

ARM-based Pico-ITX Series

VIA

VAB-800

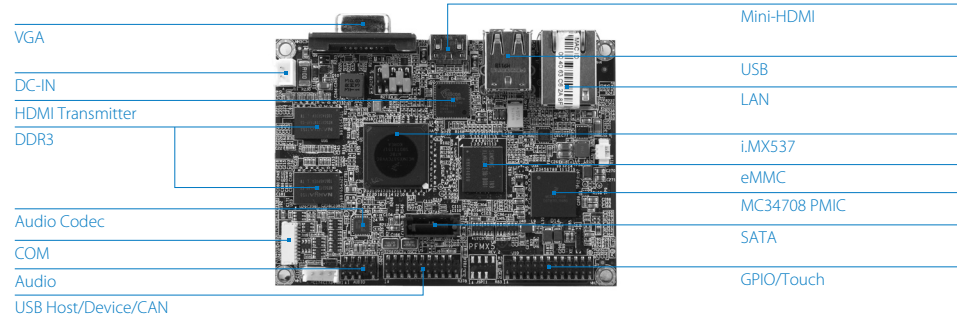
Pico-ITX Freescale Cortex-A8 Board with SATA, COM, LVDS, Mini-HDMI, VGA and USB

Features

- Supports integrated graphics processing (GPU) for 3D/2D graphics acceleration and dual displays
- Supports two single-channel 18/24-bit LVDS connectors
- Supports four USB ports (two as pin headers) and one USB device port
- Supports CAN and COM ports
- Supports mini-HDMI and VGA ports
- Small form factor and low power design



Board Placement



Specifications

Model Name	VAB-800
Processor	Freescale Cortex-A8 single core iMX537 @800MHz
System Memory	Onboard 1 x 1GB DDR3-800 SDRAM
Flash	4GB eMMC flash onboard, supports up to 64GB
Graphics	Supports two integrated graphics processing: an OpenGL® ES 2.0 3D graphics accelerator and an OpenVG™ 1.1 2D graphics accelerator
Ethernet	SMSC LAN8720A 10/100 PHY transceiver with HP Auto-MDIX support
Audio	Freescale SGTL5000 low power stereo codec with headphone amp
HDMI	Onboard HDMI transmitter
CAN	TI SN65HVD1050 EMC optimized CAN transceiver
USB Hub	SMSC USB 2.0 high speed 4-port hub controller
Onboard I/O	1 x SATA I connector with voltage select jumper 1 x SATA DOM power supply connector 2 x COM connectors with power supply (one supports 8-wire for DCE mode, another supports 2-wire for debug) 2 x Single-channel 18/24-bit LVDS connectors 1 x Micro SD connector 1 x RTC battery connector 1 x Front audio pin header for line-in, line-out and MIC-in 1 x JTAG connector 1 x Boot flash select pin headers 1 x Miscellaneous pin header for 2 USB 2.0 ports, 1 USB device port, 2 CAN bus ports, system power-on and reset 1 x Miscellaneous pin header for 4-wire resistive touch screen interface, 1 I2C pair and 8 GPIOs 1 x 5V DC-in power connector
Back Panel I/O	1 x VGA port 2 x USB 2.0 ports 1 x Mini-HDMI port 1 x RJ-45 LAN port
Watch Dog Timer	Integrated watch dog timer supports two comparison points. Each comparison point can interrupt ARM core, 2nd comparison point capable of generating external interrupts on WDOG line
Power	3W typical
Operating System	Linux Kernel 2.6
Operating Temperature	Commercial temperature: 0°C to 60°C or industrial temperature: -40°C to +85°C
Operating Humidity	0% ~ 95% (relative humidity ; non-condensing)
Form Factor	Pico-ITX (8-layer), 10 cm x 7.2 cm (3.9" x 2.8")

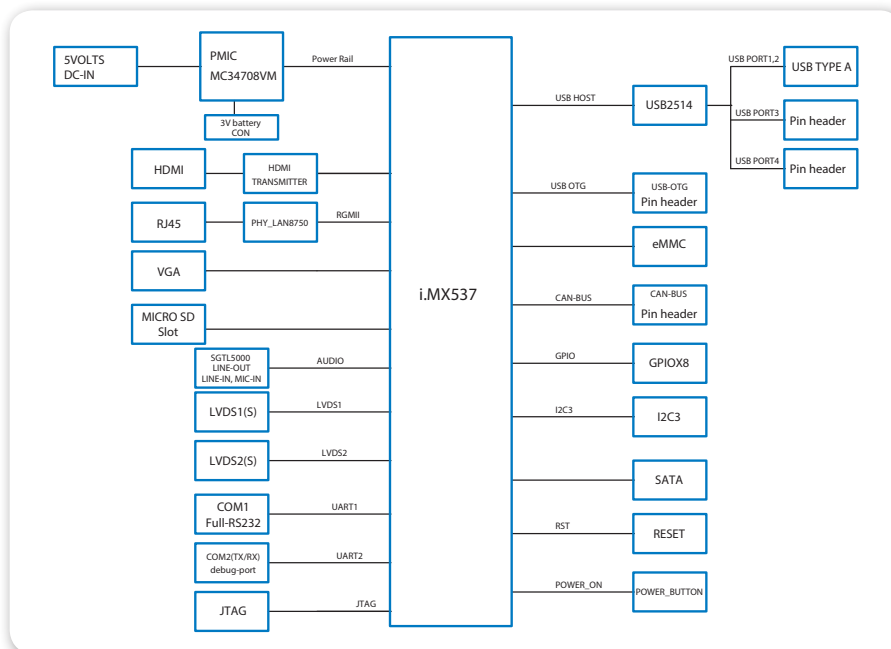
Ordering Information

Model Name	CPU Frequency	Description
VAB-800	iMX537 @800MHz	Pico-ITX Board with 800MHz Freescale Cortex-A8 CPU, 4GB Flash, 1GB RAM, VGA, Mini-HDMI, 2 x LVDS, 5 x USB 2.0, 2 x COM, LAN, DC-in power, CAN Bus

Ordering Information

Partner Number	CPU Frequency	Description
10GZ 9084000A 0 for Gift Box 10GZ908400020 for Bulk Pack	800MHz Freescale iMX537 Cortex-A8	Pico-ITX Board with 800MHz Freescale Cortex-A8 CPU, 4GB Flash, 1GB RAM, VGA, Mini-HDMI, 2 x LVDS, 5 x USB 2.0, 2 x COM, LAN, 5V DC-in power, CAN Bus (Commercial temperature: 0°C to 60°C)
10GZ 9084400A 0 for Gift Box 10GZ908440020 for Bulk Pack	800MHz Freescale iMX537 Cortex-A8	Pico-ITX Board with 800MHz Freescale Cortex-A8 CPU, 4GB Flash, 1GB RAM, VGA, Mini-HDMI, 2 x LVDS, 5 x USB 2.0, 2 x COM, LAN, 5V DC-in power, CAN Bus (Industrial temperature: -40°C to + 85°C)

Block Diagram



Packing List

Items
One DC power cable
One debug COM cable
One audio cable
One 2-port USB cable