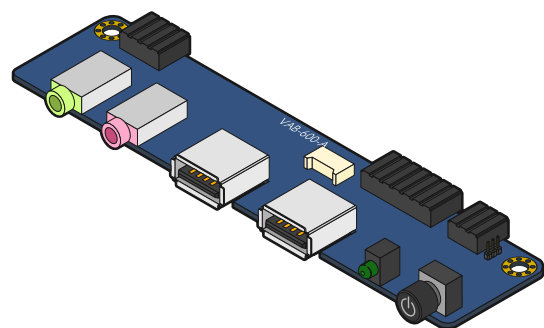


# VAB-600-A

Daughter board for VAB-600 Pico-ITX mainboard

## Quick Guide



### Key Features:

- Support audio jack for Line-Out and Mic-In
- Support two USB 2.0 ports
- Support one suspend LED power indicator
- Support Power button
- Space saving, quick installation and easy setup

The VAB-600-A is a daughter board specially designed for VAB-600 Pico-ITX mainboard to allow a complete integration for the whole system. The VAB-600-A daughter board supports multiple I/O interfaces such as audio jacks for Line-Out and Mic-In, and two USB 2.0 ports.

### Specifications:

- **PCB Size:**
  - 100 mm x 20 mm x 1.6 mm (L x W x H)
  - 4-Layer
- **USB Hub Controller:**
  - SMSC USB2512B USB 2.0 Hi-Speed
  - High performance, low-power and small footprint hub controller
  - Fully compliant with the USB 2.0 specification
- **I/O Coastline:**
  - 1 x Line-Out jack
  - 1 x Mic-In jack
  - 2 x USB 2.0 A-type ports
  - 1 x Suspend LED power indicator
  - 1 x Power On/Off button
- **Onboard Connectors and Jumper:**
  - 3 x Board-to-board connectors
  - 1 x USB board-to-board connector

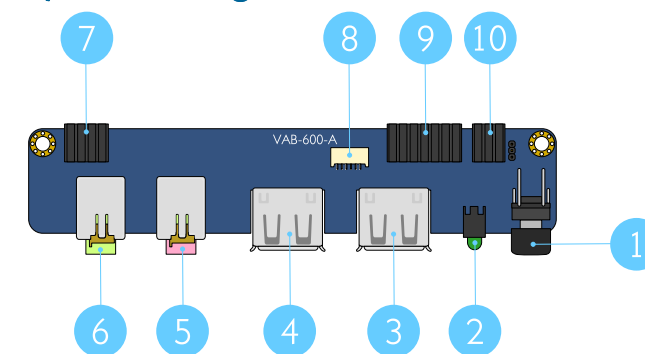
### Package Lists:

- 1 x VAB-600-A daughter board

#### Note:

Please ensure that all items in the packing list are present before using this product. If any of the items are missing or damaged, contact your distributor or sales representative immediately.

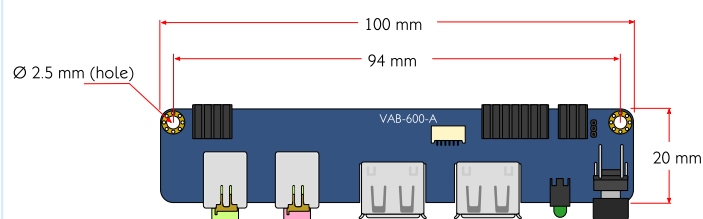
## Layout Diagram



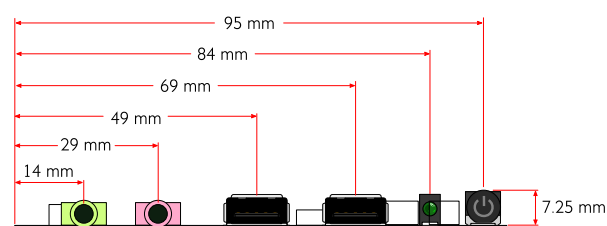
Items	Description
1	SW1: Power button with LED
2	LED1: Suspend LED power indicator
3	USB2: USB 2.0 port 2
4	USB1: USB 2.0 port 1
5	MIC1: Mic-In jack
6	LINEOUT1: Line-Out jack
7	CN2: Front Audio board-to-board connector
8	CN3: USB/GPIO board-to-board connector
9	CN4: GPIO/I <sup>2</sup> C board-to-board connector
10	CN1: Power On/LED/Shut down board-to-board connector

