Introduction

S3C6410 ARM11 development board bundled with a 4.3" TFT LCD. The most popular ARM11 development kit of 2012! 256MB DDR RAM, 1GB NAND Flash, WinCE / Linux / Android support, advanced Video / graphic support with 3D acceleration.

Specification

OK6410 Core Board — 6 layer PCB, stable performance tested through electromagnetism

- Samsung S3C6410 microcontroller based on the ARM1176JZF-S core, main frequency @ 533/667MHz;
- 256MB Mobile DDRram;
- 1GB NAND Flash;
- 12MHz, 48MHz, 27MHz, 32.768KHz clock source;
- 5V power supply adaptable
- Dimension: 60 x 50mm

OK6410 Carrier Board— 4 layer PCB, stable performance tested through electromagnetism

- One reset button implemented with specific reset chip;
- 8-bit toggle switch for selecting boot mode;
- Four serial ports, including 1 5-wire RS232 and 3 3-wire RS232;
- One 100M Ethernet port with DM9000AE and indicators;
- One USB Host interface supporting USB1.1 protocol;
- One USB Slave (MINI-USB) interface supporting USB2.0 protocol;
- One high-speed SD card slot supporting SD Memory and SDIO;
- One WIFI expansion interface;
- Stereo audio I/O sockets;
- LCD and touch screen interface supporting 3.5", 4.3", 5.6", 5.7", 7" TFT LCD;
- One CVBS output interface (PAL/NTSC)
- One CMOS camera connector supporting ITU-R BT601/656 8-bit mode;
- Built-in RTC (Real Time Clock) with back-up battery;
- One JTAG interface using 2*10pin connector;
- One Infrared receiver;
- Four user LEDs;
- One Buzzer;
- Three 2*10pin expansion interfaces. One of the expansion interface contains 1 x GND, 1 x DA, 8 x AD, 10 x IO, 1 x SPI., One for connecting 8 x 8 matrix keypad; the other one can be connected to the three TTL serial ports and 6 I/Os
- Dimension: 145 x 105mm

Package

Standard Components:

1. 1 x TE6410-CORE ARM11 System on Module
2. 1 × OK6410 carrier board
3. 1 × 4.3" LCD with touch panel and stylus.
4. 1 × serial port cable

5. 1 × USB cable
6. 1 × Ethernet cable
7. 1 × 5V power supply
8. 1 × DVD

Softwares

All softwares are provided for free!

Embedded Linux	Update Note	10/10/2014 Resolved VGA display shaking;
		          Optimised Flash bad block management
		
		08/08/2014 Added support for Samsung K9K8G08U0E NAND Flash chip;
		          Updated RTL8188 USB WIFI driver;
		          Added WIFI hotspot function;
		          Added support for WIFI WPA/WPA2 encryption ;
		          Resolved 5.6" LCD blinking;
		          Added support for 5" 800*480 LCD;
		          Added support for USB 3G modules: ZTE MC2716, ZTE MF210, ZTE AD3812, ZTE 591, HUAWEI E261, HUAWEI EC189
		
		06/27/2014 Added GPS test program under Qt4.7.1
		
		06/13/2014 Added DM9000CEP driver

	BootLoader	U-BOOT-1.1.6, supporting USB2.0 download. 100% open source.
	kernel	Linux 3.0.1, 100% open source
	BootLoader	U-BOOT-1.1.6, 1-key downloading & burning.
	Filesystem	cramfs and yaffs2 provided
	Graphical Interface	Qtopia 2.2.0, Qtopia 4.4.3 and QT4.7, runtime-switchable
	Drivers	• system interrupt and clock driver • Serial device driver • SD card driver • NAND Flash driver • Ethernet card driver • Audio driver • USB (disk, mouse, keyboard, camera) driver • Display (LCD/VGA/TV) • Touch Screen driver • CAN Bus driver • RS485 driver

		• Temperature Sensor driver • SPI driver • PWM driver • ADC driver • MFC driver • LED driver • Button driver • Temperature Sensor driver • Infrared driver • SDIO WIFI driver • 3G module driver • CMOS Camera driver
	Hardware Acceleration	• JPEG CODEC • MFC (Multi Format CODEC) • CMM (Codec Memory Management) • TVOUT • Post processor • source code and API description provided
	Demo Applications	• H.264 hardware decode testing program • MPEG-4 hardware decode testing program • H.263 hardware decode testing program • VC-1 hardware decode testing program • Multiple decoding and quarter hardware decoding • image acquisition and MFC coding test • MFC decoding and camera image acquisition • JPEG decoding • TV output MFC decoding and camera image display • TV output H.264 decoding • Multi-process test • Multi-thread test • process communication program • SOCKET programing demo • LED test program • button test program • temperature sensor test • multi-serial port test
	Ethernet support	• Complete TCP/IP protocol • Telnet server • Telnet remote logging in • FTP server • Web Server
	LCDsupport	wide resolution support: 320×240, 480×272, 640×480,

		800×600, 1024×768
	Cross Compilers	arm-linux-gcc-4.2.2-eabi
WinCE	Version	WinCE 6.0 R3 (BSP provided as source code)
	BootLoader	E-BOOT supporting USB2.0 download
	Drivers	• system interrupt and clock driver • Serialport driver • SD card driver, supporting upto 32GB SD card, Hot-Plug • NAND Flash driver • Ethernet card driver • Audio driver • RTCdriver • USB (Host & OTG) driver • Display (LCD)driver • Touch Screen driver • TV driver • Camera driver • CMM driver • MFC driver • JPEG driver • IIC driver • SPI driver • WIFI driver • LED driver • ADC driver • BUZZER driver • temperature sensor driver
	Hardware Acceleration	• Samples for DShowFilters • Samples for HW Jpeg encoder/decoder • Samples for HW MFC decoder • Samples for CMM(Codec Memory Management) driver • Samples for DivX decoder • source code, examples, and API description provided
	Demo Applications	• CMOS camera test • TV test • LED test • PWM buzzer test • temperature sensor test • ADC test • audio test • multi-serial port test

		• GPS test • JPEG hardware decoding test • MFC test supporting MPEG-4/H.263/H.264 hardware decoding • HybridDivx test • OPENGLES test (OPENGL1.1 and OPENGL2.0)
	Video support	wide resolution support: 320×240, 480x272, 640×480, 800×600, 1024×768
Android	Version	Android-2.3.4
	Bootloader	U-boot-1.1.6, source code provided
	Kernel	Linux-2.6.36.2
	Driver Support	• System Frequency: 667MHz • Nand Flash driver • Serial Port driver • DM9000 Ethernet Driver • touch screen driver • LCD driver: 3.5", 4.3", 5.6", 7" • DM9000 Ethernet driver • SD card driver • Sound card driver (ALSA) • WIFI driver • CMOS camera driver • USB 3G module driver • USB Bluetooth driver • USB Disk driver • USB ADB driver • button driver
	Applications	• Web Browser • Audio/Video Player • Image Viewer • Text Viewer • Alarm Clock • Music • Email • Calculator • Calendar