

Quick Guide

SNT-A2316 Motherboard

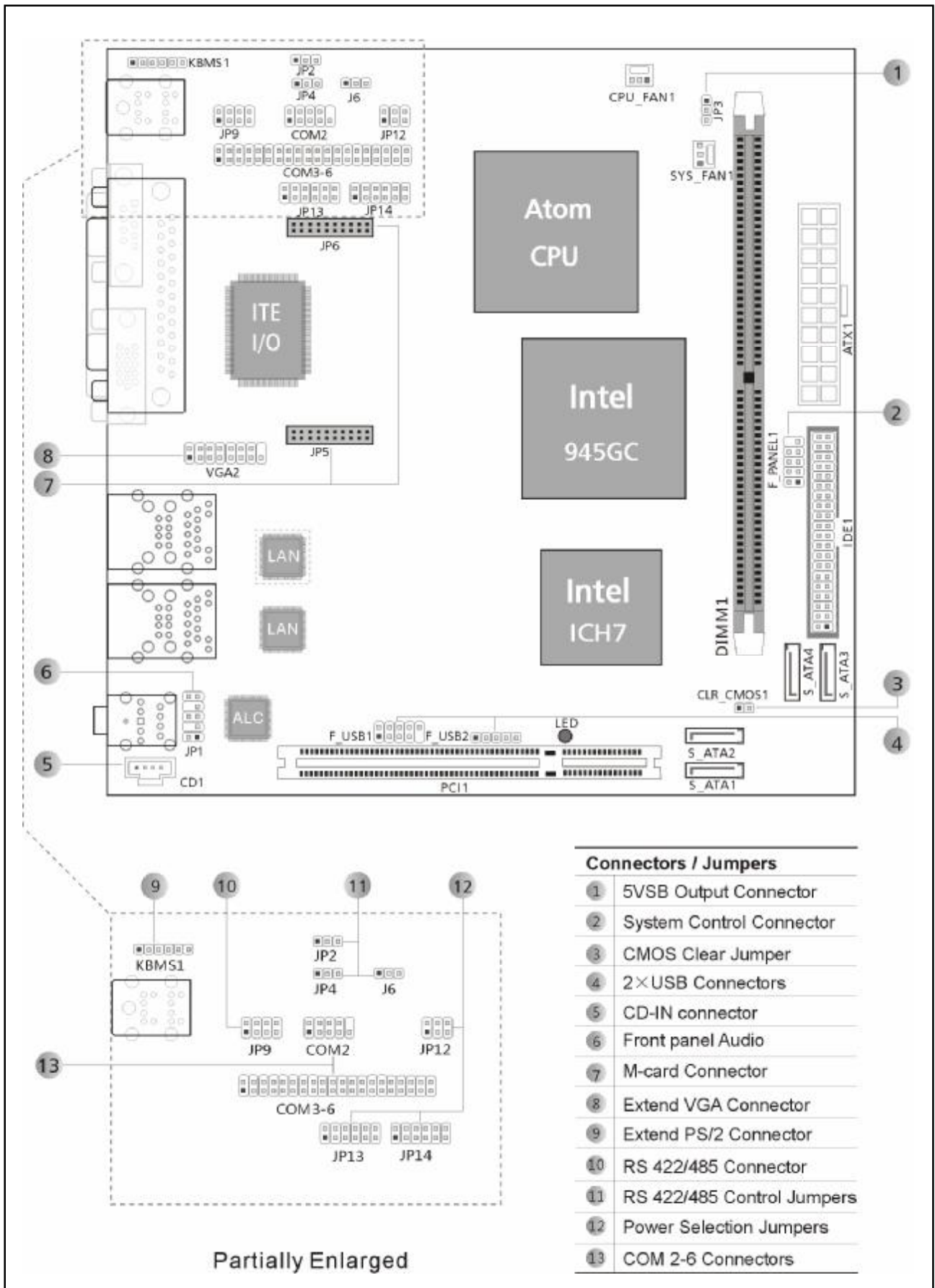
Version: 1.3
PCB version: S-036-13

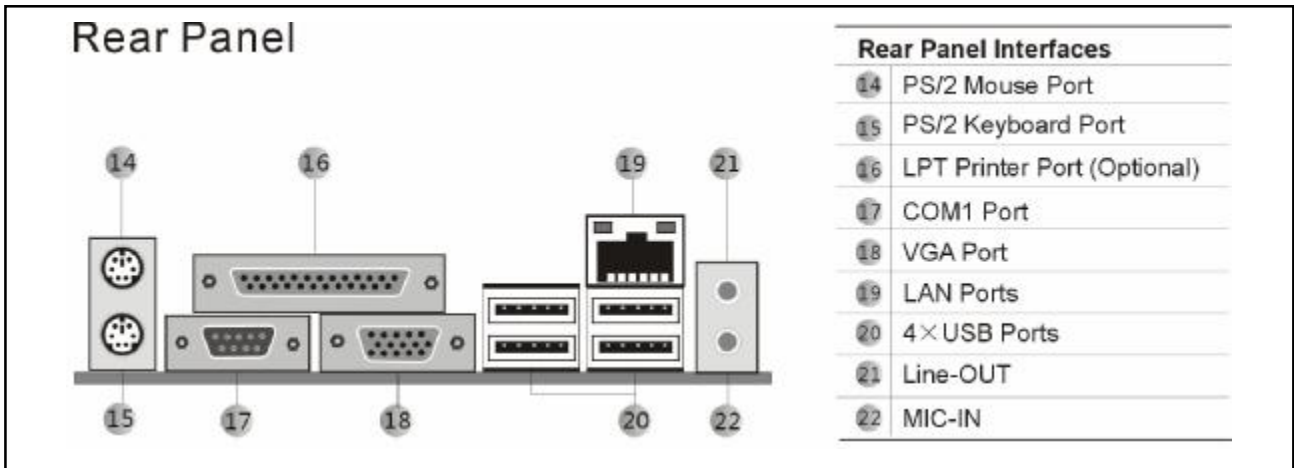
SNT-A2316 Motherboard Specifications

General	CPU	Intel® Atom 230, 1.6GHz FSB 533MHz, TDP 4W, 45nm, Hyper-Threading
	Chipset	Intel® 945GC / ICH7
	Memory	1× DDRII DIMM 533MHz up to 2GB memory
	BIOS	SPI Phoenix / Award BIOS Upgradeable in OS, Support “Plug & Play”, ACPI 2.0B, APM 1.2, DMI 2.0, SMBIOS 2.5
	Expansion Interface	1× PCI Slot
Graphics	Core	Intel® GMA 950 support DirectX 9.0c
	Memory	up to 224MB shared memory
	Interfaces	1× DB15 VGA port 1× 15 pin VGA header
Network	Chip	Realtek® 8103E PCI-E NIC
	Speed	100/10Mbps auto-adaptive
	Interfaces	1× RJ-45 port
Audio	Chip	Realtek® ALC653 AC`97 sound IC
	Interfaces	Line-OUT, MIC-IN, CD-IN
I/O	I/O Chip	ITE® 8782F
	Interfaces	1× 40 pin IDE connector (ATA-100/66/33) 4× SATA ports (transfer rate 3Gb/s), 1× PS/2 port set (keyboard + mouse) 1× PS/2 header (keyboard + mouse) 1× LPT DB-25 port 6× COM COM1 / COM1-A: RS-232 DB9 port / connector COM2: RS-232/422/485 connector(set by Jumper) Pin 9 supports 5V/12V power selection. COM3-6: RS-232 connectors Pin 1 supports 5V/12V power selection.
PCB	Form Factor	Mini-ITX
	Size	170mm×170mm (6.7inch×6.7inch)
OS Support	Windows	Vista / XP / 2000
	Others	Linux / Unix
