YY-i.MX25 Linux Embedded System

远盈科技

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Starting from Oct,2009 , YUANYING Tech has invested a lot of resource in the system design with FREESCALE ARM series product, up to date we have launched the series development platform based on i.MX28、i.MX35、i.MX51，largely help our customers shorten the time to market about their product and create the success one and another. Now we are proud to announce we have launched i.MX25 Linux system level platform：YY-i.MX25L。

i.MX25 is ARM926EJS core, up to 400MHz, own 16KB I-Cache and 16KB D-cache，also 128KB SRAM as well. Meanwhile, which include both LCDC and SLCDC controller to support display，CE-ATA and P-ATA for mass storage, 12-bit 3 channels ADC，three I2C interfaces， and five UART ports，one Ethernet interface，two CAN interface，two SD/MMC interface. Four timers and 4 channel PWM output, HS USB OTG+ FS USB Host with HF interface. CSI interface to support CMOS sensor input. Regarding display interface, which integrates LCDC and SLCDC connection. About system RAM, adopt DDR2 interface，it's new member for industrial application。

i.MX25L is the system platform based on Linux 2.6.31 kernel，treat ext2 as system file，own i.mx258+128MB DDR2 system hardware, be able to boot up form SD card or NAND Flash，also i.MX25L including 7" LCD and resistance touch panel. Which built in i.MX25 all input/output resource. Which still adopt core board + bottom board structure，the components of CPU core board meet the industrial level，be able to work at the temperature range of -40C to +85C，and storage temperature from -55C to +125 degree. i.MX25L can widely applied for intelligent electric network, outdoor multimedia, industrial control and HMI, medical equipment and so on .Which is the good selection to power meter terminal, HMI of industry equipment, automotive ECU, medical device display interface。

About the business model, YUANYING support core board selling and PCBA business model. And, promise to deliver the cost effective performance among ARM9 system to her customers.

◆ **Hardware Feature**

CPU

※ i.MX25
※ ARM926EJS 400MHz
※ 16K I-Cache
※ 16K D-Cache
※ LCD and SLCD controller integrated
※ 2 X CAN controller
※ 1 X Ethernet port, and one CMOS Sensor CSI interface

Memory

※ Memory：Chip Internal integrate 128MB SRAM + 2KB security ROM, System support DDR2
※ NAND：2GB(alternative with SD card)

Connection Interface

※ USB port： HS USB OTG and HS USB Host
※ SD： two SD card socket (one of it as system Boot up)
※ FEC： 10/100M Ethernet
※SIM interface: 2 x SIM interface
※SSI: 2 x SSI interface
※PWM: 4 X PWM channels output
※P-ATA: One P-ATA interface, up to 66Mbytes/s
※ UART：5 x UART interface
※ I2C： 3 X I2C interface
※Two CE-ATA, SDIO/MMC interface
※ TOUCH：7” resistance touch panel

A-V output

※ LCD： 7” TFT LCD, 800x480 resolution
※ Audio IN： MIC
※ Audio out： Headphones
※ SPDIF output：option

