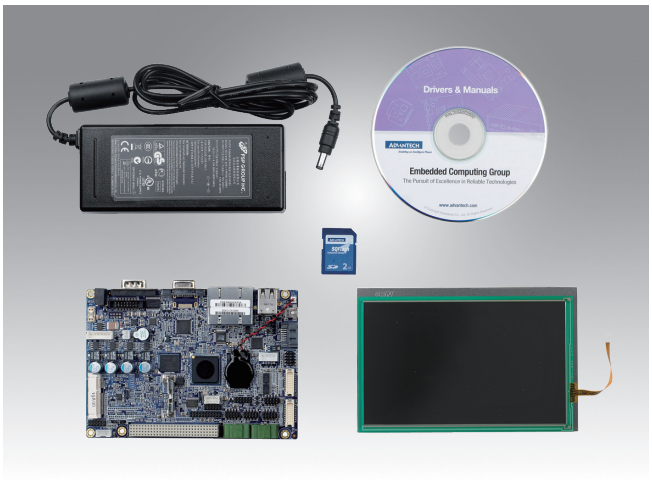
RSB-4210 Evaluation Kit

Development Kit for 3.5" SBC RSB-4210



Features

- Evaluation kit for RSB-4210
- High performance NXP i.mx53 800MHz processor
- Onbard DDR3 512MB memory and eMMC 4GB
- Supports OpenGL ES 2.0 and OpenVG™ 1.1 hardware accelerators
- Supports full HD 1080p video decode and HD 720p video encode hardware engine
- LCD, Touch, UART, I²C, I²S, SPI, GPIO, USB, VGA, HDMI I/O interface
- Supports SATA storage interface and CAN-bus for vehicle applications
- Cable pack & panel included
- Evaluuative image & test utilites built-in

Specifications

Kernel	CPU	NXP i.MX53 Cortex-A8 800 MHz
	System RAM	On-board DDR3 512 MB
	Image/AP Flash	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader
	Graphics Engine	1 IPU. OpenGL ES 2.0 for 3D, BitBlt for 2D and OpenVG 1.1
	H/W Video Codec	Decoder: MPEG-4 ASP, H.264 HP, H.263, MPEG-2 MP, MJPEG BP Encoder: MPEG-4 SP, H.264 BP, H.263, MJPEG BP
	Watchdog Timer	256-level timer interval from 0~128 sec
	Power Management	Normal / idle mode
	Reset	H/W reset & S/W reset
I/O	COM	UART1 pin header x1 (2 wires) UART2 RS-232 DB9 connector x1 (4 wires) UART3, UART4 pin header x2 (4 wires) UART5 RS-485 phoenix connector x1 (2 wires)
	Ethernet LAN	2 x 10/100 Mbps
	USB Host	4 (2 x Type A , 1 x pin header and 1 x mini PCIe)
	USB OTG	1
	SD/MMC	2
	SATA	1
	Touch	4-wire resistive type
	Keypad	6 x 6 matrix
	I²C Interface	1
	I²S Interface	1
	CAN Bus	1
	SPI Interface	1
	VGA	Up to 1600 x 1200 at 60Hz
	Mini PCIe Connector	Yes (USB interface)
	System Bus	Address: 25 pins Data: 16 pins
	GPIO	20 GPIO w/o Isolation
Multimedia	Graphics Chip	CPU internal 24-bit LCD controller
	Resolution	Default: 800 x 480 WVGA; 320 x 240 ~ 1920 x 1080 (optional)
	LCD Interface	2 x 24 bit LVDS LCD connector
	Brightness/Backlight Control	Yes
	Audio	Line-in, Line-out, MIC-in, Speaker-out
Power	DC-input	12 V , 19 V , 24 V
Power Consumption		3.8W (Max)
Mechanical & Environmental	Board Size	146 x 102 x 20 mm
	Weight	110g
	Operating Temperature	0 ~ 60 °C
	Operating Humidity	5% ~ 95% relative humidity, non-condensing