Special Functions	Power On after Power-Fail*	Recover system after power fail
	“Watchdog”	Recover system when crashes occur
	ESD Protection	Resist 2000V+ lightning or electrostatic discharge
Adaptability	Voltage Range	130V~250V
	Temperature Range	-10°C ~ 55°C

* “Power-On After Power-Fail” function is functioning by default, so the system will start once you link the DC power. You can always change this function in BIOS -> Integrated Peripherals ->Super I/O page.

Motherboard Platform





Internal Connectors and Jumpers

[1] 5V Power Output Connector (2.54mm)

<p>JP3</p>	Pin	Definition
	1	5VSB
	2	GND
	3	NC


[2] System Control Connector (2.54mm)


<p>F_PANEL1</p>	Pin	Definition	Pin	Definition
	1	HD_LED+	2	PWR_LED+
	3	HD_LED-	4	PWR_LED-
	5	RST_SW+	6	PWR_SW+
	7	RST_SW-	8	PWR_SW-
	9	RSV		

[3] CMOS Control Jumper (2.54mm)


CLR_CMOS	Pin	Definition	Instruction
1	1-2	Clear CMOS	Cut off power and short it. Then restore the jumper.
1	N/A	Normal	

[4] Front Panel USB Connector (2.54mm)


 F_USB1	Pin	Definition	Pin	Definition
	1	VCC	2	VCC
	3	USB 0-	4	USB 1-
	5	USB 0+	6	USB 1+
	7	GND	8	GND
	9	N/A		

 F_USB2	Pin	Definition	Pin	Definition
	1	VCC	2	USB-
	3	USB+	4	GND
5	NC			


[5] Front Panel Audio Connector (2.54mm)

 JP1	Pin	Definition	Pin	Definition
	1	MIC_IN	2	VCC
	3	NC	4	N/A
	5	FPOUT_R	6	RET_R
	7	HP_NO	8	N/A
	9	FPOUT_L	10	RET_L

