

3.5" SBC Series

VIA VAB-630

Cost effective single board computer with flexible I/O and rich connectivity

Features

- Compact 3.5" SBC Form Factor
- Hardware acceleration for smooth 1080p video playback
- Android solution pack available
- Optional 12V(default) or 5V power input
- Support for 3G, Wi-Fi, & BT wireless connectivity



Board Placement

Ethernet

COM

USB Connector

SIM Card Slot

miniPCIe Slot

Line-out

Mic-in

Micro SD Card Slot

Micro USB 2.0

USB 2.0

HDMI

DC-in

Battery Charger

VIA Dual-core SoC

DDR3

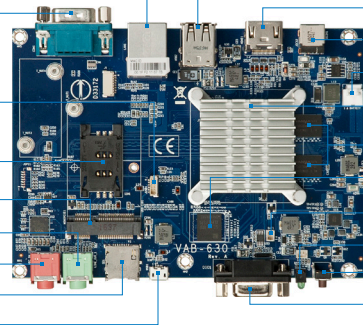
eMMC

RTC Battery Connector

Power LED

Power Button

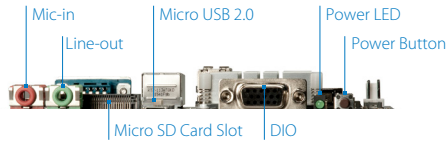
DIO



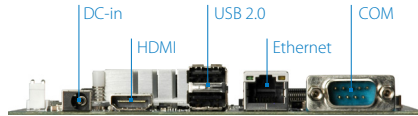
Specifications

| | |
|------------------------------|--|
| Model Name | VAB-630 |
| Processor | 1.0GHz VIA Cortex-A9 dual-core SoC |
| System Memory | 1GB DDR3 SDRAM onboard |
| Storage | 4GB eMMC flash memory |
| Boot Loader | 512KB SPI Flash ROM |
| Graphics | Mali-400 SP GPU 2 integrated, independent 3D/2D graphics processing units Graphics engine supporting OpenGL® ES 2.0 hardware acceleration Supports MPEG-2 and H.264 video decoding up to 1080p |
| LAN | ASIC AX88772CLF |
| Audio | VIA VT1603A I2S Audio Codec |
| HDMI | Integrated HDMI 1.4 Transmitter |
| USB | ASIC USB2514B-AEZC USB 2.0 hi speed 4-port hub controller |
| Expansion I/O | 1 miniPCIe slot |
| Onboard I/O | 1 Single-channel LVDS connector 1 miscellaneous pin header for I ² C touch screen interface 1 USB connector 1 UART (console port connector) 1 RTC battery connector 1 Battery charger connector 1 Reset connector 1 SIM card slot (supports 3G module without built-in SIM card slot) 1 miniPCIe slot |
| Front Panel I/O | 1 Micro USB 2.0 OTG port 1 DIO port supporting 10 GPIO with 3.3V power 1 Micro SD card slot 2 Audio jacks : Line-out and Mic-in 1 Power LED 1 Power Button |
| Back Panel I/O | 1 HDMI port 2 USB 2.0 ports 1 COM port for RS-232 (TX/RX) 1 10/100Mbps Ethernet port 1 DC-in jack |
| Power Supply | 12V DC-in (5V DC-in optional) |
| Operating System | Android 5.0, Linux Kernel 3.4.5 |
| VIA Smart ETK | Watchdog timer, GPIO, UART |
| Operating Temperature | 0°C ~ 60°C |
| Operating Humidity | 0 ~ 90% @ 40°C (non-condensing) |
| Form Factor | 14.6cm x 10.2cm (5.75" x 4.02") |
| Compliance | CE, FCC |

Front Panel I/O



Back Panel I/O



Accessories



EMIO-5531 USB Wi-Fi + BT Module
802.11b/g/n standards
Bluetooth 2.1 + EDR specification



EMIO-2550 3G HSPA/UMTS Mobile Broadband Module



EMIO-2531 miniPCIe Wi-Fi + BT Module
802.11b/g/n standards
Bluetooth 2.1 + EDR specification

Ordering Information

| Part Number | SoC Frequency | Description |
|---------------|--------------------------------------|---|
| 10GHL126000A0 | VIA Cortex-A9 dual-core SoC @ 1.0GHz | 3.5" SBC with 1.0GHz VIA Cortex-A9 dual-core SoC, 4GB eMMC, 1GB DDR3 SDRAM, HDMI, 2 USB 2.0, 1 Micro USB 2.0 OTG, COM, DIO, 10/100Mbps Ethernet, miniPCIe slot, Micro SD card slot, 12V DC-in |

Optional Accessories

Power Accessories

| Part Number | Description |
|--------------|---|
| 99G63-02033A | 12V 36W power adapter (power plug not included) |

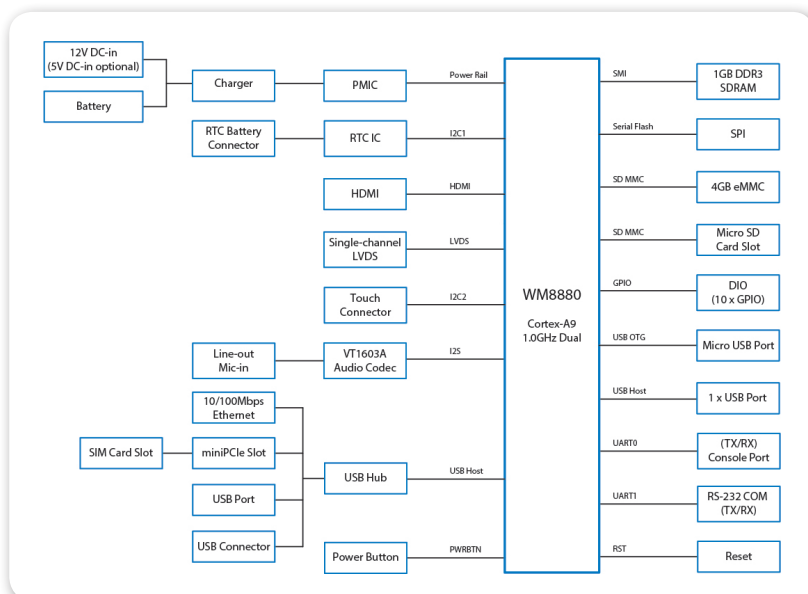
Touch Panel

| Part Number | Description |
|----------------|---|
| STK-10630-00A0 | 10.1" LVDS LCD Touch panel with LVDS and touch cables |

Wireless Accessories

| Part Number | Description |
|----------------|---|
| EMIO-5531-00A1 | VAB-820-W IEEE 802.11 b/g/n USB Wi-Fi + Bluetooth module with assembly kit and antenna |
| EMIO-2531-00A1 | VAB-820-W-M IEEE 802.11 b/g/n miniPCIe Wi-Fi & Bluetooth module with assembly kit and antenna |
| EMIO-2550-01A1 | 3.75G HSPA/UMTS mobile broadband full size miniPCIe module with assembly kit and antenna |

Dimensions



Packing List

| Items |
|---------------|
| VAB-630 Board |
| RTC battery |