

SOM Modules

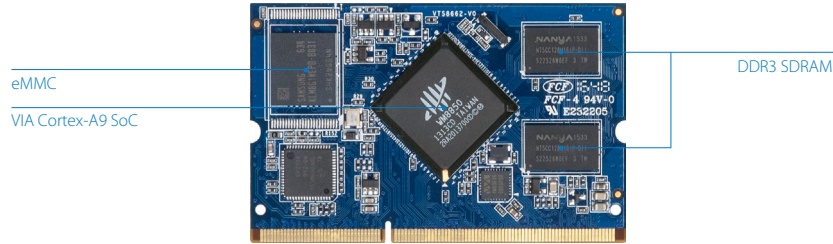
VIA SOM-6X50

Compact cost-effective solution for HMI applications with quick-time-to-market

Features

- 1.0GHz VIA Cortex-A9 SoC
- Supports MPEG-2 and H.264 video decoding up to 1080p
- Supports up to 6 UART and 3 USB 2.0
- Supports HDMI and LVDS
- Reference carrier board with built-in Wi-Fi and Bluetooth available

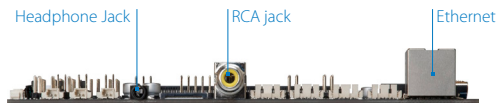
Board Placement



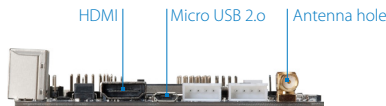
Specifications

Model Name	SOM-6X50
Processor	1.0GHz VIA Cortex-A9 SoC
System Memory	512MB DDR3 SDRAM
Storage	8GB 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	Realtek RTL8201 10/100 base-TX PHY chip
Audio	Wolfson WM8960 I2S Audio Codec
HDMI	Integrated HDMI 1.4 Transmitter
USB to UART	CP2108-B02-GM USB to UART 4-port controller
Supported I/O	1 HDMI 1 Single-Channel LVDS or DVO 1 CSI 3 USB 2.0 ports 6 UART (5 TX/RX, RTS/CTS, 1 Debug TX/RX) 11 GPIO 1 10/100Mbps Ethernet port 3 I ² C 1 SDIO 1 SD Card slot 2 SPI 4 PWM 1 Line-in, Line-out, Mic-in 1 Headphone-out
Operating System	Linux 3.4.5
Operating Temperature	0°C ~ 60°C
Operating Humidity	0% ~ 95% (non-condensing)
Form Factor	6.76cm x 4.3cm (2.66" x 1.69")

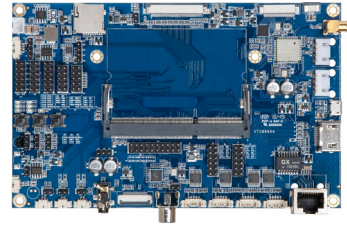
Carrier Board Front Panel I/O



Carrier Board Right Panel I/O



Carrier Board (SOMDB1)



Specifications

Model Name	SOMDB1
Onboard I/O	1 RGB LCD panel connector 1 Touch connector 2 USB 2.0 pin headers 5 COM port pin headers (4 RS-232; 1 Debug) 1 Camera connector 11 GPIO 1 Wi-Fi 802.11 b/g/n & Bluetooth 4.0 module 3 I ² C 2 SPI 1 IR 1 Audio pin header for Line-in, Line-out, 2 Mic-in 1 Reset button 1 Watchdog timer reset button 1 Power button 1 RTC connector 1 DC in connector
Front Panel I/O	1 Composite RCA jack 1 10/100Mbps Ethernet port 1 Headphone jack
Back Panel I/O	1 Micro SD card slot
Right Panel I/O	1 HDMI port 1 Micro USB 2.0 port 1 Wi-Fi/Bluetooth Antenna connector
Power Supply	5V~19V DC-in
Operating Temperature	0°C ~ 60°C
Operating Humidity	0% ~ 95% (non-condensing)
Form Factor	16cm x 10cm (6.3" x 3.94")

Ordering Information

Model Name	SoC Frequency	Description
00GJQ10E00020	VIA Cortex-A9 SoC @ 1.0GHz	SOM module with 1.0GHz VIA Cortex-A9 SoC, 8GB eMMC, 512 SPI ROM, 512MB DDR3 SDRAM, HDMI, Single-Channel LVDS or DVO, 1 CSI, 3 USB 2.0, 6 UART, GPIO, 10/100Mbps Ethernet
00GJU10E00020	N/A	SOM-6X50 evaluation carrier board with debug card, debug cable, USB cable and DC power cable

Block Diagram