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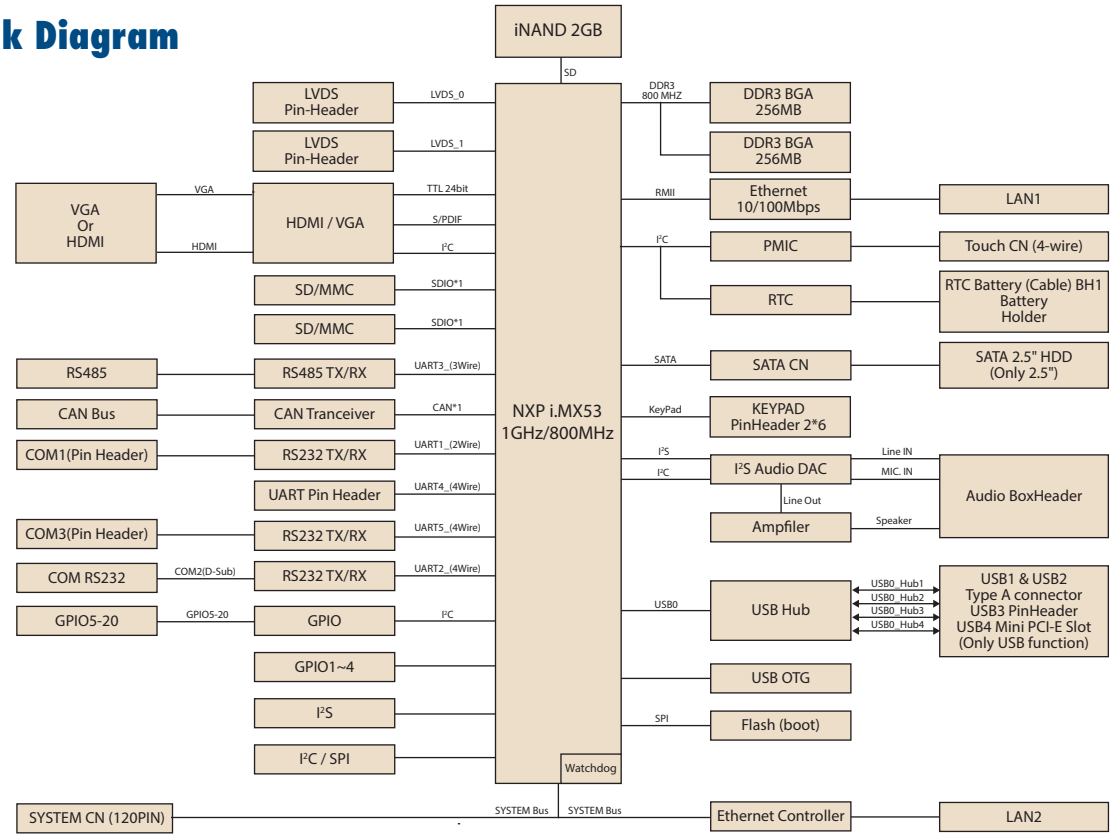
All product specifications are subject to change without notice

Last updated: 10-Mar-2016

Block Diagram



Ordering Information

Part No.	CPU	Memory	Flash Memory	HDMI	VGA	LVDS	LAN	Serial Port	SATA	USB Host	USB OTG	System bus	SD	CANbus	Operating Temperature
RSB-4210CF-A78AAE	NXP i.MX536 Cortex-A8 800 MHz	512 MB	4 GB	-	1	2	2	2 x 2 wire UART, 1 x RS232, 1 x RS485	Yes	4	1	Yes	2	Yes	0 ~ 60 °C
RSB-4210WF-A78AAE	NXP i.MX536 Cortex-A8 800 MHz	512 MB	4 GB	-	1	2	2	2 x 2 wire UART, 1 x RS232, 1 x RS485	Yes	4	1	Yes	2	Yes	-40 ~ 85 °C

Packing List

Part No.	Description
RSB-4210CF-A78AAE	FSL i.MX536 512MB DDR3 RAM w/ 2GB flash (0 ~ 60 °C)
1757003734	Adapter 100-240V 65W 19V 3.42A 9NA0651256
1700000194	Touch cable
1700014418	LVDS cable
1700019577	LCD backlight cable
1700018785	SATA power cable
1700004711	SATA signal cable
1700019546-11	Speaker & audio cable
1700100250	F Cable IDE#2 10P-2.0/D-SUB 9P (M) 25cm cable
1700019129	USB type A Host cable
1700019077	Mini USB cable (Client)
1700019076	Mini USB cable (Host)
1654909900	Terminal connector 9P Female
1700019474	RS-232 AND RS-485 cable
1700019476	RS-422 cable
SQF-ISDS2-2G-ETE	SQFlash SD Card SLC 2G, 2CH (-40 ~ 85 °C)
96LEDK-A070WV32RB1	LCD-LED Backlight 7" LVDS RGB 97G070V1N0F-2

Optional Accessories

Part No.	Description
RSB-4210DK-B00E	RSB-4210 Evaluation Kit
RSB-4210WF-A78AAE	FSL i.MX536 512MB DDR3 RAM w/ 2GB flash (-40 ~ 85 °C)
1700001524	Power cord 3P UL 180cm
170203183C	Power cord 3P EU 183cm
170203180A	Power cord 3P UK 183cm
1700008921	Power Cord 3P PSE 183cm