

## ARM-based Pico-ITX Series

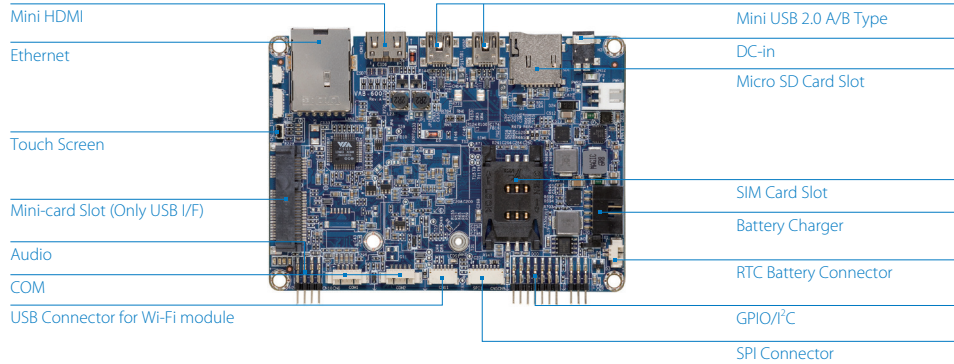
# VIA VAB-600

Flexible low-power platform for a broad range of interactive multimedia applications

### Features

- Compact 10cm x 7.2cm Pico-ITX form factor
- 800MHz VIA Cortex-A9 SoC
- Support for two COM ports (TX/RX)
- Optional Wi-Fi module
- Android and Linux software solution packs available

### Board Placement

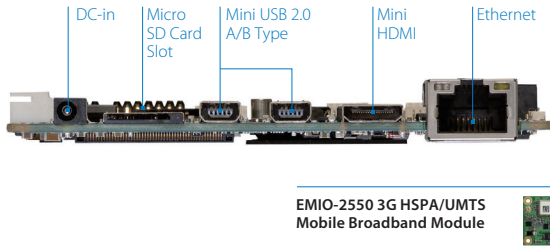


### Specifications

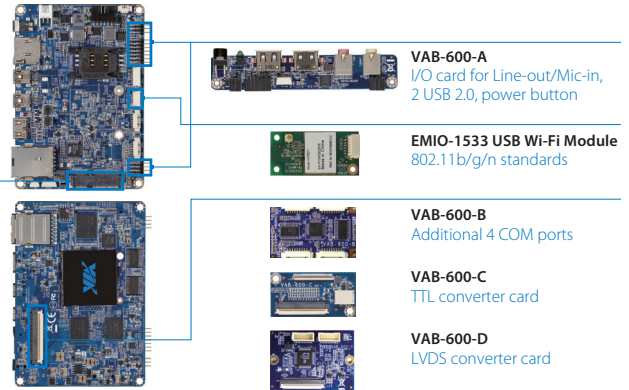
<b>Model Name</b>	<b>VAB-600</b>
<b>Processor</b>	800MHz VIA Cortex-A9 SoC
<b>System Memory</b>	1GB DDR3 SDRAM onboard
<b>Storage</b>	4GB eMMC Flash memory
<b>Boot Loader</b>	512KB SPI Flash ROM
<b>Graphics</b>	Mali-400 SP GPU 2 integrated, independent 3D/2D graphics processing units Graphics engine supporting OpenGL® ES 2.0 hardware acceleration Supports MPEG-2, VC-1 and H.264 video decoding up to 1080p
<b>LAN</b>	VIA VT6113 10/100 base-TX PHY chip
<b>Audio</b>	VIA VT1603A I2S Audio Codec
<b>HDMI</b>	Integrated HDMI 1.4 transmitter
<b>Expansion I/O</b>	1 miniPCIe slot (supports USB 2.0 connectivity for optional 3G module)
<b>Onboard I/O</b>	1 USB 2.0 connector 1 DVO connector for TTL or LVDS display (corresponding daughter card required) 2 COM port connectors (TX/RX) 1 Miscellaneous pin header for 1 I²C pair and 1 DIO (4 GPI + 4 GPO) 1 SIM card slot (supports 3G module without built-in SIM card slot) 1 RTC battery pin header 1 Keypad connector 1 CIR connector 1 SPI Flash pin header 1 Front panel pin header for system power-on, reset and power LED 1 4-wire resistive touch screen FPC connector (through VT1603A) 1 Front audio pin header for Line-out, Mic-in 1 DC-in connector 1 Battery charger connector with smart battery function (manufacturing option) 1 miniPCIe slot (supports USB 2.0 connectivity for optional 3G module)
<b>Back Panel I/O</b>	2 Mini USB 2.0 ports 1 Mini HDMI port 1 10/100Mbps Ethernet port 1 Micro SD card slot 1 DC-in jack
<b>Power Supply</b>	12V ~ 24V DC-in
<b>Operating System</b>	Android 4.0.3, Linux kernel 3.0.8
<b>Operating Temperature</b>	0°C ~ 60°C
<b>Operating Humidity</b>	0% ~ 95% (non-condensing)
<b>Form Factor</b>	Pico-ITX (10cm x 7.2cm, 3.9" x 2.8")
<b>Compliance</b>	CE, FCC



