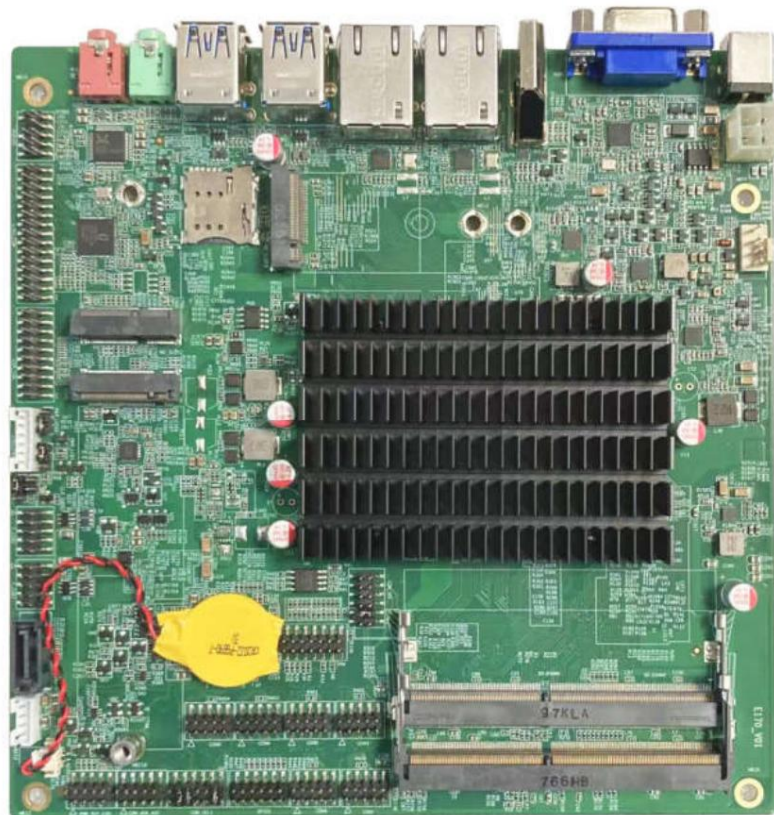


» User's Guide «

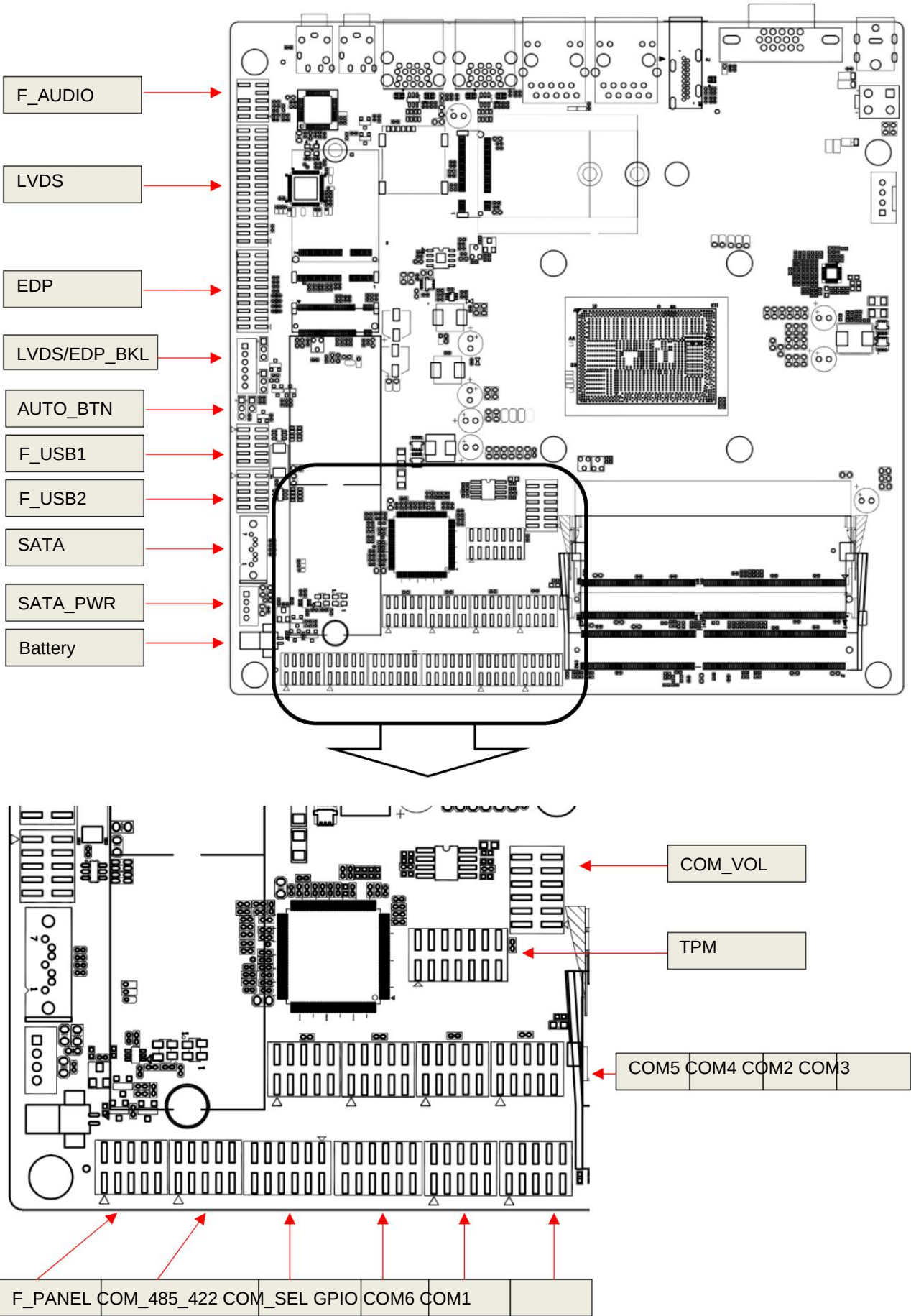
PCM-E170 User Manual

V0.1

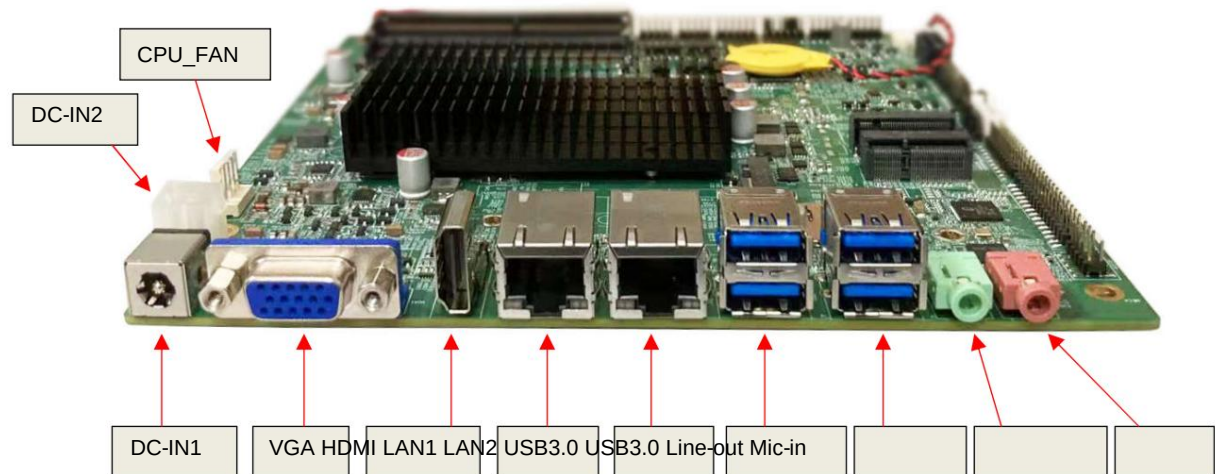


1. Interface location

PCM-E170 motherboard front interface location



PCM-E170 motherboard IO interface location



2. Interface definition

2.1 Interface function description

Interface name	Function description
F_AUDIO	Front audio
LVDS	LVDS signal output, connected to LCD screen
EDP	EDP signal output, connected to LCD screen
LVDS/EDP BKL backlight control and power supply, connected to LVDS or EDP LCD screen	
AUTO_BTN	Power-on function setting jumper
F_USB1,F_USB2 front USB2.0	
SATA	SATA3.0, connected to SATA hard drive
SATA_PWR	SATA hard drive power socket
Battery	CMOS battery socket, Wafer 1.25,2P
F_PANEL	Switch, restart, power light, hard disk light
COM_485_422 COM1,COM2	When selecting RS485/422 signal, connect this socket
COM_SEL	COM1, COM2 mode selection jumper, optional RS232/485/422
GPIO	8 GPIO channels, all can be set as DI or DO
COM1-COM6	COM1-COM6 serial port, RS232 mode
TPM	Connect to TPM module
COM_VOL	COM3, COM4 9th Pin voltage can be selected from 5V/12V, the default is RI
CPU_FAN	Connect the CPU cooling fan, the default is fanless cooling.

