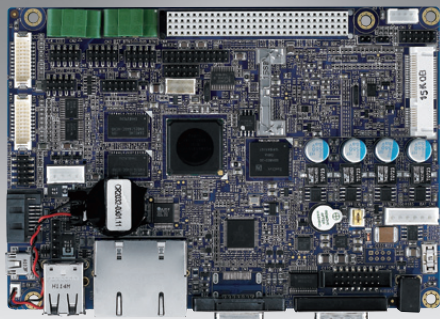


# RSB-4210

## SBC with Freescale i.MX53 Series Processor



### Features

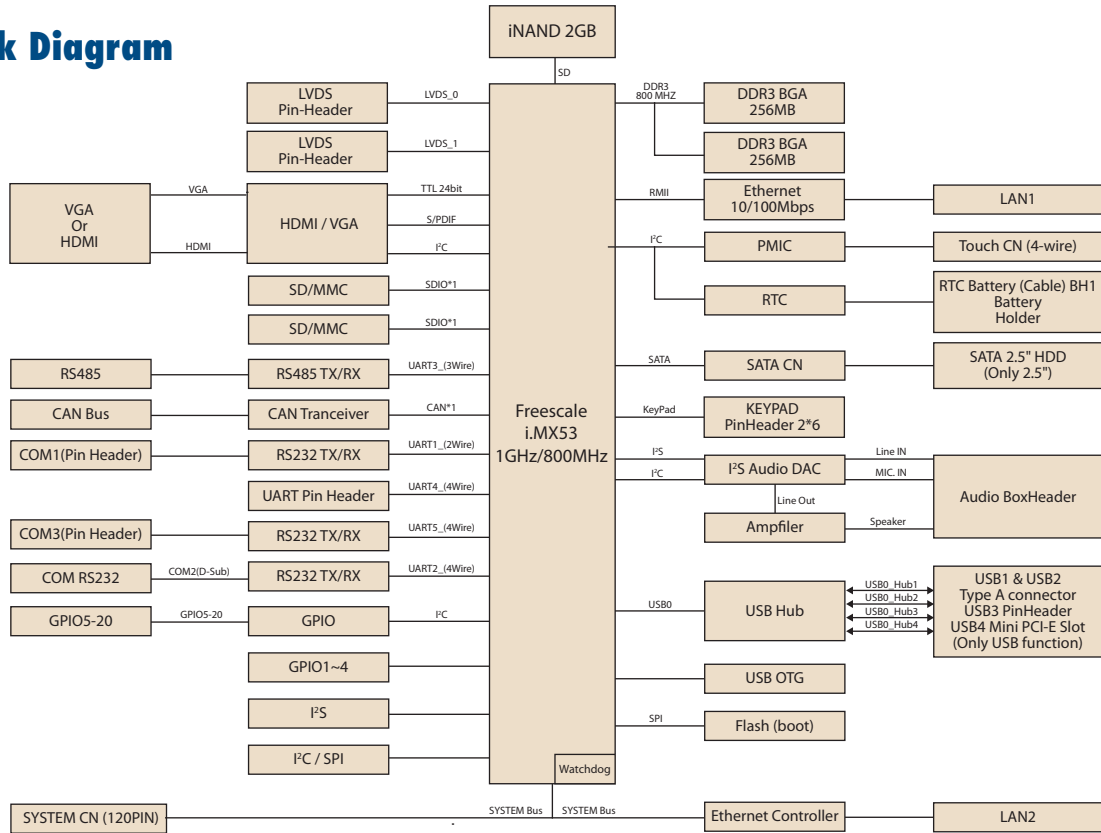
- Freescale ARM® Cortex™-A8 i.MX53 1 GHz high performance processor
- Supports OpenGL ES 2.0 and OpenVG™ 1.1 hardware accelerators
- Supports full HD 1080p video decode and HD 720p video encode hardware engine
- LCD, Touch, UART, I<sup>2</sup>C, SPI, GPIO, USB, VGA, HDMI I/O interface
- Supports SATA storage interface and CAN-bus for vehicle applications
- DC power input support 9 ~ 24 V
- Supports Android, Embedded Linux2.6, Windows® Embedded Compact 7



