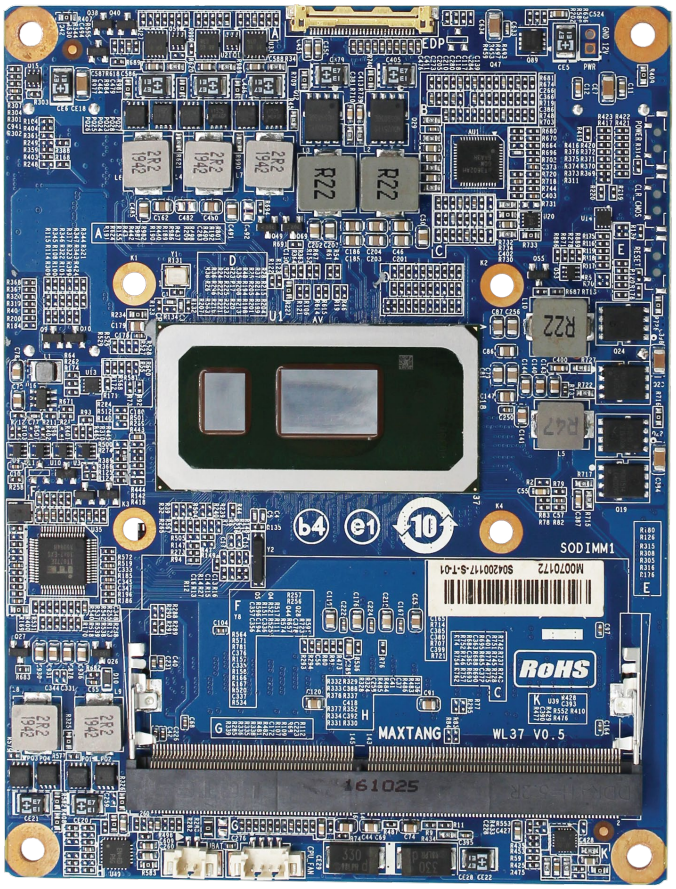
DATASHEET

WL-37

Intel Whiskey Lake-U Coreboard



Features

- CPU: Intel Whiskey Lake-U Celeron and Core processor
- Memory: Dual channel DDR4 up to 64GB
- GPU: Integrated graphics, 1x eDP interface
- Other: 1x CONN1 and 1x CONN2 connectors
- Power: 12V power input by CONN1, CONN2
- Working Temp: -20°C~60°C

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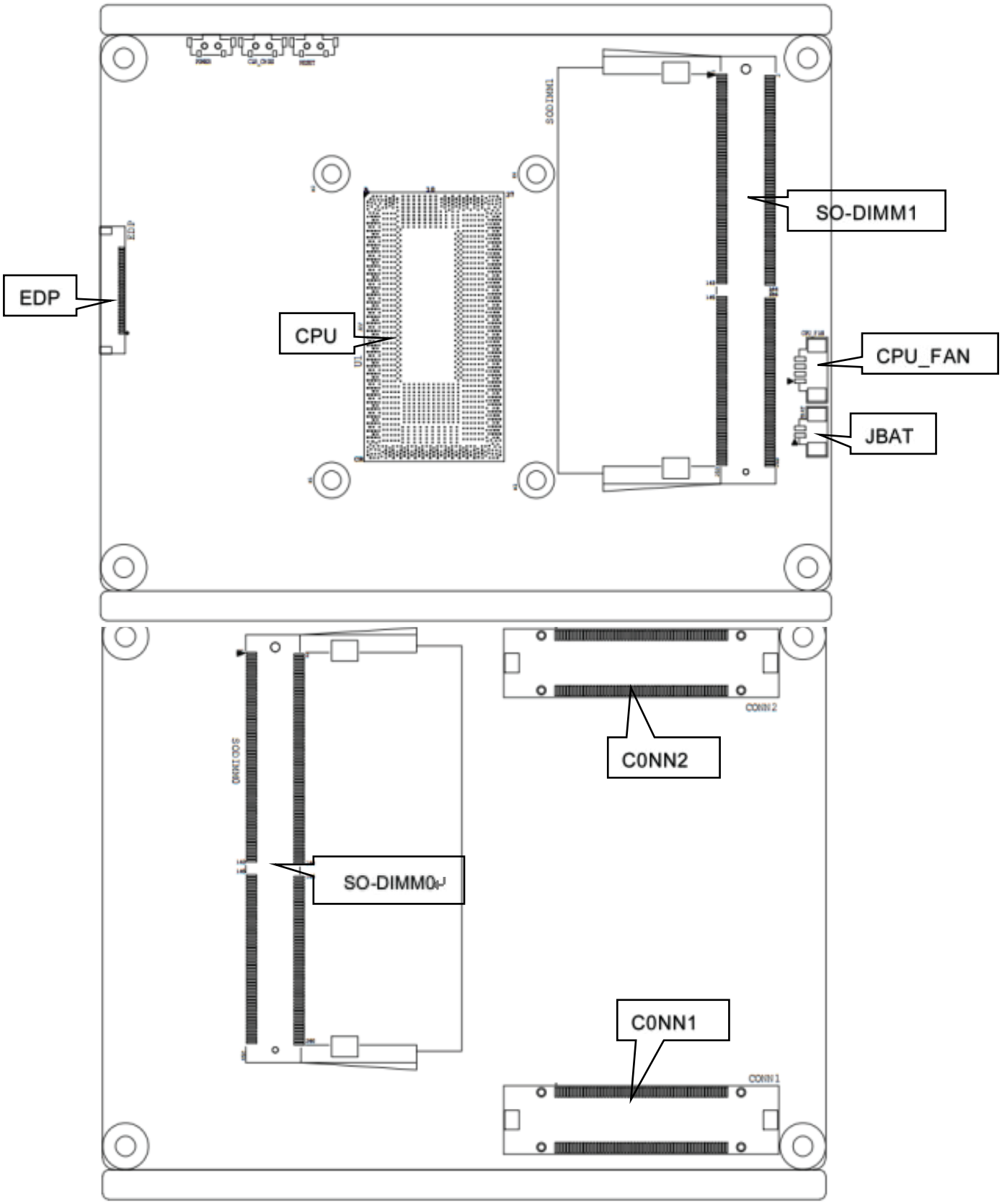
1. Connector Diagram



