Product Spec

Motherboard

RB-J1900BW V1.0

Prepared by： Ken Date： 2017/10/31

Approved by： Peter Date： 2017/10/31

Revision History			
Revision	Date	Description	Author
V1.0	2017/10/31	First release	KEN

RB-J1900BW

REALBOM

Features

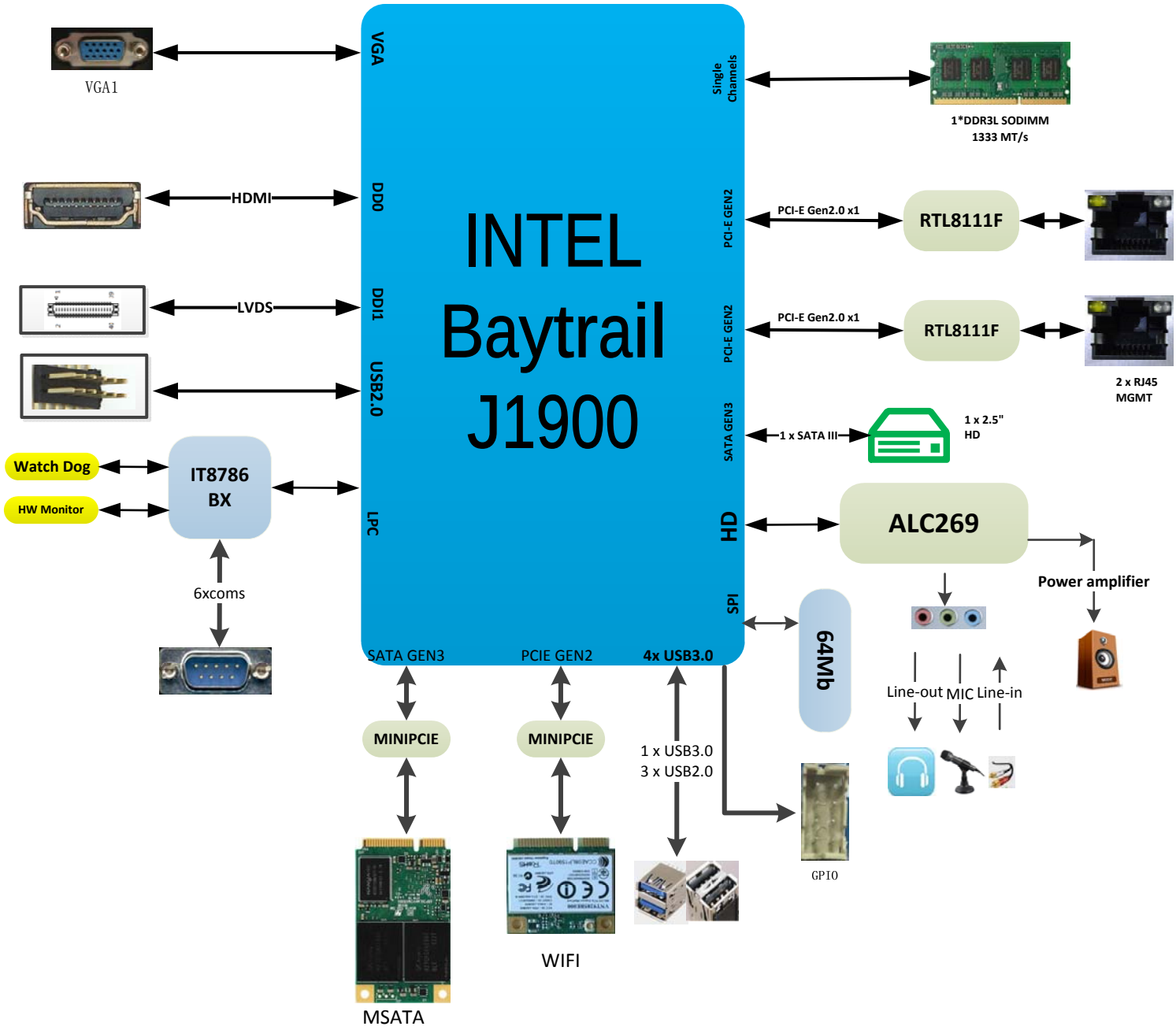
*Intel Baytrail Platform, J1900 CPU, 2.0GHz, 4Cores
*Supports 2 x Display VGA+HDMI+LVDS,
*Supports 2x 10/100/1000M LAN adapter
*Support 11 x USB2.0, 1 x USB3.0
*Support 6 x COMs, 1 x SATAII, 1 x MSATA , 1 x WIFI ,1xPCIEX1,1xLPT
*Support HD Audio , 1 x line out, 1 x line in,1x MIC,4ohm &2w Power amplifier
*One 204-pin SODIMM up to 8GB, DDR3L 1333 MHz

