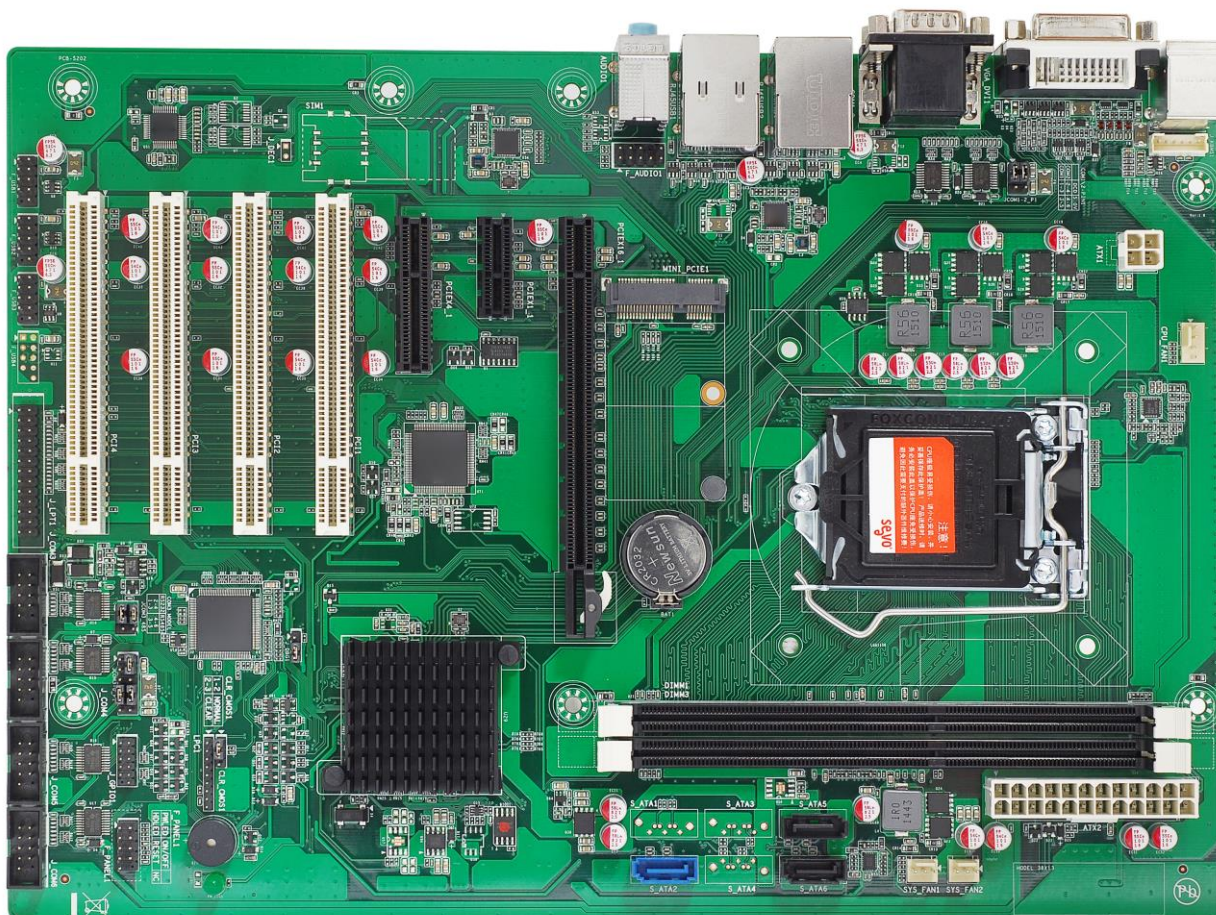


SV4-H8134 Series Motherboard

User Guide

Ver 1.0



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1. Models and Attentions

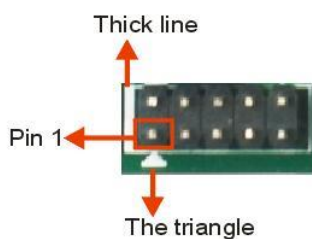
1.1 Models

This manual is applied to following models:

Model	Chipset	SATA	USB	COM	PCI-E X1	PCI-E X4	PCI-E X16	PCI
SV4-H8134	H81	3	10	6	1	1	1	4

1.2 Attentions

- 1) Notes under a table or figure indicate the difference of models, or alternative definition of specific pin of the header (jumper/connector).
- 2) How to identify the first pin of a header or jumper
 - Usually, there is a thick line or a triangle near the header's or jumper's pin 1.



- Square pad, which you can find on the back of the motherboard, is usually used for pin 1.