2.5 CONN1 and CONN2 (Screen Printing CONN1, CONN2)

Equipped with CONN1 and CONN2 interfaces for high-speed connection.

CONN1(Screen Printing：CONN1)

Signal	Pin		Signal
GPP_E2/SATAXPCIE2/SATAGP2	1	61	PWRBTN#_IN
GPP_C17/I2C0_SCL	2	62	SYS_RESET#
CPP_C16/I2C0_SDA	3	63	GPP_B13/PLTRST#
GND	4	64	WAKE#
CLKOUT_PCIE_P0	5	65	GPD4/SLP_S3#
CLKOUT_PCIE_N0	6	66	GPD5/SLP_S4#
GND	7	67	PWR_LED#
CLKOUT_PCIE_P1	8	68	GPP_E8/SATALED#/SPI1_CS1#
CLKOUT_PCIE_N1	9	69	IO_BOARD_PWROK
GND	10	70	GPP_C0/SMBCLK
CLKOUT_PCIE_P2	11	71	GPP_C1/SMBDATA
CLKOUT_PCIE_N2	12	72	GND
GND	13	73	GPP_E0/SATAXPCIE0/SATAGP0
USB2P_1	14	74	GPP_E1/SATAXPCIE1/SATAGP1
USB2N_1	15	75	GPP_C9/UART0_TXD
GND	16	76	GPP_C8/UART0_RXD
USB2P_2	17	77	GPP_B16/GSPI0_CLK
USB2N_2	18	78	GPP_B17/GSPI0_MISO
GND	19	79	GPP_B18/GSPI0_MOSI
USB2P_3	20	80	GPP_B15/GSPI0_CS0#
USB2N_3	21	81	GND
GND	22	82	PCIE11_RXP/SATA0_RXP
PCIE11_TXP/SATA0_TXP	23	83	PCIE11_RXN/SATA0_RXN
PCIE11_TXN/SATA0_TXN	24	84	GND
GND	25	85	PCIE13_RXP
PCIE13_TXP	26	86	PCIE13_RXN
PCIE13_TXN	27	87	GND
GND	28	88	PCIE14_RXP
PCIE14_TXP	29	89	PCIE14_RXN
PCIE14_TXN	30	90	GND