## Dimensions

### Top View



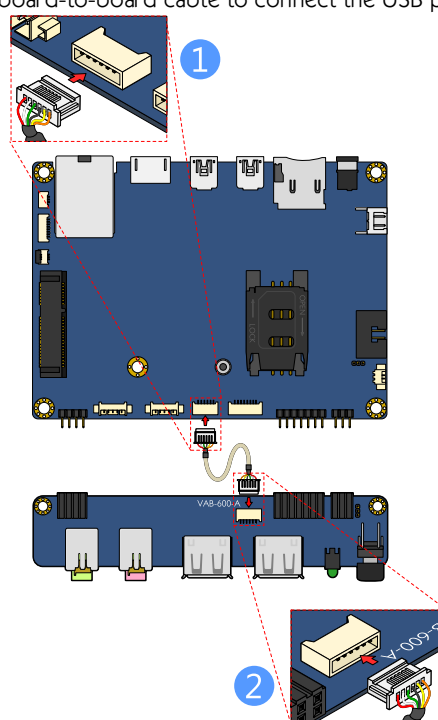
### Side View



## 1 Installing VAB-600-A to VAB-600 mainboard

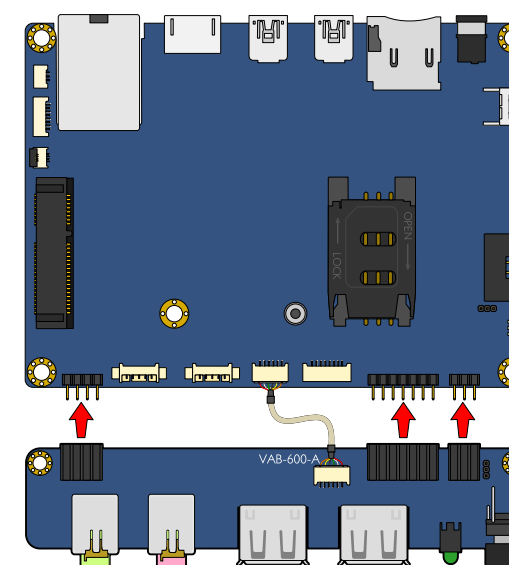
### Step 1

To connect the VAB-600-A daughter board to VAB-600 mainboard, use the USB board-to-board cable to connect the USB ports from both ends.



### Step 2

Insert the VAB-600-A to VAB-600 mainboard until all the three board-to-board connectors of the daughter board are firmly attached to the pin headers of the mainboard.

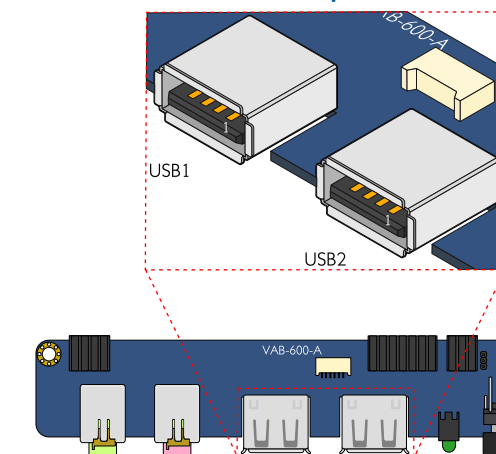


#### Note:

Before inserting the VAB-600-A daughter board to VAB-600 mainboard, please ensure the USB cable is properly connected.

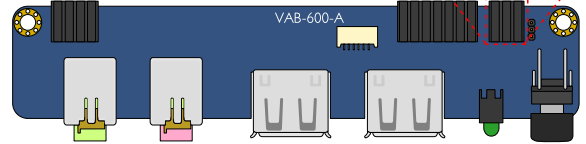
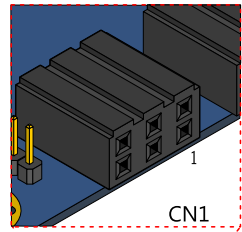
## 2 Ports and Connectors Pinout

### USB1 and USB2: USB 2.0 ports



USB1		USB2	
Pin	Signal	Pin	Signal
1	VCC (+5)	1	VCC (+5)
2	USBDN_DM_1	2	USBDN_DM_2
3	USBDN_DP_1	3	USBDN_DP_2
4	GND	4	GND

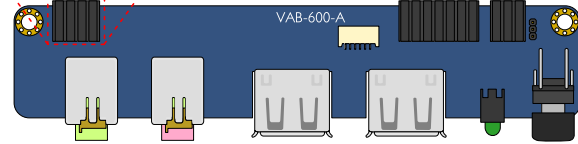
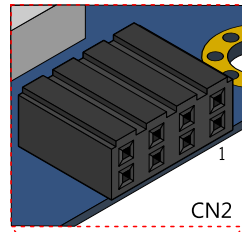
### CN1: Power On/LED/Shut down board-to-board



Pin	Signal	Pin	Signal
1	PWR_LED	2	GND
3	PWRBTN-	4	GND
5	RESET1	6	GND

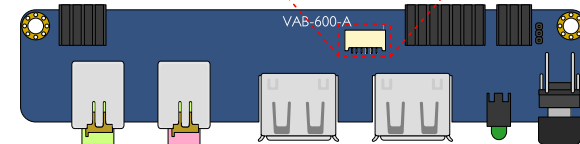
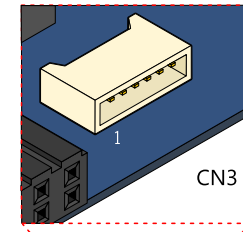
**Note:**  
Although the signal name for pin#5 is "RESET1", its function is "shut down".

### CN2: Front Audio board-to-board connector



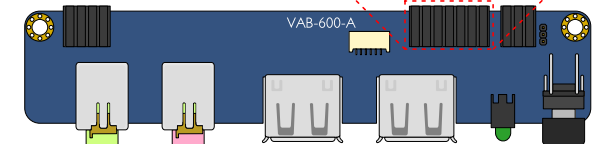
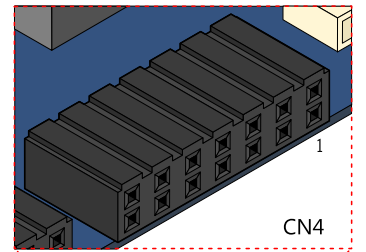
Pin	Signal	Pin	Signal
1	N/A	2	GND
3	N/A	4	MICIN1
5	LINEOUT_R	6	MICIN2
7	LINEOUT_L	8	HP_DET

### CN3: USB/GPIO board-to-board connector



Pin	Signal
1	GPIO_4
2	NA
3	GND
4	USBH3+
5	USBH3-
6	5VIN

### CN4: GPIO/I<sup>2</sup>C board-to-board connector



Pin	Signal	Pin	Signal
1	VCC33	2	5VIN
3	GND	4	VSUS33
5	GPIO20_CH	6	GPIO24_CH
7	GPIO21	8	GPIO25
9	GPIO_22	10	GPIO_26
11	GPIO_23	12	GPIO_27
13	I2C0SDA	14	I2C0SCL