2. Specification

Model	SV4-H8134
CPU	Support Intel Pentium/ Celeron/ 4 th Generation Core i3/5/7 CPU, LGA1150
Chipset	Intel® H81 ^[1] , TDP 4.1 W
Display	1 * VGA 1 * DVI
Memory	Support DDR3 1333/1600 MHz, 2 * DIMM Slot, Up to16GB ^[2]
Storage	1 * SATA 3.0 +2 * SATA 2.0
Ethernet	2 * Realtek GbE LAN Chip (10/100/1000 Mbps)
Audio	Realtek ALC662 5.1 Channel HDA Codec , Support MIC/Line-out Ports
COM	5 * RS232 + 1 * RS232/RS485 ^[3]
Other Ports	1 * PCI-E X1 slot 1 * PCI-E X4 slot ^[4] 1 * PCI-E X16 slot 4 * PCI 10 * USB: 2 * Rear I/O(USB3.0) + 2 * Rear I/O(USB2.0) + 6* Header(USB2.0) Fan: 1 * CPU Fan + 2 * System Fan 8 * GPIO 1 * Audio Connector + 1 * Front Audio 1 * Mini PCI-E ^[5] 1 * LPT Header 1 * SIM Connector 1 * PS/2 Connector + 1 * PS/2 Pin Header ^[6] 2 * ATX Power Input Connector
Temperature	Storage: -20~75℃ Operating: 0~60℃
BIOS	AMI UEFI BIOS
Factor	ATX (305mm * 220mm)

Notes:

[1]: Chipset can be customized into Intel® B85.

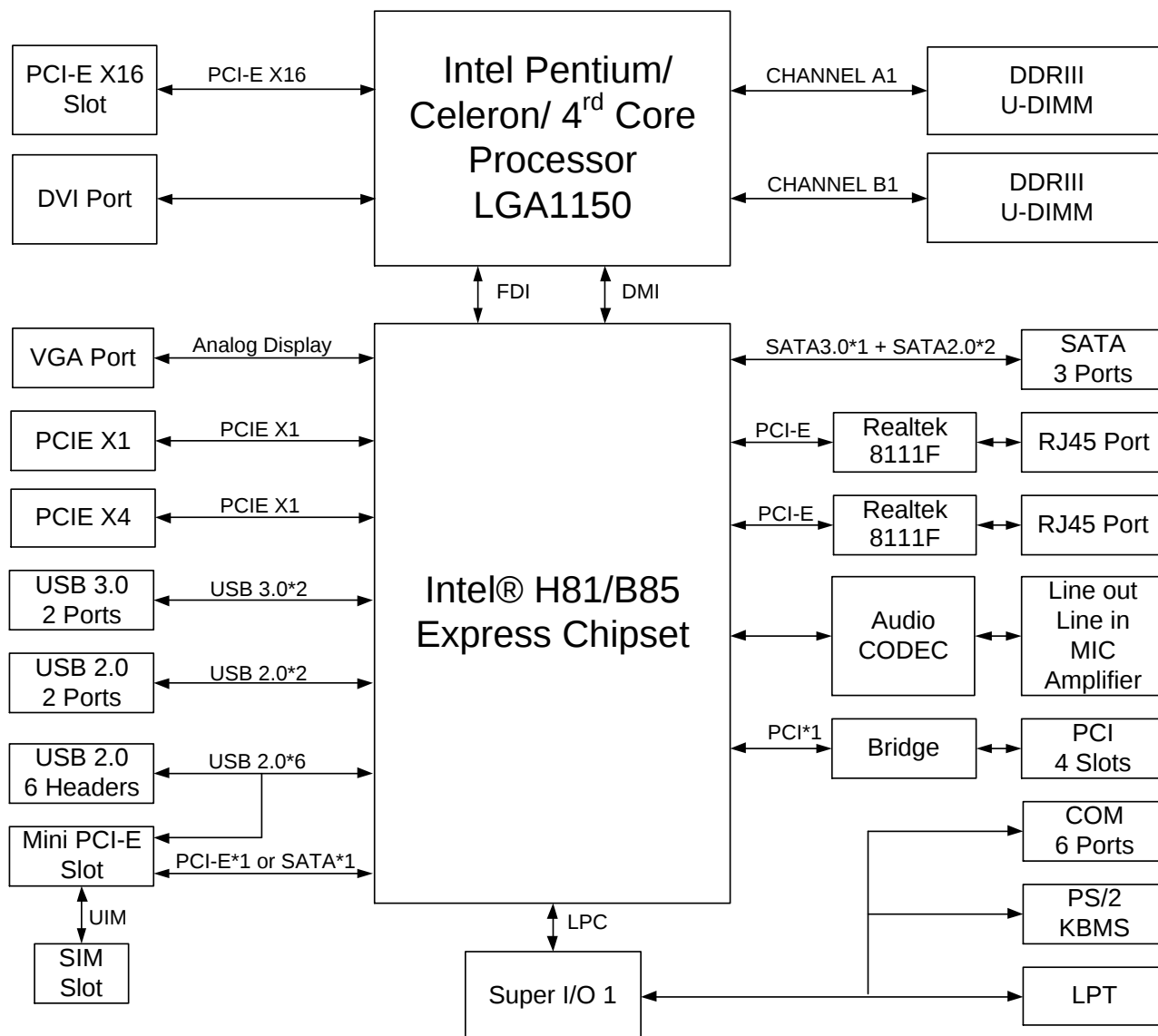
[2]: Due to the restriction of Windows 32 bit OS, when applied more than 4G memory, 32 bit OS may detect less than actual size.

