

ARM-based Pico-ITX Series

VIA

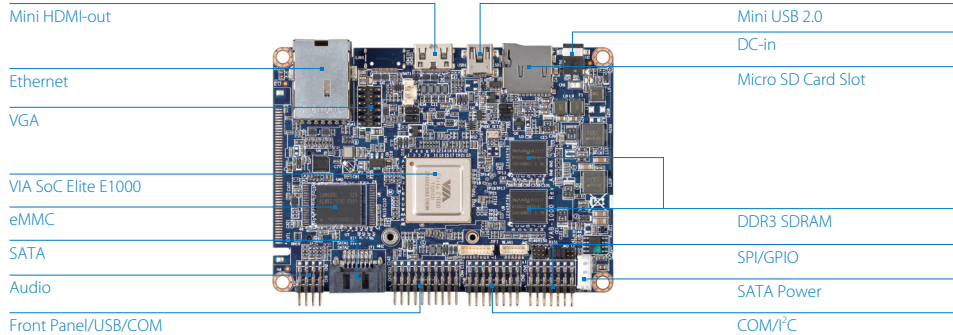
VAB-1000

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

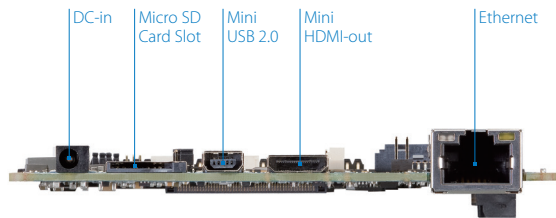


Specifications

| | |
|--|--|
| Model Name | VAB-1000 |
| Processor | 1.0GHz VIA Elite E1000 Cortex-A9 dual-core SoC |
| System Memory | 2GB DDR3 SDRAM onboard |
| Storage | 4GB eMMC Flash memory 1 SATA connector |
| Graphics | 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 |
| LAN | Realtek RTL8111G Gigabit Ethernet controller |
| Audio | Wolfson WM8960 Audio Codec |
| HDMI | Integrated HDMI 1.4 transmitter |
| Expansion I/O | 1 miniPCIe slot |
| Onboard I/O | 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 ² 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 |
| Front Panel I/O (with VAB-1000-T) | 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 |
| Back Panel I/O | 1 Mini USB 2.0 port 1 Mini HDMI 1 Gigabit Ethernet port 1 Micro SD card slot 1 DC-in jack |
| Power Supply | 12V DC-in |
| Operating System | Android 4.4.2 |
| Operating Temperature | 0°C ~ 60°C |
| Operating Humidity | 0% ~ 95% (non-condensing) |
| Form Factor | Pico-ITX (10cm x 7.2cm, 3.9" x 2.8") |
| Compliance | 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

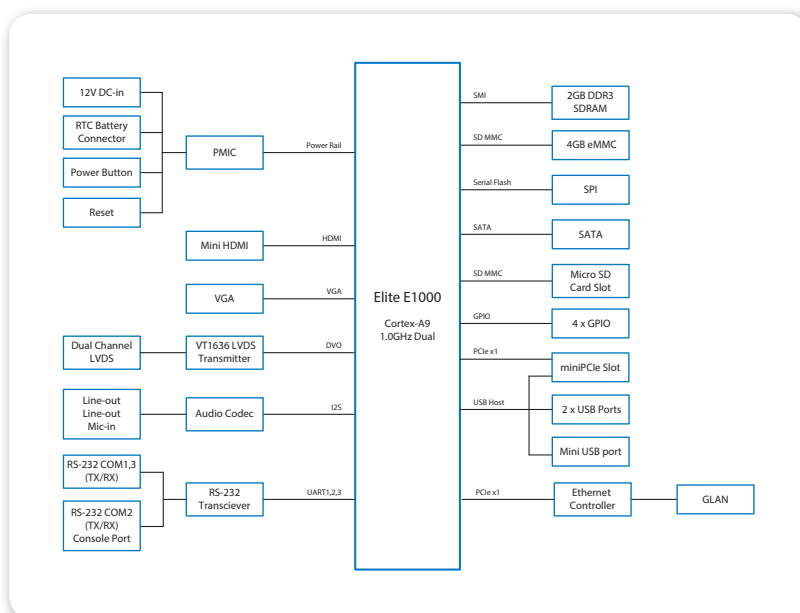
I/O Expansion Cards

| 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 |

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