### Specifications

Kernel	CPU	Freescale i.MX535 Cortex-A8 1 GHz (i.MX536 Cortex-A8 800 MHz for wide temp. only)
	Multi-Media Support	1080p decode/ 720p encode
	2D/3D Accelerators	Supports OpenGL ES 1.1&2.0, OpenVG1.1
	System RAM	256 MB/512 MB DDR3 Memory
	Image/AP Flash	2 GB onboard flash (RSB-4210CB-A60AAE without onboard flash)
	Graphics Chip	24-bit LCD controller by CPU
	RTC	Yes
	Watchdog Timer	Yes
	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 RS-485 phoenix connector x1 (2 wires) UART4, UART5 pin header x2 (4 wires)
	Ethernet LAN	2 x 10/100 Mbps (optional)
	USB Host	4 x (2 x type A; 1 x pin header; 1 x mini PCIe)
	USB OTG	1
	SD/MMC	2
	SATA	1
	Touch	4-wire resistive type
	Keypad	6 x 6 matrix
	I <sup>2</sup> C Interface	1
	I <sup>2</sup> S Interface	1
	CANBus	Optional
	SPI Interface	1
	HDMI	RSB-4210CH-A78AAE only
	VGA	1
	Mini PCIe Connector	Yes (USB interface)
System Bus	Yes (optional)	
GPIO	20-pin 3.3V TTL level GPIOs	
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
Power	Audio	Line-in, Line-out, MIC-in, Speaker out
	DC-input	9V ~ 24V +- 5%
Power Consumption	Normal Run	2.3 Watts
	Full Run	3.8 Watts
Mechanical & Environmental	Board Size	146 x 102 x 20 mm
	Weight	110g
	Operating Temperature	0 ~ 60° C (-20 ~ 70° C, -40 ~ 85° C wide temperature support)
	Operating Humidity	5% ~ 95 % relative humidity, non-condensing
Other	RoHS	Yes
	Certifications	CE/FCC Class A
	Software Support	Embedded Linux 2.6 (WEC7, Android project-based)

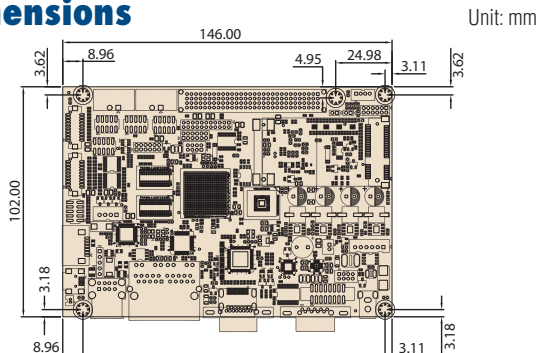
### Block Diagram



### Ordering Information

Part No.	CPU	Memory	Flash	HDMI	VGA	LAN	RS-232	RS-485	SATA	USB Host	System bus	SD	CANbus	Operating Temp.
RSB-4210CB-A60AAE	Freescale i.MX535 Cortex-A8 1 GHz	256 MB	-	-	1	1	1	1	Yes	4	-	2	-	0 ~ 60° C
RSB-4210CV-A78AAE	Freescale i.MX535 Cortex-A8 1 GHz	512 MB	2 GB	-	1	1	1	1	Yes	4	-	2	-	0 ~ 60° C
RSB-4210CH-A78AAE	Freescale i.MX535 Cortex-A8 1 GHz	512 MB	2 GB	1	-	1	1	1	Yes	4	-	2	-	0 ~ 60° C
RSB-4210CF-A78AAE	Freescale i.MX536 Cortex-A8 800 MHz	512 MB	2 GB	-	1	2	1	1	Yes	4	Yes	2	Yes	0 ~ 60° C
RSB-4210IF-A78AAE	Freescale i.MX536 Cortex-A8 800 MHz	512 MB	2 GB	-	1	2	1	1	Yes	4	Yes	2	Yes	-20 ~ 70° C
RSB-4210WF-A78AAE	Freescale i.MX536 Cortex-A8 800 MHz	512 MB	2 GB	-	1	2	1	1	Yes	4	Yes	2	Yes	-40 ~ 85° C

### Dimensions



### RSB-4210DK-B00E Design-in Package

Part No.	Description
RSB-4210DK-B00E	Evaluation kit for Freescale i.MX53 w/ Linux 2.6 512MB DDR3 SDRAM, 2GB flash
Power cord	1700001524 for 3-pin USA standard power cord 170203183C for 3-pin Europe standard power cord 170203180A for 3-pin UK standard power cord