[3]: Signal of J_COM3 is RS232 by default.It also can be RS485 via Jumper JCOM3_485.

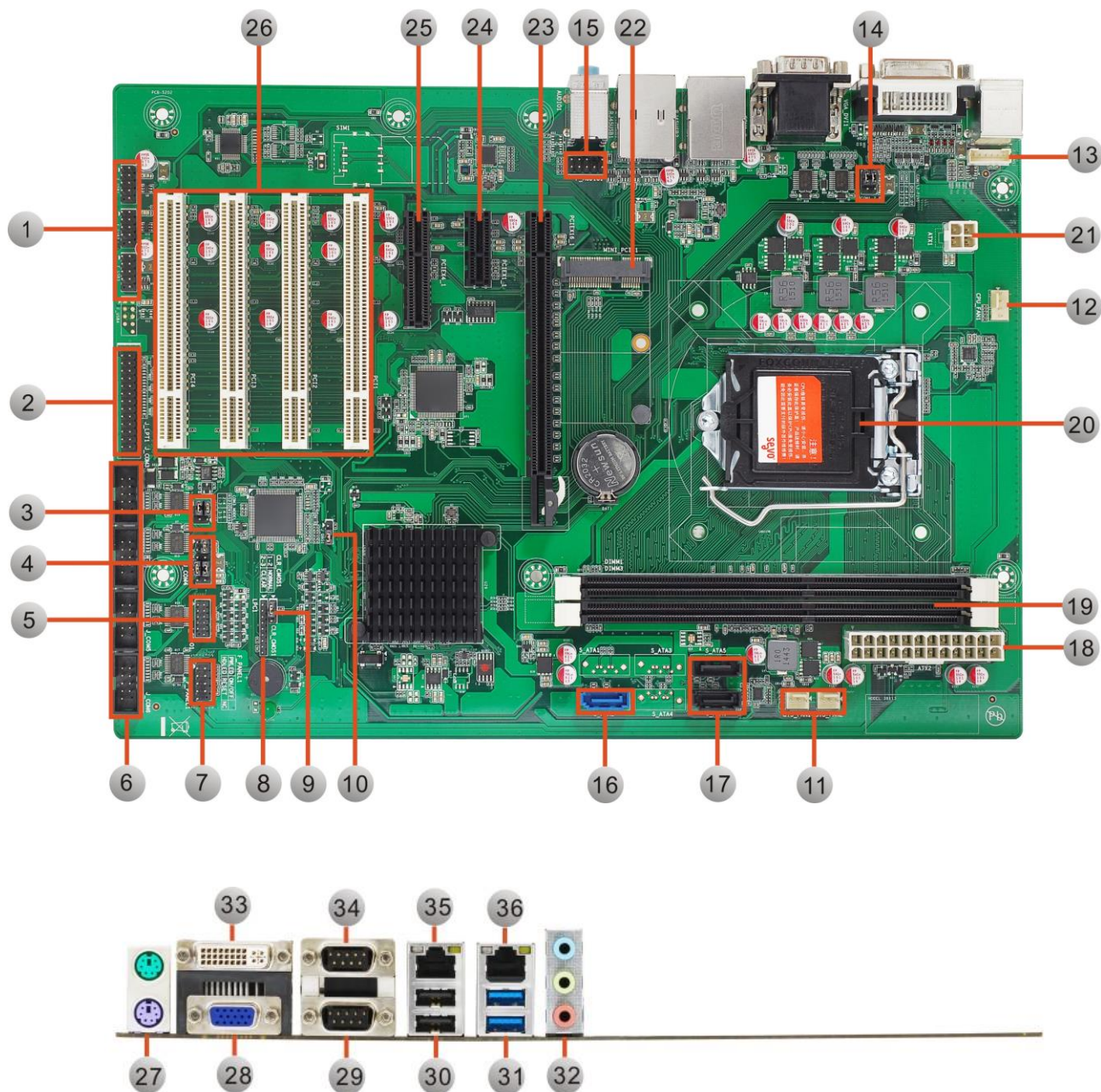
[4]: This PCI-E X4 slot can only support PCI-E X1 device for it just have PCI-E X1 signal.

