

## ARM-based Pico-ITX Series

NEW

VIA

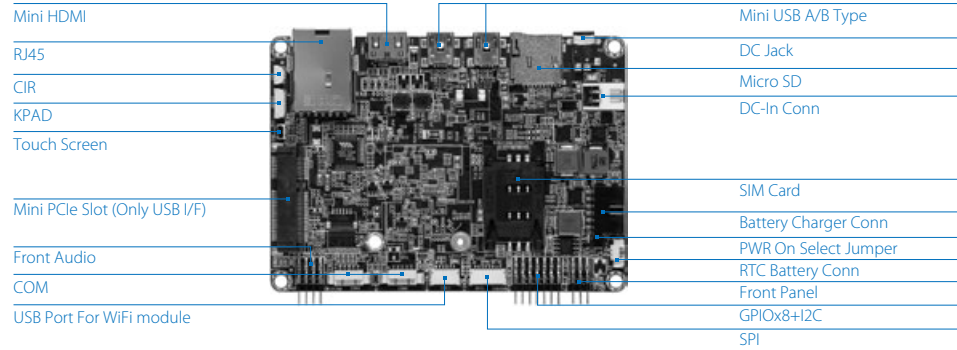
# VAB-600

Pico-ITX Cortex-A9 Board  
with Mini-USB, Mini-HDMI,  
COM and LAN

## Features

- Supports integrated graphics processing (GPU) for 3D/2D graphics acceleration
- Supports Android 4.0 and Embedded Linux
- Optional support 3G module
- Supports two COM ports (support Tx/Rx)
- Supports 12~24V DC-in
- Flexible display choices: Mini-HDMI, LVDS and TTL (optional)

## Board Placement



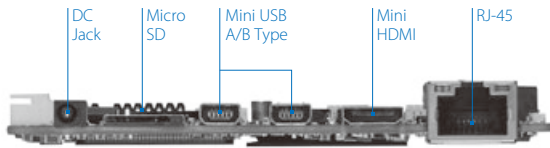
## Specifications

<b>Model Name</b>	<b>VAB-600</b>
<b>Processor</b>	Cortex-A9 single core WM8950 @800MHz
<b>System Memory</b>	1 x Onboard DDR3 1066 1GB
<b>Flash Storage</b>	1 x Onboard 512KB SPI Flash for Boot Loader 1 x Onboard 4GB eMMC Flash
<b>Graphics and Video</b>	Built-in 2D/3D Graphic Engine to support OpenGL® ES 2.0 Built-in video multi-standard decoder to support MPEG2 MP@HL, MPEG4, H.264 BP/MP/HP@L4.0, VC-1 SP/MP/AP, VP8 and JPEG/MJPEG decoding
<b>Audio</b>	VIA VT1603A I2S Audio Codec
<b>Ethernet</b>	VIA VT6113 10/100 base-TX PHY chip
<b>WiFi Module</b>	Optional VIA VNT9271B6050 WiFi module (shared with one USB port)
<b>Onboard I/O</b>	1 x DVO connector for TTL or LVDS display (the corresponding daughter card is required) 2 x COM connectors (supports Tx/Rx) 1 x Micro-SD card reader connector 1 x RTC battery pin header 1 x USB 2.0 connector 1 x SPI connector for programming SPI Flash ROM 1 x Mini card slot (supports USB 2.0 connectivity for optional 3G module) 1 x SIM card slot (supports the 3G module without built-in SIM card slot) 1 x Keypad connector 1 x CIR connector 1 x Front audio pin header for Line-in, Line-out and MIC-in 1 x Front panel pin header for system power-on, reset and power LED 1 x 4-wire resistive touch screen FPC connector (through VT1603A) 1 x Miscellaneous pin header for 1 I2C pair and 8 GPIOs 1 x 12~24V DC-In connector 1 x Battery charger connector with smart battery function (manufacturing option)
<b>Back Panel I/O</b>	2 x Mini-USB 2.0 (type A/B) ports 1 x Mini-HDMI port 1 x RJ-45 LAN port 1 x 12~24V DC-in Jack
<b>Operating System</b>	Android 4.0 and Embedded Linux
<b>Operating Temperature</b>	0°C up to 60°C
<b>Operating Humidity</b>	0% ~ 95% (relative humidity ; non-condensing)
<b>Form Factor</b>	Pico-ITX, 10 cm x 7.2 cm (3.9" x 2.8")