2.2 Identify the position of pin 1 of the jumper

Please check the motherboard markings. Any square-marked pins (PCB pads) or have a number 1 or "j" next to them
The marked pin is pin 1.

2.3 Power input interface DC_IN1, DC_IN2 (DC5525/5557 type 2X2P, pitch 4.2mm)

Suitable for DC5525 plug

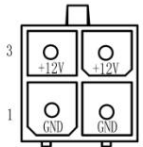
DC 5.5*2.5

2.5MM



5.5MM



Connector		PIN definition
	3-4	12V
	1-2	GND

DC5525 plug and 5557 plug, only one of them can be used to power the motherboard.

2.4 Hard drive power supply interface (PH2.0 4P, motherboard label: SATA_PWR)

Connector	PIN function
1	1 NC (optional 12V)
2	2 GND
3	3 GND
4	4 5V

The maximum current allowed per PIN is 2A.

2.5 LVDS interface (DuPont 2.0 2x15P, motherboard label: LVDS_CON)

illustrate	definition	PIN	definition	illustrate
	LCD_VCC	1 2	LCD_VCC	
	LCD_VCC	3 4	GND	LCD screen detection, grounding
	GND	5 6	GND	
	LVDS A0-	7 8	LVDS A0+	
	LVDS A1-	9 10	LVDS A1+	
	LVDS A2-	11 12	LVDS A2+	
	GND	13 14	GND	
	LVDS ACLK-	15 16	LVDS ACLK+	
	LVDS A3-	17 18	LVDS A3+	
	LVDS B0-	19 20	LVDS B0+	
	LVDS B1-	21 22	LVDS B1+	
	LVDS B2-	23 24	LVDS B2+	
	GND	25 26	GND	
	LVDS BCLK-	27 28	LVDS BCLK+	
	LVDS B3-	29 30	LVDS B3+	

Note: When the motherboard leaves the factory, the LVDS function is enabled by default, and LVDS and EDP are optional functions.

2.6 EDP interface (DuPont 2.0 2x10P, motherboard label: EDP_CON)

illustrate	definition	PIN	definition	illustrate
	LCD_VCC	1 2	LCD_VCC	
	GND	3 4	GND	
	Lane 0(n)	5 6	Lane 0(p)	
	Lane 1(n)	7 8	Lane 1(p)	
	Lane 2(n)	9 10	Lane 2(p)	
	Lane 3(n)	11 12	Lane 3(p)	
	GND	13 14	GND	
	Aux Ch(n)	15 16	Aux Ch(p)	
	GND	17 18	GND	
	GND	19 20	HPD	Hot Plug

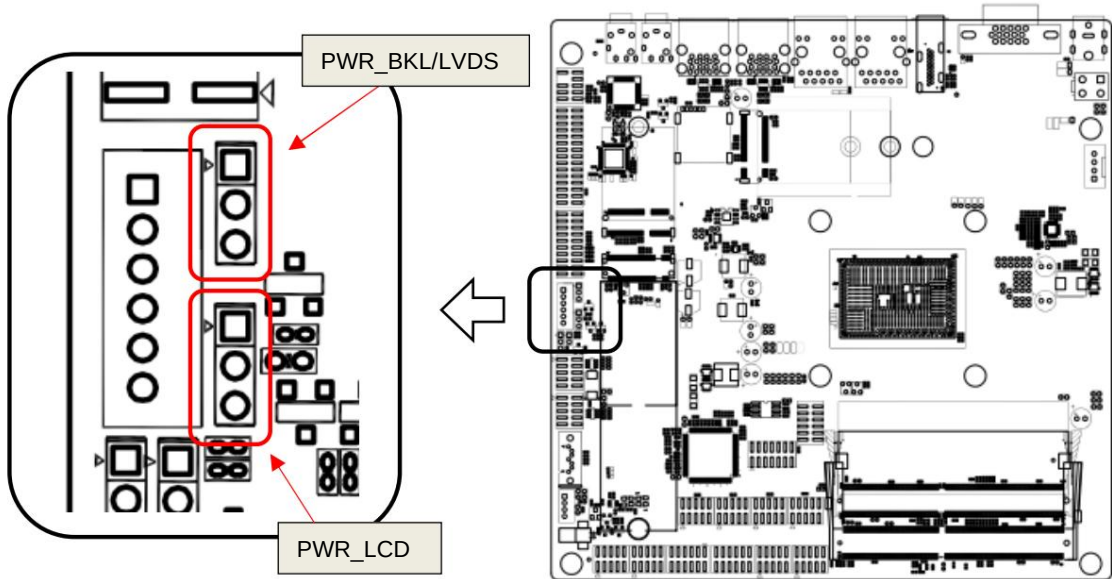
2.7 LVDS/EDP backlight control and power supply (PH2.0 6P motherboard label: LVDS_PWR)