- [5]: Mini PCI-E1 slot supports mSATA (SATA 3.0) by default at the cost of invalidating SATA1. It can also support 3G/WIFI if specialized. When it supports 3G, one of the USB ports of F_USB3 will be invalid.
- [6]: The PS/2 Connector and the PS/2 Pin Header share the same signal, they can't be accessed simultaneously.

3. Data Flow



4. Jumpers / Headers and Connectors



Jumpers/Headers/Connectors				
1	Front USB Pin Headers	P ₈	19	DIMM Slots
2	Parallel Pin Header	P ₈	20	CPU Slot
3	RS485/RS232 Select Jumper	P ₉	21	ATX1 Power Input Connector
4	COM3-6 Control Jumpers	P ₉	22	Mini PCI-E Slot
5	GPIO Pin Header	P ₉	23	PCI-E X16 Slot
6	COM3-6 Pin Headers	P ₁₀	24	PCI-E X1 Slot
7	Front Panel Pin Header	P ₁₁	25	PCI-E X4Slot
8	Debug Pin Header		26	PCI Slots
9	CMOS Clear Jumper	P ₁₁	27	PS/2 Connector
10	Debug Jumper		28	VGA Connector
11	System Fan Connectors	P ₁₁	29	COM2 Connector
12	CPU Fan Connector Front	P ₁₁	30	USB 2.0 Connectors
13	Keyboard and Mouse Pin Header	P ₁₂	31	USB 3.0 Connectors
14	COM1-2 Control Jumpers	P ₁₂	32	Audio Connector
15	Audio Pin Header	P ₁₂	33	DVI Connector
16	SATA3.0 Connector		34	COM1 Connector
17	SATA2.0 Connectors		35	LAN Connector
18	ATX2 Power Input Connector		36	LAN Connector

5. Definition of Jumpers/Headers and Connectors

[1] Front USB Pin Headers (5*2 Pin 2.54mm)

Location	Header	Pin	Definition	Pin	Definition
1	F_USB1	1	+ 5 V	2	+ 5 V
		3	USB1-	4	USB2-
		5	USB1+	6	USB2+
		7	GND	8	GND
				10	N/C
	F_USB2	1	+ 5 V	2	+ 5 V
		3	USB3-	4	USB4-
		5	USB3+	6	USB4+
		7	GND	8	GND
				10	N/C
	F_USB3	1	+ 5 V	2	+ 5 V
		3	USB5- ^[1]	4	USB6-
		5	USB5+ ^[1]	6	USB6+
		7	GND	8	GND
				10	N/C
	F_USB4	1	+ 5 V	2	+ 5 V
		3	USB7- ^[2]	4	USB8- ^[2]
		5	USB7+ ^[2]	6	USB8+ ^[2]
		7	GND	8	GND
				10	N/C

Notes:

[1]: When Mini-PCIE Slot supports 3G devices, one of the USB ports of F_USB3 will be invalid.

[2]: F_USB4 can be accessed when mounting B85 chipset.

[2] Parallel Pin Header (13*2 Pin 2.54mm)

Location	Header	Pin	Definition	Pin	Definition
2	LPT1	1	STROBE#	2	AUTOFEED#
		3	DATA0	4	ERROR#
		5	DATA1	6	INIT#

		7	DATA2	8	SLCTIN#
		9	DATA3	10	GND
		11	DATA4	12	GND
		13	DATA5	14	GND
		15	DATA6	16	GND
		17	DATA7	18	GND
		19	ACKNLG#	20	GND
		21	BUSY	22	GND
		23	PE	24	GND
		25	SLCT	26	N/C

[3] RS485/RS232 Select Jumper (3*2 Pin 2.54mm)

Location	Header	Setting	Function
3	JCOM3_485	1-3、2-4(Default)	RS232
		3-5、4-6	RS485

[4] COM3-6 Control Jumper (6*2 Pin 2.54mm)

Location	Jumper	COM	Setting	Function
4	JCOM3-6_P1	COM3	1-3 ^[1]	Pin1: DCD
			3-5 ^[1]	Pin1: + 5V
		COM4	2-4(Default)	Pin1: DCD
			4-6	Pin1: + 5V
		COM5	7-9(Default)	Pin1: DCD
			9-11	Pin1: + 5V
		COM6	8-10(Default)	Pin1: DCD
			10-12	Pin1: + 5V