Signal	Pin		Signal
GND	31	91	PCIE15_RXP/SATA1B_RXP
PCIE15_TXP/SATA1B_TXP	32	92	PCIE15_RXN/SATA1B_RXN
PCIE15_TXN/SATA1B_TXN	33	93	GND
GND	34	94	PCIE16_RXP/SATA2_RXP
PCIE16_TXP/SATA2_TXP	35	95	PCIE16_RXN/SATA2_RXN
PCIE16_TXN/SATA2_TXN	36	96	GND
GND	37	97	PCIE1_RXP/USB31_1_RXP
PCIE1_TXP/USB31_1_TXP	38	98	PCIE1_RXN/USB31_1_RXN
PCIE1_TXN/USB31_1_TXN	39	99	GND
GND	40	100	PCIE2_RXP/USB31_2_RXP/SSIC_1_RXP
PCIE2_TXP/USB31_2_TXP/SSIC_1_TXP	41	101	PCIE2_RXN/USB31_2_RXN/SSIC_1_RXN
PCIE2_TXN/USB31_2_TXN/SSIC_1_TXN	42	102	GND
GND	43	103	GPP_A9/CLKOUT_LPC0/ESPI_CLK
DDI1_TXP_0	44	104	GPP_A1/LAD0/ESPI_IO0
DDI1_TXN_0	45	105	GPP_A2/LAD1/ESPI_IO1
GND	46	106	GPP_A3/LAD2/ESPI_IO2
DDI1_TPX_1	47	107	GPP_A4/LAD3/ESPI_IO3
DDI1_TXN_1	48	108	GPP_A14/SUS_STAT#/ESPI_RESET#
GND	49	109	GPP_A5/LFRAME#/ESPI_CS#
DDI1_TXP_2	50	110	GPP_A6/SERIRQ
DDI1_TXN_2	51	111	GPP_A7/PIRQA#/GSPI0_CS1#
GND	52	112	LPC_ESPI_SEL
DDI1_TXP_3	53	113	PU to +1.8VA, reserve PD
DDI1_TXN_3	54	114	PU to +1.8VA, reserve PD
GND	55	115	PU to +1.8VA, reserve PD
DDI1_AUX_P	56	116	PU to +1.8VA, reserve PD
DDI1_AUX	57	117	PU to +1.8VA, reserve PD
GPP_E18/DDPB_CTRLCLK	58	118	PU to +1.8VA, reserve PD
GPP_E19/DDPB_CTRLDATA	59	119	GPP_E9/USB2_OC0#/GP_BSSB_CLK
GPP_E13/DDPB_HPD0/DISP_MISC0	60	120	VCCRTC
GND	121	123	GND
+12V	122	124	+12V

Signal	Pin		Signal
GPP_E14/DDPC_HPD1/DISP_MISC1	1	61	GND
GPP_C13/UART1_TXD/ISH_UART1_TXD	2	62	USB2P_4
GPP_C12/UART1_RXD/ISH_UART1_RXD	3	63	USB2N_4
GPP_C3/SML0CLK	4	64	GND
GPP_C4/SML0_DATA	5	65	USB2P_5
GPP_E11/USB2_OC2#	6	66	USB2N_5
GPP_E12/USB2_OC3#	7	67	GND
GPD2/LAN_WAKE#	8	68	USB2P_6
GPD11/LANPHYPC	9	69	USB2N_6
GND	10	70	GND
+VCCHDA	11	71	USB2P_7
HDA_RST#/I2S1_SCLK/SNDW1_CLK	12	72	USB2N_7
GPP_D23/I2S_MCLK	13	73	GND
HDA_SYNC/I2S0_SFRM	14	74	USB2P_10
HDA_SDI0/I2S0_RXD	15	75	USB2N_10
HDA_SDO/I2S0_TXD	16	76	GND
HDA_BCLK/I2S0_SCLK	17	77	CLKOUT_PCIE_P3
GND	18	78	CLKOUT_PCIE_N3
GPP_C21/UART2_TXD	19	79	GND
GPP_C20/UART2_RXD	20	80	CLKOUT_PCIE_P4
GPP_H6/I2C3_SDA	21	81	CLKOUT_PCIE_N4
GPP_H7/I2C3_SCL	22	82	GND
GND	23	83	CLKOUT_PCIE_P5
PCIE3_RXP/USB31_3_RXP	24	84	CLKOUT_PCIE_N5
PCIE3_RXN/USB31_3_RXN	25	85	GND
GND	26	86	PCIE3_TXP/USB31_3_TXP
PCIE4_RXP/USB31_4_RXP	27	87	PCIE3_TXN/USB31_3_TXN
PCIE4_RXP/USB31_4_RXP	28	88	GND
GND	29	89	PCIE3_TXP/USB31_3_TXP
PCIE12_RXP/SATA1A_RXP	30	90	PCIE3_TXN/USB31_3_TXN
PCIE12_RXN/SATA1A_RXN	31	91	GND
GND	32	92	PCIE12_TXP/SATA1A_TXP
PCIE7_RXP	33	93	PCIE12_TXN/SATA1A_TXN
PCIE7_RXN	34	94	GND
GND	35	95	PCIE7_TXP
PCIE8_RXP	36	96	PCIE7_TXN