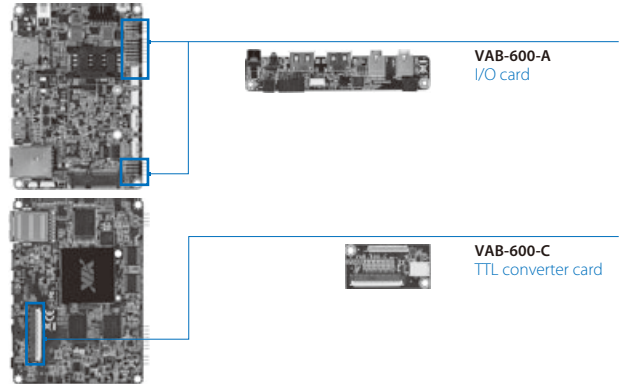
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## Back Panel I/O



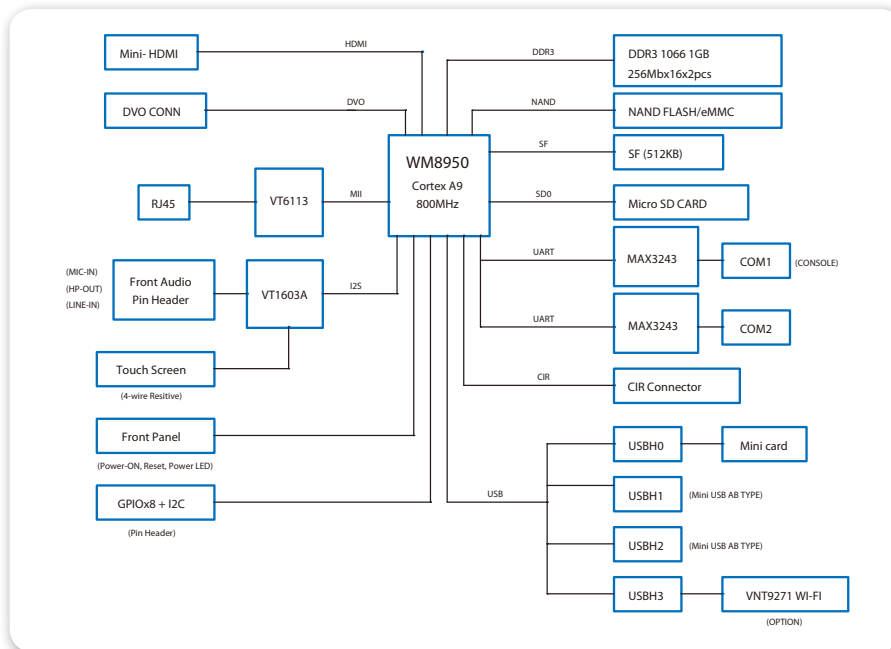
## Accessories



## Ordering Information

Model Name	CPU Frequency	Description
VAB-600	WM8950 @800MHz	Pico-ITX Board with 800MHz Cortex-A9 CPU, 4GB Flash, 1GB SDRAM, 2 x Mini-USB 2.0, 1 x Mini-HDMI, 2 x COM, 1 x LAN, 12~24V DC-in power

## Block Diagram



## Packing List

### Items

- 1 x VAB-600 board
- 1 x DC-in cable
- 1 x Front panel cable
- 1 x Front audio cable
- 1 x COM connector cable
- 1 x USB cable (for optional WiFi USB module)

### Items for Starter Kit

- 1 x VAB-600 board
- 1 x VAB-600-A
- 1 x VAB-600-C (with cable) (optional)
- 1 x Keypad cable
- 1 x GPIO/I2C cable
- 1 x Front panel cable
- 1 x Front audio cable
- 1 x COM cable
- 1 x AC adapter
- 1 x DC-in cable
- 1 x Mini-USB cable
- 1 x USB cable (for WiFi USB module)
- 1 x 7" TTL panel (with cable) (optional)