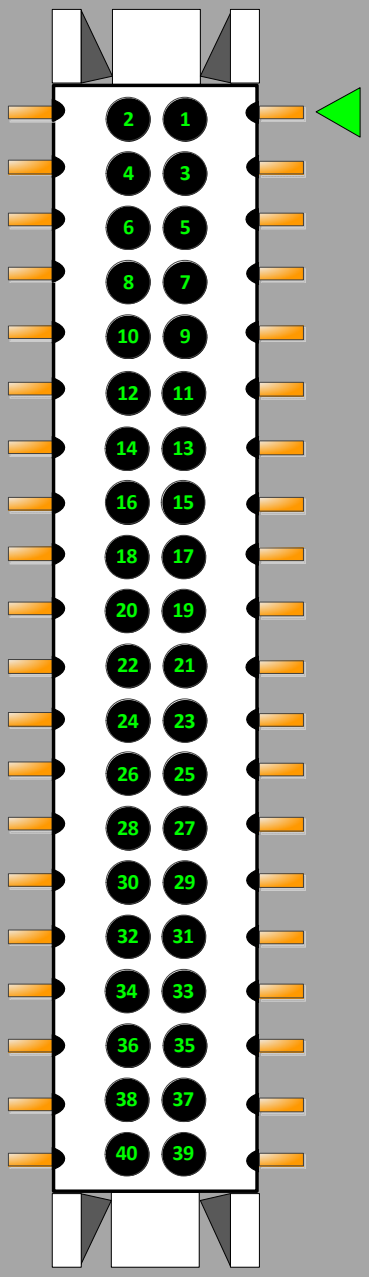
Application Industry

Medical industry.Traffic industry, Advertising Machine,Financial industry,

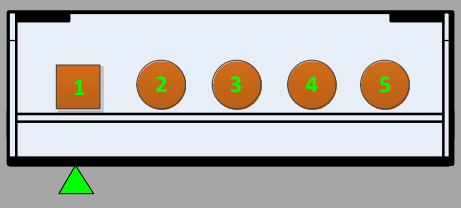
Specifications

CPU	CPU	Intel Baytrail J1900 2 GHz- 2.4 GHz
	Instruction Set	64bit
	Lithography	22nm
Memory	Type	SODIMM DDR3L No ECC ,Supoort 1333 MHz
	Channel	Single
	Max Memory Size	8GB
Graphics	Graphics	Intel HD Graphics
	Displays Supported	3 Display Port VGA& HDMI & LVDS
Audio	ALC269 HD Audio	x1 line out,、x1 line in 、x1 MIC、4ohm&2W Power amplifier
Ethernet	RTL8111F	x2 10/100/1000M BASET LAN
Internal Connector	MSATA	x1 MINIPCIE
	SATA	x1 7PIN SATA
	WIFI	x1 Half length MINIPCIE
	LVDS	x1 2x20 Header Box
	PCIE1X	x1 PCIE1X
	COM	x3 COM4-COM6 (RS232) 2x5 Header Box,Powered 5V(Optional)
	USB	x2 2x5 DuPont Header （support 4* USB2.0）
	USB	x1 2x6 DuPont Header （support 2* USB2.0 and I2C）
	LPT	x1 2x13 DuPont Header
	PS2	x1 2x4 DuPont Header
	GPIO	x1 2X6 DuPont Header ,8*independent Programing GPIO
I/0	Input DC connector	x2 1xDC jack ,1xATX Power 4Pin connector
	COM	x3 DB9 Com1-2 Powered 5V/12V(Optional), Com3 Powered 5V (Optional)
	USB	x4 1xPorts USB3.0 and 3xUSB2.0
	RJ45	x2 Single RJ45
	Aduio	x1 Suport Line out,Line in,mic
	VGA	x1 Standard VGA
	HDMI	x1 Standard HDMI
BIOS	Vender	AMI
	ACPI	Supported