LVDS_PWR definition		
1		Backlight voltage, optional 12V/5V
2		Backlight voltage, optional 12V/5V
3		Backlight enable, Backlight ON/OFF
4		Backlight brightness adjustment PWM
5		Ground, GND
6		Ground, GND

2.8 Backlight voltage adjustment (motherboard marking: PWR_BKL/PWR_LVDS, default is 5V)

PWR_BKL	Function
1-2	Select the backlight voltage to 12V
2-3	Select the backlight voltage as 5V (default)

Jumper position (square pad is Pin1):



2.9 LVDS/EDP VCC voltage adjustment (mainboard label: PWR_LCD, default is 3.3V)

PWR_LCD	Function
1-2	Select VCC voltage as 3.3V (default)
2-3	Select VCC voltage as 5V

2.10 USB2.0 (DuPont 2.0 2x5P, motherboard marking: F_USB1, F_USB2)

definition	PIN		definition
+5V	1	2	5V
USB2.0 Data1-	3	4	USB2.0 Data2-
USB2.0 Data1+	5	6	USB2.0 Data2+
GND	7	8	GND
GND	9	10	NC

2.11 COM1, COM2 mode selection (mainboard label: COM_SEL)

PIN function	
1-2	COM1 selects RS232 mode (default)
3-4	COM1 selects RS485 mode
5-6	COM1 select RS422 mode
7-8	COM2 Select RS232 mode (default)
9-10	COM2 select RS485 mode
11-12	COM2 select RS422 mode

2.12 COM_485_422 (DuPont 2.0 2x5P, motherboard marking: COM_485_422)

illustrate	definition	PIN		definition	illustrate
COM1	RS485_A_D- /RS422_A_TxD-	1	2	RS485_A_D+ /RS422_A_TxD+	COM1
	RS422_A_RxD-	3	4	RS422_A_RxD+	
COM2	RS485_B_D- /RS422_B_TxD-	5	6	RS485_B_D+ /RS422_B_TxD+	COM2
	RS422_B_RxD-	7	8	RS422_B_RxD+	
	Ground	9	10		

2.13 COM1-COM6 (DuPont 2.0 2x5P, motherboard marking: COM1-6)

definition	PIN		definition
DCD	1	2	RXD
TxD	3	4	DTR
GND	5	6	DSR
RTS	7	8	CTS
RI (COM3/4 optional powered 5V/12V)	9	10	NC

2.14 COM3, COM4 Pin9 voltage selection (mainboard label: COM_VOL)

PIN function	
1-2	COM3 Pin9 voltage selection 12V
3-4	COM3 Pin9 selects RI (default), not powered
5-6	COM3 Pin9 voltage selection 5V
7-8	COM4 Pin9 voltage selection 12V
9-10	COM4 Pin9 select RI (default), not powered
11-12	COM4 Pin9 voltage selection 5V

2.15 audio (DuPont 2.0 2x5P, motherboard marking: F_AUDIO)

definition	PIN		definition
Right channel output LineOut-R	1	2	Left channel output LineOut-L
GND	3	4	GND
Microphone right channel Mic-R	5	6	Microphone right channel Mic-L
GND	7	8	NC
Line input right channel LineIn-R	9	10	line input left channel LineIn-L

2.16 GPIO (DuPont 2.0 2x6P, motherboard marking: GPIO)

definition	PIN		definition
3.3V	1	2	GND
GPIO0(GPIO70)	3	4	GPIO1(GPIO71)
GPIO2(GPIO72)	5	6	GPIO3(GPIO73)
GPIO4(GPIO74)	7	8	GPIO5(GPIO75)
GPIO6(GPIO76)	9	10	GPIO7(GPIO77)
GND	11	12	3.3V

2.17 F_PANEL (DuPont 2.0 2x5P, motherboard marking: F_PANEL/PWR_RST_LED)

definition	PIN		definition
HDD_LED+	1	2	PWR_LED+
HDD_LED-	3	4	PWR_LED-
Reset-	5	6	Power switch+
Reset+	7	8	Power switch-
NC	9	10	NC

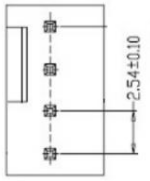
2.18 TPM (DuPont 2.0 2x7P, motherboard marking: TPM)

definition	PIN		definition
TPM_IO2	1	2	TPM_IO3
TPM_CS0	3	4	+3.3V
TPM_MISO	5	6	TPM_PRESENT
RSM_Reset	7	8	TPM_CLK
GND	9	10	TPM_MOSI
TPM_CS-	11	12	Reset
NC	13	14	TPM_PIRQ

