V
2	+12V
3	GND
4	BKL ON
5	GND
6	Reserved.

20. VGA1: Pin Header for D-Sub 15 Pin VGA.



PIN	SIGNAL	PIN	SIGNAL
1	R	2	GND
3	G	4	GND
5	B	6	GND
7	VSYNC	8	SCL
9	HSYNC	10	SDA

21. DVI1: Digital Video Interface (DVI-D).



PIN	SIGNAL	PIN	SIGNAL
1	TD2- (Digital red-)	13	N.C
2	TD2+ (Digital red+)	14	+VCC
3	GND	15	GND
4	N.C	16	Hot plug detect
5	N.C-	17	TD0- (Digital blue-)
6	DDC clock	18	TD0+ (Digital blue+)
7	DDC data	19	GND
8	N.C	20	N.C
9	TD1- (Digital green-)	21	N.C
10	TD1+ (Digital green+)	22	GND
11	GND	23	TCLK- (Digital clock-)
12	N.C	24	TCLK+ (Digital clock+)

22. J9: RS422/RS485 signal connector (for COM2).



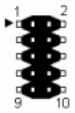
PIN	SETTING
1	RS485 DATA+ or RS422 TX+
2	RS485 DATA- or RS422 TX-
3	RS422 RX+
4	RS422 RX-

23. COM3⁺: RS232 signal connector for port #3.



PIN	SETTING	PIN	SETTING
1	DCD #2	2	DSR #2
3	RX #2	4	RTS #2
5	TX #2	6	CTS #2
7	DTR #2	8	RI #2
9	GND	10	NC

24. COM4⁺: RS232 signal connector for port #4.



PIN	SETTING	PIN	SETTING
1	DCD #3	2	DSR #3
3	RX #3	4	RTS #3
5	TX #3	6	CTS #3
7	DTR #3	8	RI #3
9	GND	10	NC

25. COM1⁺: RS-232 signal connector for port #1.



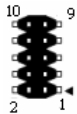
D-SUB-9 male connector for RS232 port #1.

26. JP1: Select COM2 RS232/422/485.



STATUS	JP1
RS-232	1-2
RS-422	3-4
RS-485	5-6

27. COM2⁺: RS232 signal connector for port #2.



PIN	SETTING	PIN	SETTING
1	DCD #2	2	DSR #2
3	RX #2	4	RTS #2
5	TX #2	6	CTS #2
7	DTR #2	8	RI #2
9	GND	10	NC

28. GPIO1:8-bit TTL-5V GPIO connector.



PIN	SETTING	PIN	SETTING
1	GPIO0 [30]	2	+5V
3	GPIO1 [31]	4	GPIO7 [37]
5	GPIO2 [32]	6	GPIO6 [36]
7	GPIO3 [33]	8	GPIO5 [35]
9	GND	10	GPIO4 [34]

29. AUDIO1: 5.1 channels Audio signal connector.



PIN	SETTING	PIN	SETTING
1	Line-out Right	2	Line-out Left
3	AGND	4	AGND
5	Line-in Right	6	Line-in Left
7	MIC-in	8	AGND
9	AGND	10	AGND
11	SR-out Right	12	SR-out Left
13	LFT-out	14	SEN-out

30. FAN2: System DC fan connector.



PIN	SETTING
1	GND
2	+12V
3	Fan speed data

ON/OFF controlled by system temperature setting of BIOS.

31. FAN1: CPU DC fan connector.

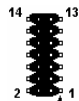


PIN	SETTING
1	GND
2	+12V
3	Sense

32. J1: LCD panel driving voltage selection. 33. TVCON1: TV-out signal connector.

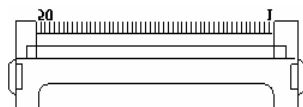


STATUS	SETTING
1-2	+5V for LCD panel.
2-3	+3.3V for LCD panel. (Default).



PIN	SETTING	PIN	SETTING
1	Y-G	2	N/A
3	GND	4	N/A
5	CVBS/Pb-G	6	N/A
7	GND	8	N/A
9	C/Pr-G	10	N/A
11	GND	12	N/A
13	GND	14	N/A

34. SODIMM1: DDR2 SO-DIMM SLOT. 35. CF1: CF CARD SOCKET.



- *:1. COM1 is the external UART RS-232 port, the text description on the PCB board is "COM1".
- *:2. COM2 is the internal UART RS-232/422/485 port, the text description on the PCB board is "COM1".
- *:3. COM3 is the internal UART RS-232 port, the text description on the PCB board is "COM2".
- *:4. COM4 is the internal UART RS-232 port, the text description on the PCB board is "COM3".

NOTE 1:

J12: Front panel connector.

STATUS	SETTING
1, 2	External buzzer. 5: Buzz + 6: Buzz -
3, 4	Hardware reset
5, 6	Power button for ATX mode; jumper shorted for AT mode.

When using **AT mode** in the system, the pin5-6 of header **J12** must be shorted. If using **ATX mode** in the system, the pin5-6 of header **J12** should connect to a **Push-Button-Switch**.

NOTE: When using AT mode, the monitor will not display any message and the system will not auto-shut down after soft-off. In this case, please cut the PSU's power off or remove PSU's power to cut the system power off.