Power	POWER Brick	9V-24V DC POWER Brick
Dimensions	PCB	170*170MM
Requirements Environment	Operation	-15℃~+50℃， 10%~95% RTH
	Storeage	-40℃~+70℃， 10%~95% RTH

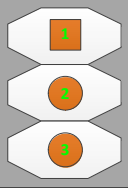

VGA1
VGA
HDMI
DDO
LVDS
DDI1
USB2.0
Watch Dog
HW Monitor
IT8786
BX
6xcoms
LPC
INTEL
Baytrail
J1900
Single Channels
1*DDR3L SODIMM
1333 MT/s
PCI-E Gen2.0 x1
PCI-E GEN2
RTL8111F
2 x RJ45
MGMT
SATA GEN3
1 x SATA III
1 x 2.5"
HD
HD
ALC269
Power amplifier
SPI
64Mb
Line-out MIC Line-in
SATA GEN3
PCIE GEN2
4x USB3.0
MINIPCIE
MINIPCIE
1 x USB3.0
3 x USB2.0
GPIO
WIFI
MSATA

LVDS	LVDS
PIN Define	
Type	2x20 PH=0.15mm

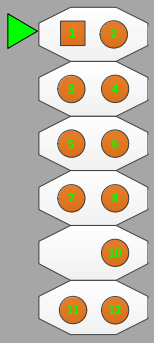
1	LCD_VDD	2	LCD_VDD
3	LCD_VDD	4	LCD_VDD
5	BKLT_ON	6	BKLT_CTL
7	GND	8	GND
9	LVDS_D1+	10	LVDS_D0+
11	LVDS_D1-	12	LVDS_D0-
13	GND	14	GND
15	LVDS_D3+	16	LVDS_D2+
17	LVDS_D3-	18	LVDS_D2-
19	GND	20	GND
21	LVDS_D5+	22	LVDS_D4+
23	LVDS_D5-	24	LVDS_D4-
25	GND	26	GND
27	LVDS_D7+	28	LVDS_D6+
29	LVDS_D7-	30	LVDS_D6-
31	GND	32	GND
33	LVDS_CLK2+	34	LVDS_CLK1+
35	LVDS_CLK2-	36	LVDS_CLK1-
37	GND	38	GND
39	+V12S	40	+V12S

VP1	LVDS Power and Control
PIN Define	
Type	1X5 Header Box， PH=2.54mm

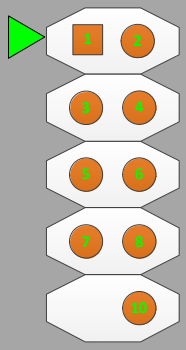
1	+V12S
2	GND
3	LVDS_BKLT_ON
4	LVDS_BKLT_PWM
5	+V5S

JLV	LVDS Power option
PIN Define	
Type	1X3 DuPont Header， PH=2.54mm
Memo	Default Setting：JLV (1-2)