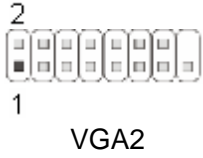
[6] CD-IN Connector (2.54mm)

 CD1	Pin	Definition
	1	CD_L
	2	CD_REF
	3	CD_REF
	4	CD_R


[7] M-card Connector (2.54mm)

 JP5 & JP6	<p>This interface is for M-card (Multi-functional Sub-board) only.</p> <p>M-card provides additional interfaces including HDMI, DVI, VGA, LVDS, TV(S/ AV), Mini PCI-E, Wi-Fi, to meet customized requirements. Usually M-card can provide a combination of some of the mentioned interfaces. Contact your motherboard provider for details.</p>
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[8] VGA Expansion Connector (2.0mm)

 VGA2	Pin	Definition	Pin	Definition
	1	RED	2	NC
	3	GREEN	4	GND
	5	BLUE	6	NC
	7	NC	8	DDCDATA
	9	GND	10	HSYNC
	11	GND	12	VSYNC
	13	GND	14	DDCCLK
	15	GND		

[9] PS/2 Expansion Connector (2.0mm)

 KBMS1	Pin	Definition	Pin	Definition
	1	KBCLK	2	KBDATA
	3	MSCLK	4	GND
5	VCC	6	MSDATA	


[10] RS-422/485 Mode Output Connector (2.0mm)

 JP9	Pin	Definition	Pin	Definition
	1	RX+ (RS-422)	2	RX- (RS-422)
	3	TX+ (RS-422) RX+/TX+ (RS-485)	4	TX- (RS-422) RX-/TX- (RS-485)
	5	GPIO1(NC)	6	GPIO2 (0x804:bit2)
	7	GPIO3 (0x802:bit7)	8	GPIO4 (0x804:bit3)


JP9 replaces and disables COM2 in RS-422/485 mode. Refer to table [11].

General Purpose I/O interface is for advanced user only.





[11] RS-232/422/485 Control Jumpers (2.0mm)

 JP2, JP4, J6	JP2 & JP4	J6	COM 2	JP9
	1-2	NONE*	RS-232 Mode	Disabled
	2-3	2-3	Disabled	RS-422 Mode
	2-3	1-2	Disabled	RS-485 Mode

[12] Power Selection Jumper (2.0mm)

Jumper	Setting	Serial Port	9 th Pin Output
 JP12	1-2	COM2	5V
	3-4		RI
	5-6		12V

COM2 is extended from the header by a ribbon cable.

Jumper	Setting	Serial Port	1 st Pin Output	
 JP13	1-2	COM3	12V	
	3-4		DCD	
	5-6		5V	
	 JP14	7-8	COM4	12V
		9-10		DCD
		11-12		5V
 JP14	1-2	COM5	12V	
	3-4		DCD	
	5-6		5V	
	 JP14	7-8	COM6	12V
		9-10		DCD
		11-12		5V


COM3-6 is extended from the header by a 1 to 4 ribbon cable.

By Modified COM extender, the 1st and 9th pin signal of the DB-9 ports is switched, so that the power output will be on the 9th pin.

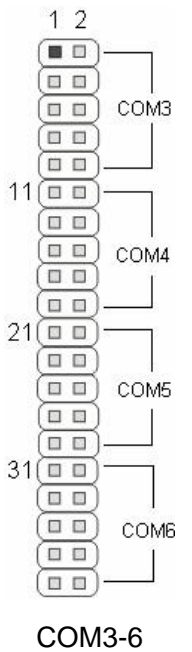


No multiple jumpers allowed on pin 1-6 or pin 7-12 of the Jumper 13/14 !

[13] COM2, COM3-6 Connector (2.0mm)

 COM2	Pin	Definition	Pin	Definition
	1	DCD	2	SIN
	3	SOUT	4	DTR
	5	GND	6	DSR
	7	RTS	8	CTS
	9	JP12*	10	N/A

* The 9th pin of COM2 is set by JP12, Refer to table [12]

	COM 3		COM 4		COM 5		COM 6	
	Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
	1	JP13*	11	JP13*	21	JP14*	31	JP14*
	2	SIN	12	SIN	22	SIN	32	SIN
	3	SOUT	13	SOUT	23	SOUT	33	SOUT
	4	DTR	14	DTR	24	DTR	34	DTR
	5	GND	15	GND	25	GND	35	GND
	6	DSR	16	DSR	26	DSR	36	DSR
	7	RTS	17	RTS	27	RTS	37	RTS
	8	CTS	18	CTS	28	CTS	38	CTS
	9	RI	19	RI	29	RI	39	RI
	10	GND	20	GND	30	GND	40	GND

*The 1st pin of COM3-6 is set by Jumpers, Refer to table [12].

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