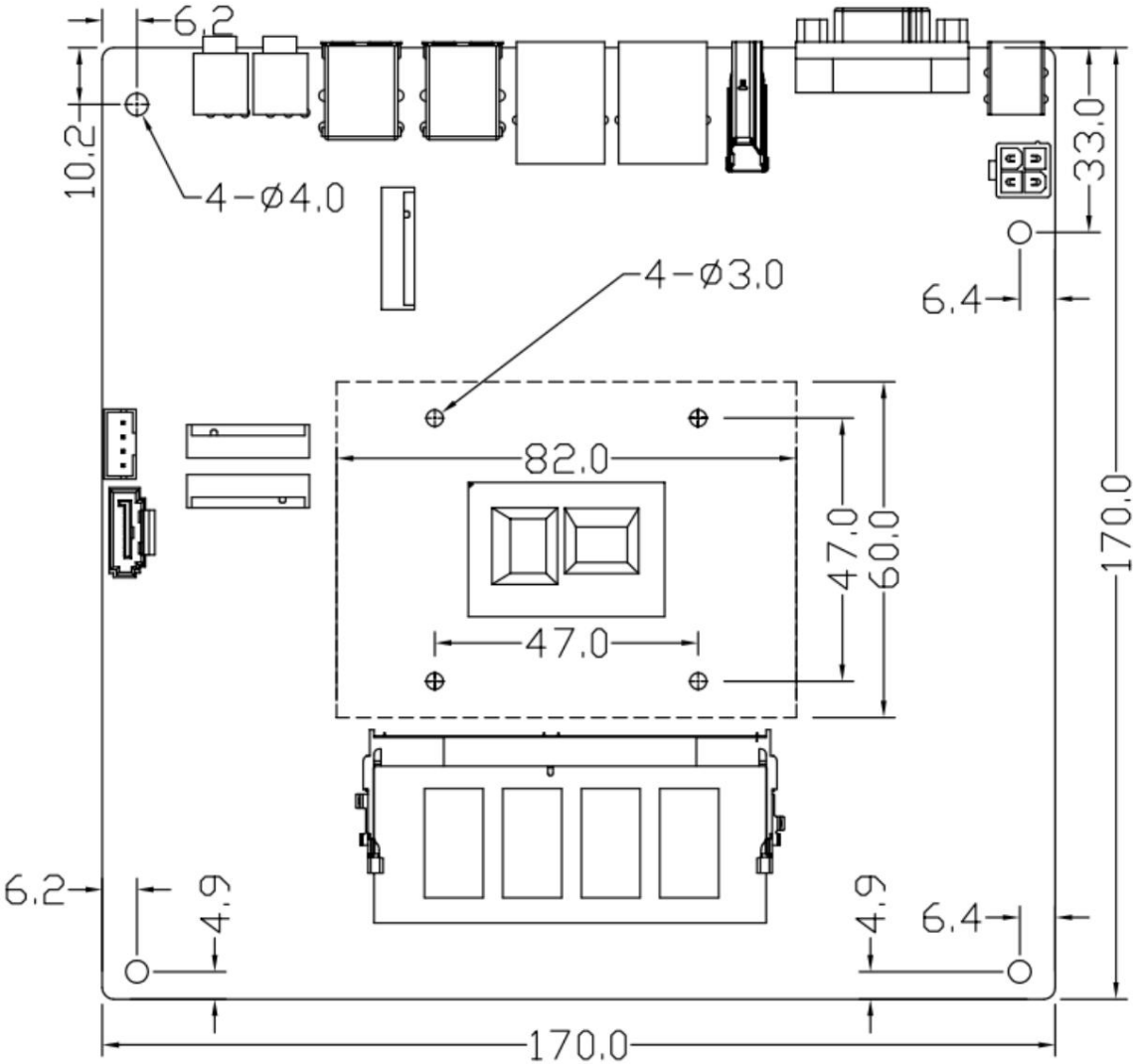
2.19 Power-on function setting (motherboard label: AUTO_BTN)

PIN function	
1-2 Enable power-on function	
2-3 Turn off the power-on function	

2.20 CPU cooling fan (motherboard label: CPU_FAN)

Connector	PIN function
	1GND
	2 12V
	3TAC
	4 FAN_CTRL

3. Structural dimension drawing (unit: mm)



4. Driver

Visit <http://www.ydstech.com> to download the driver.