PCIE8_RXN	37	97	GND
GND	38	98	PCIE8_TXP
PCIE9_RXP	39	99	PCIE8_TXN
PCIE9_RXN	40	100	GND
GND	41	101	PCIE9_TXP
GPP_H8/I2C4_SDA	42	102	PCIE9_TXN
GPP_H9/I2C4_SCL	43	103	GND
GPP_H4/I2C2_SDA	44	104	DDI2_TXP_0
GPP_H5/I2C2_SCL	45	105	DDI2_TXN_0
GPP_A18/ISH_GP0	46	106	GND
GPP_A19/ISH_GP1	47	107	DDI2_TXP_1
GPP_A20/ISH_GP2	48	108	DDI2_TXN_1
GPP_A21/ISH_GP3	49	109	GND
GND	50	110	DDI2_TXP_2
GPP_C19/I2C1_SCL	51	111	DDI2_TXN_2
GPP_C18/I2C1_SDA	52	112	GND
GPP_D9/ISH_SPI_CS#/GSPI2_CS0#	53	113	DDI2_TXP_3
GPP_D10/ISH_SPI_CLK/GSPI2_CLK	54	114	DDI2_TXN_3
GPP_D11/ISH_SPI_MISO/GSPI2_MISO	55	115	GND
GPP_D12/ISH_SPI_MOSI/GSPI2_MOSI	56	116	DDI2_AUX_P
GPP_B19/GSPI1_CS0#	57	117	DDI2_AUX
GPP_B20/GSPI1_CLK	58	118	GND
GPP_B21/GSPI1_MISO	59	119	GPP_E20/DDPC_CTRLCLK
GPP_B22/GSPI1_MOSI	60	120	GPP_E21/DDPC_CTRLDATA
GND	121	123	GND
+12V	122	124	+12V

2.6 CPU FAN Socket (Screen Printing CPU_FAN)

Equipped with a socket for the CPU fan for better heat disspiation when it's needed.

CPU_FAN:（Screen Printing：CPU_FAN）

Pin	Signal
1	(5V by default, 12V optional
2	GND
3	CPUFAN_TAC
4	CPUFAN_CTL

2.7 CMOS Content clear/hold button (Screen Printing CLR_CMOS)

The CMOS is powered by the button battery on the board. Clearing CMOS will permanently erase the previous system settings and set them to the original (factory settings) system settings.
Steps to clear CMOS:

(1) Turn off the computer and power disconnect.
(2) Long press the CLR_CMOS button for about 10 seconds, then disconnect.
(3) Starting the computer, press the <Del> key to enter the BIOS, load the optimal default values, save it and exit the settings.
(4) The CLR_CMOS button on the board is reserved for the board.

Please do not clear CMOS when the computer is powered on, in case for any damages to the board.

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2. Hardware Function

2.1 Jumper Setting

Please configure the jumpers according to your needs by following the list of requirements before installation.

Identify the jumper and first header pin method: observe the text mark next to the jumper and the pin, which will be indicated by the number "1", a bold line or triangle symbol; or observe the rear panel with the square pad is the first header.

2.2 Memory Slots

On-board 2 x SO-DIMM DDR4 -2400/2133 slots, supporting dual channels, maximum capacity 64GB.

2.3 ON/OFF Power Reset

The board reserves one switch button(Power), one reset button (Reset).

2.4 Display Interface:

Equipped with 1x EDP interface on the board.

EDP:(Screen Printing: EDP)

Pin	Signal	Pin	Signal
1	BL_VCC	16	AUX_N
2	BL_VCC	17	AUX_P
3	BL_VCC	18	GND
4	BL_VCC	19	LANE0P
5	BL_PWM	20	LANE0N
6	BL_EN	21	GND
7	GND	22	LANE1P
8	GND	23	LANE1N
9	GND	24	GND
10	GND	25	LANE2P
11	HPD	26	LANE2N
12	GND	27	GND
13	LCD_VCC	28	LANE3P
14	LCD_VCC	29	LANE3N
15	GND	30	GND