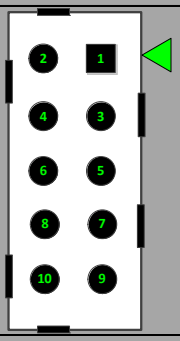
1	+V3.3S
2	LCD_VDD
3	+V5S

JUSB	JUSB3
PIN Define	
Type	2X6 DuPont Header PH=2.0 mm

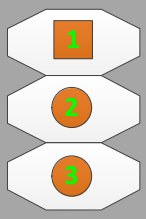
1	VCC	2	VCC
3	Data1-	4	Data2-
5	Data1+	6	Data2+
7	GND	8	GND
9		10	GND
11	I2C_DATA	12	I2C_CLK

JUSB	JUSB(1-2、4)
PIN Define	
Type	2X5 DuPont Header PH=2.0 mm

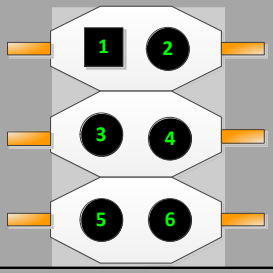
1	VCC	2	VCC
3	Data1-	4	Data2-
5	Data1+	6	Data2+
7	GND	8	GND
9		10	GND

COM	COM3-COM10
PIN Define	
Type	2X5 Header Box PH=2.0 mm

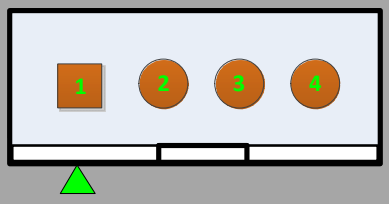
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI_MUX	10	NC

COM Power	JC3-JC6
PIN Define	
Type	1X3 DuPont Header， PH=2.0mm
Memo	Default Setting： JC3-JC6 (1-2)

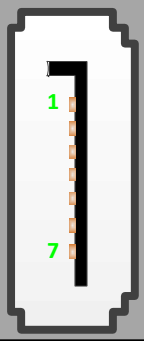
1	RI
2	RI_MUX
3	5V
1-2	RI
3-4	5V

COM Power	JC1/JC2
PIN Define	
Type	2x3 DuPont Header， PH=2.0mm
Memo	FOR DB9（Pin9） com power optioan， Default Setting： JC1(3-4) JC2(3-4)

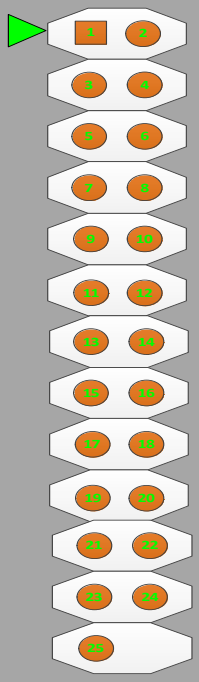
1	5V	2	RI_MUX
3	RI	4	
5	12V	6	

SATAPWR1	SATA POWER
PIN Define	
Type	1X4 DuPont Header， PH=2.54mm

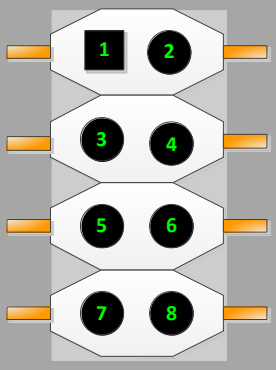
1	+V12S
2	GND
3	GND
4	+V5S

SATA	SATA1
PIN Define	
Type	7PIN Standard SATA

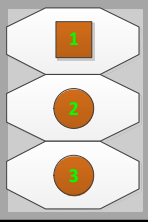
1	GND
2	TX+
3	TX-
4	GND
5	RX-
6	RX+
7	GND