Note:**[1]:Jumper of COM3 isn't on by default.**

[5] GPIO Header (6*2 Pin 2.00 mm)

Location	Header	Pin	Definition	Pin	Definition
5	J_GPIO1	1	PCH_GPO68 (0x1C48,bit 4)	2	PCH_GPI69 (0x1C48,bit 5)

		3	PCH_GPO70 (0x1C48,bit 6)	4	PCH_GPI71 (0x1C48,bit 7)
		5	GND	6	PCH_GPI1 (0x1C0C,bit 1)
		7	PCH_GPO6 (0x1C0C,bit 6)	8	PCH_GPI7 (0x1C0C,bit 7)
		9	PCH_GPO17 (0x1C0E,bit 1)	10	+ 5V ^[1]
				12	NC

Note: All GPIOs can be programmed to input or output.

[1]: GPIO output is 5V signaling by default, 3.3V is available if specified (resistor selectable).

[6] COM3-6 Pin Headers (5*2 Pin 2.54mm)

Location	Jumper	Pin	Definition	Pin	Definition
6	J_COM3	1	DCD3 ^[1]	2	DSR3
		3	RXD3 ^[1]	4	RTS3
		5	TXD3	6	CTS3
		7	DTR3	8	RI3
		9	GND		
	J_COM4	1	DCD4*	2	DSR4
		3	RXD4	4	RTS4
		5	TXD4	6	CTS4
		7	DTR4	8	RI4
		9	GND		
	J_COM5	1	DCD5*	2	DSR5
		3	RXD5	4	RTS5
		5	TXD5	6	CTS5
		7	DTR5	8	RI5
		9	GND		
	J_COM6	1	DCD6*	2	DSR6
		3	RXD6	4	RTS6
		5	TXD6	6	CTS6

		7	DTR6	8	RI6
		9	GND		

Note:

* These signals are depend on relevant Jumpers (e.g. Pin1 of J_COM4 depends on JCOM3-6_P1 Jumper), to find more details, check the above table (Location 4).

[1]: This set of signals is RS232 by default. It also can be other signal via JCOM3-6_P1 and JCOM3_485(Location 4 and Location 3).

[7] Front Panel Pin Header (5*2 Pin 2.54 mm)

Location	Header	Pin	Definition	Pin	Definition
7	F_PANEL1	1	HD LED+	2	Power LED+
		3	HD LED-	4	Power LED-
		5	RESET-	6	PWR+
		7	RESET+	8	PWR -
		9	N/C	10	

[9] CMOS Clear Jumper (3*1 Pin 2.54mm)

Location	Jumper	Setting	Function
9	CLR_CMOS1	1-2(Default)	Normal
		2-3	Clear CMOS

[11]System and Auxiliary Fan Connectors (4*1 Pin 2.54mm)

Location	Connector	Pin	Definition	Pin	Definition
11	SYS_FAN1	1	GND	2	+ 12V
		3	FAN Speed Detection		
	SYS_FAN2	1	GND	2	+ 12V
		3	FAN Speed Detection		

[12] CPU Fan Connector (4*1 Pin 2.54mm)

Location	Connector	Pin	Definition	Pin	Definition
12	CPU_FAN1	1	GND	2	+ 12V
		3	FAN Speed Detection	4	FAN Speed Control

[13] Keyboard and Mouse Pin Header (6*1 Pin 2.00mm)

Location	Header	Pin	Definition	Pin	Definition
13	J_KBMS1	1	KB_CLK	2	KB_DATA
		3	MS_CLK	4	GND
		5	+ 5V	6	MS_DATA

[14] COM1-2 Control Jumpers (3*2 Pin 2.00mm)

Location	Jumper	Setting	Function
14	JCOM1-2_P1	1-3、2-4(Default)	Pin1: DCD
		3-5、4-6	Pin1: + 5V

[15] Front Audio Pin Header (5*2 Pin 2.54mm)

Location	Header	Pin	Definition	Pin	Definition
15	F_AUDIO1	1	FP_MIC_L	2	GND
		3	FP_MIC_R	4	+ 3.3V
		5	FP_OUT_R	6	SENSE1_RETURN
		7	GND		
		9	FP_OUT_L	10	SENSE2_RETURN

6. BIOS setup

See “SV4-H8134 BIOS Quick Start Guide” or “SV4-H8134 BIOS Specification Summary Sheet” for detail information of BIOS setup.

【End】