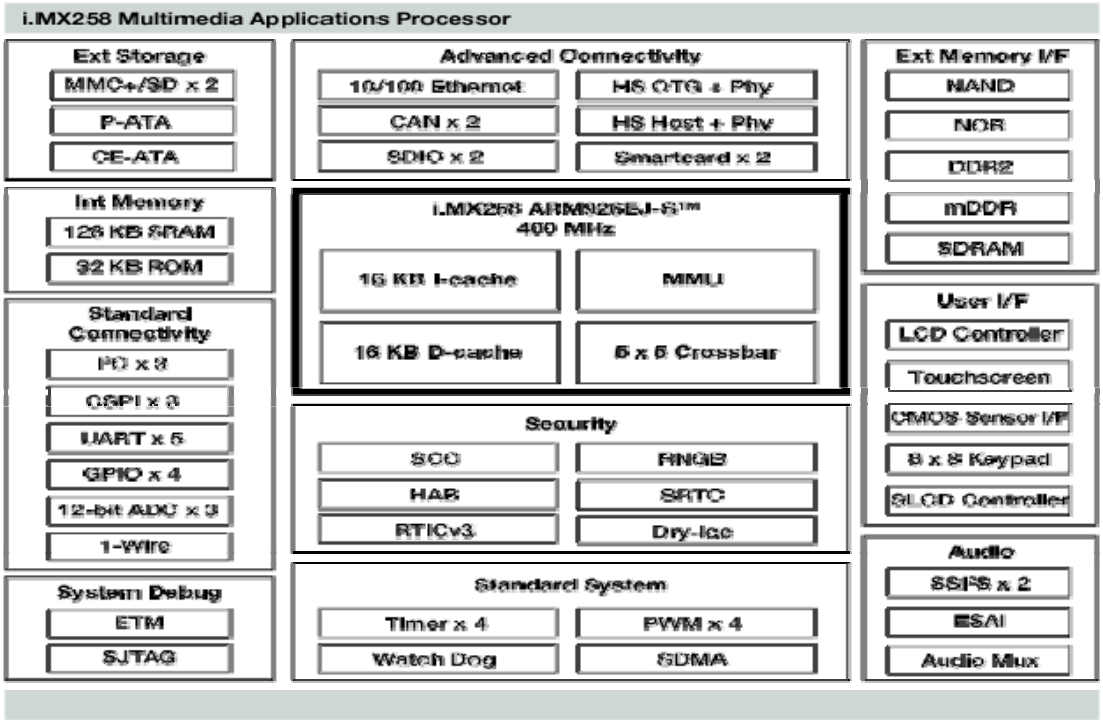
Clock and Power Supply

※ Power： 5V 2A DC power supply

Wireless communication

※ WiFi： WiFi 802.11g/b (option)

Block Diagram



■ BOOT mode setting:

Table 40-3. Boot Mode Selection Map

ETM Enable/ LCD_ DATA[5]	VOLTAGE SELECTOR/ LCD_ DATA[4]	BM3/ LCD_ DATA[3]	BM2/ LCD_ DATA[2]	BM1/ LCD_ DATA[1]	BM0/ LCD_ DATA[0]	PORT	BOOT MODE
x	x	0	0	0	0	USB0	USB (unencrypted vs. encrypted is under OTP control)
x	0	0	0	0	1	I2C0	I2C0 master, 3.3 V
x	1	0	0	0	1	I2C0	I2C0 master, 1.8 V
x	0	0	0	1	0	SPI2	SPI master SSP2 boot from flash, 3.3 V
x	1	0	0	1	0	SPI2	SPI master SSP2 boot from flash, 1.8 V
x	0	0	0	1	1	SPI3	SPI master SSP3 boot from flash, 3.3 V
x	1	0	0	1	1	SPI3	SPI master SSP3 boot from flash, 1.8 V
x	0	0	1	0	0	GPMI	NAND, 3.3 V
x	1	0	1	0	0	GPMI	NAND, 1.8 V
x	0	0	1	0	1		Reserved
x	0	0	1	1	0		Reserved
x	0	0	1	1	1		Reserved
x	0	1	0	0	0	SPI3	SPI master SSP2 boot from EEPROM, 3.3 V
x	1	1	0	0	0	SPI3	SPI master SSP2 boot from EEPROM, 1.8 V
x	0	1	0	0	1	SSP0	SD/MMC master on SSP0, 3.3 V
x	1	1	0	0	1	SSP0	SD/MMC master on SSP0 1.8 V
x	0	1	0	1	0	SSP1	SD/MMC master on SSP1, 3.3 V
x	1	1	0	1	0	SSP1	SD/MMC master on SSP1, 1.8 V
x	0	1	0	1	1		Reserved
x	0	1	1	0	0		Reserved
x	0	1	1	0	1		Reserved
x	0	1	1	1	0		Reserved
x	0	1	1	1	1		Manufacturing Test Mode

■ Linux BSP

Bootloader	
Redboot	Support SD card update new kernel and file system, end user can download kernel and file system by Ethernet
U-boot	Support SD card update kernel and file system, also user can down load kernel and file system by Ethernet

Operation System:
Linux 2.6.31 kernel

Bottom layer Driver:	
FEC Driver	Ethernet driver
USB OTG Driver	USB OTG driver
USB Host Driver	USB Host driver
UART Driver	Serial port driver
Audio Driver	Audio codec driver
TOUCH Driver	Resistance touch panel driver
Flex CAN Driver	CAN driver
Camera Driver	Camera driver
MMC/SD/SDIO Driver	MMC/SD/SDIO driver
SPI Driver	SPI ROM driver
I2C Driver	I2C communication driver
RTC Driver	RTC driver program
PWM Driver	PWM output driver

Multimedia Supporting:	
Video decoding	● MPEG4 decode：320x240,30fps ● H.264 decode：320x240,30fps
Audio decoding	● AAC MPEG-2 and MPEG-4 audio low complexity ● AAC PLUS MPEG-2 and MPEG-4 audio low complexity ● MP3 MPEG-1 Audio Layer I II III ● WMA Standard WMA V10 Standard L1/L2/L3 profile ● WMA Professional WMA V10 Professional M0a/b profile
Supported file format	MP3,wma,aac,m4a,m4b,mp4,mov,3gp,m4v,avi

➢ Please refer to below for the package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