LPT	LPT
PIN Define	
Type	2X13 Header Box PH=2.0 mm

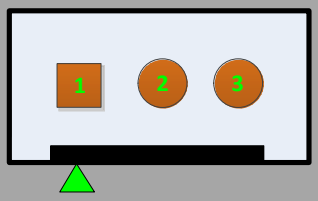
1	STB#	2	AFD#
3	PD0	4	ERR#
5	PD1	6	INIT#
7	PD2	8	SLIN#
9	PD3	10	GND
11	PD4	12	GND
13	PD5	14	GND
15	PD6	16	GND
17	PD7	18	GND
19	ACK#	20	GND
21	BUSY	22	GND
23	PE	24	GND
25	SLCT	26	NC

J_PS2	Ps2 header
PIN Define	
Type	2x4 DuPont Header， PH=2.0mm

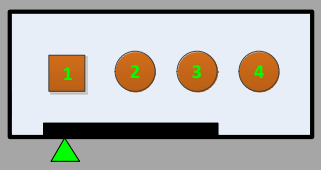
1	KB_DATA	2	MS_DATA
3	KB_CLK	4	MS_CLK
5	GND	6	GND
7	+V5S	8	+V5S

PWR_AT	AT&ATX mode option
PIN Define	
Type	1X3 DuPont Header， PH=2.0mm
Memo	Default Setting：PWR_AT(1-2)

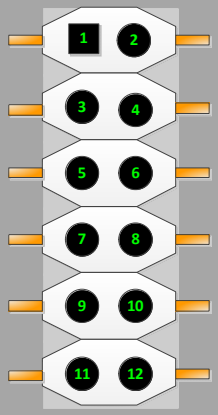
1-2	ATX
3-4	AT

SYS_FAN	System Fan Power and sense
PIN Define	
Type	1X3 DuPont Header， PH=2.54mm

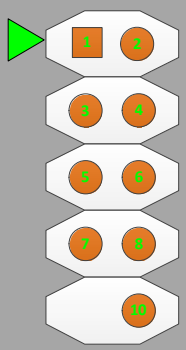
1	GND
2	+V12S
3	FAN_TAC

CPU_FAN	CPU FAN Power and Control
PIN Define	
Type	1X4 DuPont Header， PH=2.54mm

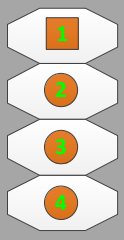
1	GND
2	+V12S
3	FAN_TAC
4	FAN_CTL

GPIO	GPIO Pin Define
PIN Define	
Type	2x6 DuPont Header， PH=2.54mm

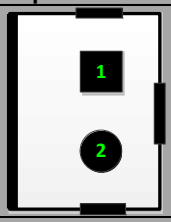
1	+V5S	2	+V12S
3	GPIO1	4	GPIO5
5	GPIO2	6	GPIO6
7	GPIO3	8	GPIO7
9	GPIO4	10	GPIO8
11	GND	12	GND

FPNAEL	LED and SYSTEM function header
PIN Define	
Type	2X5 DuPont Header PH=2.54mm

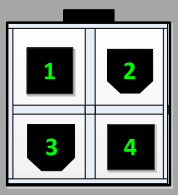
1	PWR_ON	2	HDD_LED+
3	GND	4	HDD_LED-
5	SYS_RESET	6	PWR_LED+
7	GND	8	PWR_LED-
9		10	GND

JCOMS	Cmos and ME fucktion header
PIN Define	
Type	1X4 DuPont Header，PH=2.0mm
Memo	Default Setting：JCmos(1-2)

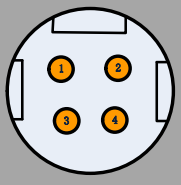
1-2	Normal
2-3	Clear cmos
3-4	Override ME

SPKR_L/SPKR_R	Power amplifier
PIN Define	
Type	1x2 Wafer Box PH=2.0 mm

1	SPKR_L-/SPKR_R-
2	SPKR_L+/SPKR_R+

DC-PWR	ATX 4Pin
PIN Define	
Type	ATX Standard 4 pin connector

1-2	DC+
3-4	DC-

DC-PWR	DC-JACK
PIN Define	
Type	DC Jack

1/3	DC-
2/4	DC+