

## ARM-based Pico-ITX Series

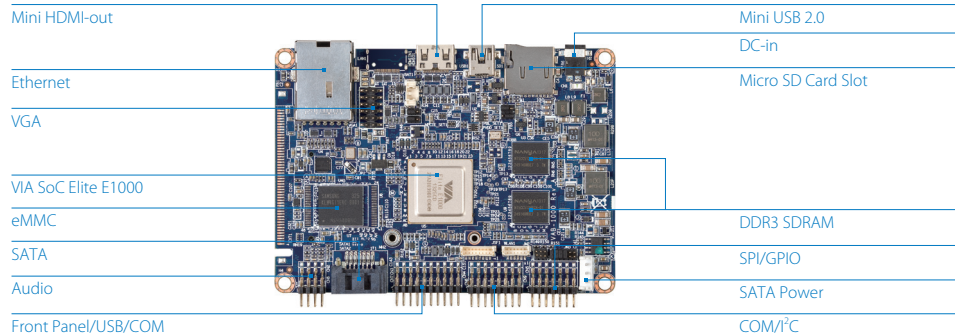
# VIA VAB-1000

Advanced graphics and video capabilities with a rich I/O feature set for interactive multimedia applications

## Features

- Compact 10cm x 7.2cm Pico-ITX form factor
- 1.0GHz VIA Elite E1000 Cortex-A9 dual-core SoC
- Dual display support including full HD content and dual channel LVDS
- Graphics powerhouse
- Android software solution pack available

## Board Placement

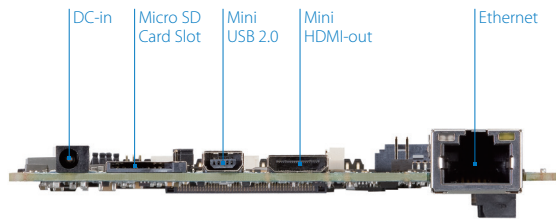


## Specifications

<b>Model Name</b>	<b>VAB-1000</b>
<b>Processor</b>	1.0GHz VIA Elite E1000 Cortex-A9 dual-core SoC
<b>System Memory</b>	2GB DDR3 SDRAM onboard
<b>Storage</b>	4GB eMMC Flash memory 1 SATA connector
<b>Graphics</b>	3 integrated, independent 3D/2D and video processing units Graphics engine supporting OpenGL® ES 3.0 hardware acceleration Supports MPEG-2, VC-1 and H.264 video decoding up to 1080p
<b>LAN</b>	Realtek RTL8111G Gigabit Ethernet controller
<b>Audio</b>	Wolfson WM8960 Audio Codec
<b>HDMI</b>	Integrated HDMI 1.4 transmitter
<b>Expansion I/O</b>	1 miniPCIe slot
<b>Onboard I/O</b>	1 SATA connector 1 SATA power connector with +12V/+5V select jumper for SSD 1 USB pin header for Wi-Fi module 1 Dual-channel 18/24-bit LVDS panel connector 1 Front panel pin header for 2 USB 2.0 ports, 1 COM (TX/RX) port, power-on and 2 activity LED indicators 1 Miscellaneous pin header for 2 COM (TX/RX) ports and 3 I <sup>2</sup> C 1 Miscellaneous pin header for Digital I/O (4 GPIO) 1 JTAG pin header (for debugging) 1 SPI Flash pin header 1 Audio pin header for Line-in, Line-out, Mic-in 1 miniPCIe slot
<b>Front Panel I/O (with VAB-1000-T)</b>	2 USB 2.0 ports 3 Audio jacks: Line-in, Line-out and Mic-in 1 Power on/off button with built-in LED 1 SSD activity LED indicator 1 USB/COM LED indicator
<b>Back Panel I/O</b>	1 Mini USB 2.0 port 1 Mini HDMI 1 Gigabit Ethernet port 1 Micro SD card slot 1 DC-in jack
<b>Power Supply</b>	12V DC-in
<b>Operating System</b>	Android 4.4.2
<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



VAB-1000-L  
LVDS converter card



## Accessories



EMIO-1533 USB Wi-Fi Module  
802.11b/g/n standards



VAB-1000-T  
I/O card for Line-in/Line-out/  
Mic-in, 2 USB 2.0, 2 activity LEDs,  
Power button



EMIO-2550 3G HSPA/UMTS  
Mobile Broadband Module



EMIO-1541 miniPCIe Wi-Fi Module  
802.11b/g/n standards

## Ordering Information

Part Number	CPU Frequency	Description
10GBL100200A0	VIA Elite E1000 Cortex-A9 dual-core SoC @ 1.0GHz	Pico-ITX board with 1.0GHz VIA Elite E1000 Cortex-A9 SoC, 4GB eMMC, 2GB DDR3 SDRAM, Mini HDMI, LVDS, 2 USB 2.0, COM, Gigabit Ethernet, Micro SD card slot, miniPCIe slot, 12V DC-in (Packed with VAB-1000-T I/O card)

## Optional Accessories

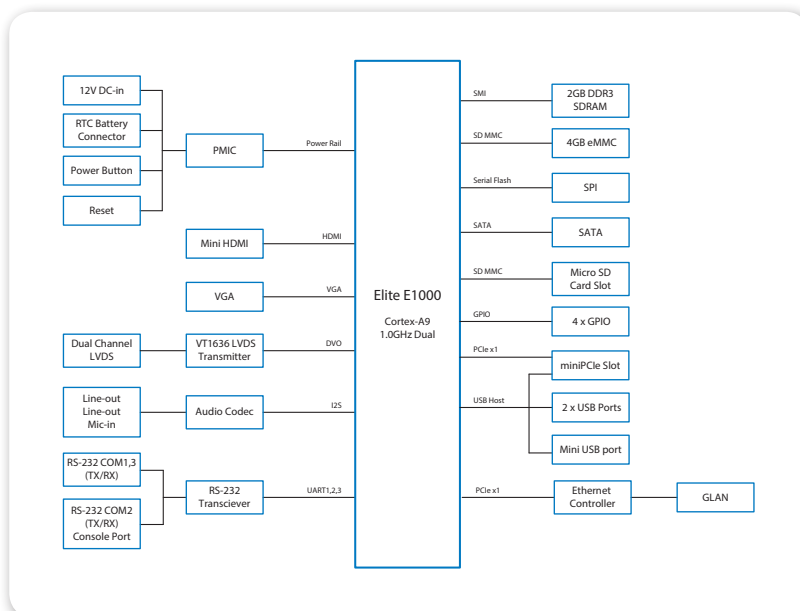
### I/O Expansion Cards

Part Number	Description
10GBN00000020	VAB-1000-L LVDS converter card
10GBQ00000020	VAB-1000-T I/O card for Line-in, Line-out, Mic-in, 2 USB 2.0 ports, 2 activity LEDs, Power button

### Wireless Modules

Part Number	Description
EMIO-1533-00A2	VNT9271 IEEE 802.11 b/g/n USB Wi-Fi module with assembly kit
EMIO-1541-00A1	VNT9485 IEEE 802.11 b/g/n miniPCIe Wi-Fi module with assembly kit and antenna
EMIO-2550-00A1	3.75G HSPA/UMTS mobile broadband full size miniPCIe module with GPS and SIM card slot (*Note: GPS function is not currently supported for VAB-1000)

## Block Diagram



## Packing List

Items
VAB-1000 board
VAB-1000-T I/O card
Screw pack for miniPCIe card
Console cable