## Back Panel I/O



## Accessories



## Ordering Information

Part Number	SoC Frequency	Description
10GAU082000A0	VIA Cortex-A9 SoC @ 800MHz	Pico-ITX board with 800MHz VIA Cortex-A9 SoC, 4GB eMMC, 512KB SPI Flash ROM, 1GB DDR3 SDRAM, Mini HDMI, 2 Mini USB 2.0, 2 COM, 10/100Mbps Ethernet, Micro SD card slot, miniPCIe slot, 12 ~ 24V DC-in

## Optional Accessories

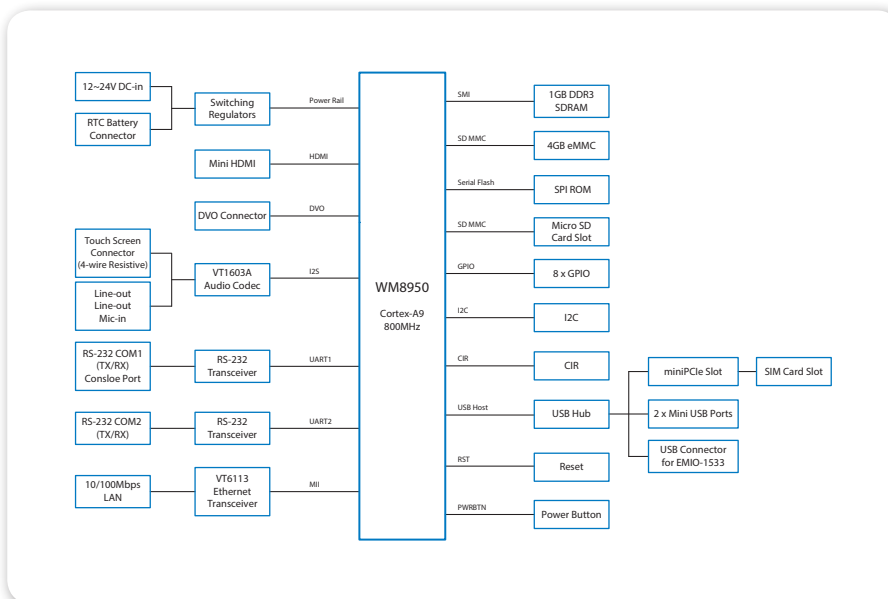
### I/O Expansion Cards

Part Number	Description
10GAX00000020	VAB-600-A I/O card for Line-out, Mic-in, 2 USB 2.0 ports, Power button
10GAZ00000020	VAB-600-B I/O card for additional 4 COM ports
10GBC00000020	VAB-600-C TTL converter card
10GBD00000020	VAB-600-D Dual-CH LVDS converter card

### Wireless Modules

Part Number	Description
EMIO-1533-00A2	VNT9271 IEEE 802.11 b/g/n USB Wi-Fi module with assembly kit
EMIO-2550-01A1	3.75G HSPA/UMTS mobile broadband full size miniPCIe module with GPS

## Block Diagram



## Packing List

Items
VAB-600 board
DC power cable
Front panel cable
Audio cable
COM cable
USB cable

### Items for Starter Kit

VAB-600 board
AC-to-DC adpater
DC power cable
VAB-600-A I/O card
VAB-600-D I/O card
Keypad cable
GPIO/I <sup>2</sup> C cable
Front panel cable
Audio cable
COM cable
USB cable
USB cable for USB Wi-Fi module
7" LVDS panel with cable (optional)