

# Одноплатные компьютеры с архитектурой RISC серии RSB

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# RSB-4410

## Freescale ARM Cortex-A9 i.MX6 SBC



### Features

- Freescale Cortex-A9 i.MX6 Solo/Dual core 1.0 GHz
- On-board DDR3 1 GB & 4 GB eMMC NAND Flash
- Supports full HD 1080P H/W video codec engine
- Networking capability of Giga LAN, WiFi, 3G and HSDPA
- Low power consumption
- Supports Linux BSP V3.0.35/ Android 4.2.2

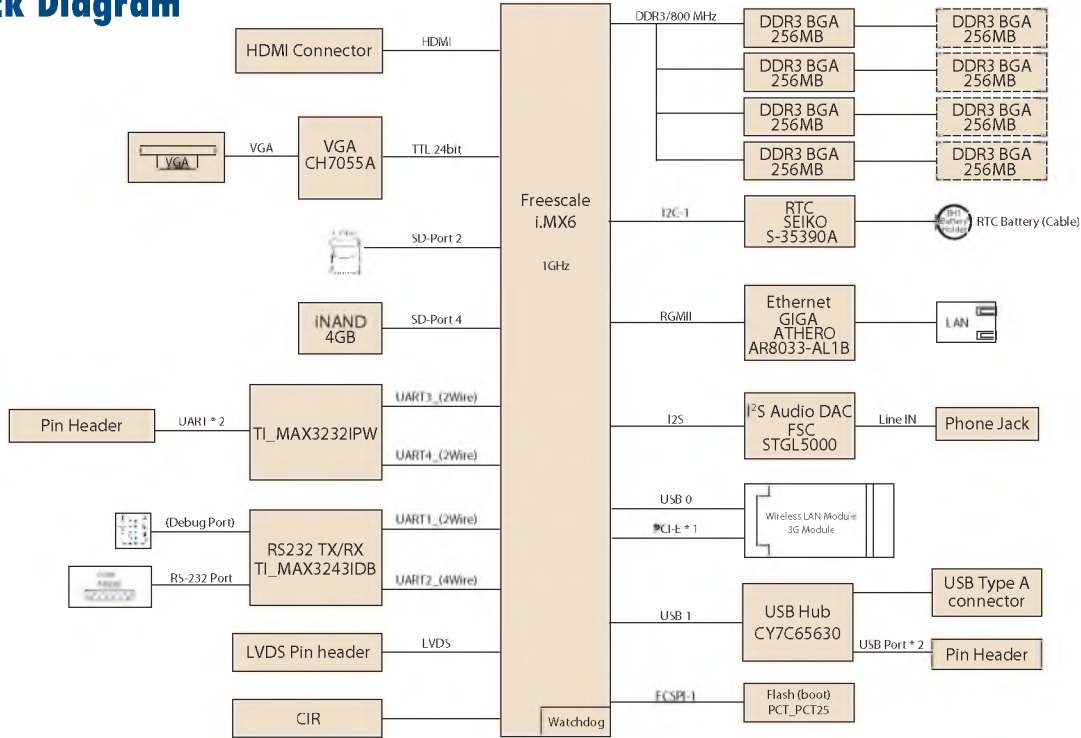
### Introduction

RSB-4410 is an Advantech RISC 3.5" SBC powered by Freescale ARM® Cortex-A9 i.MX6 dual-core high performance processor, which provide sufficient power for Full HD video encoding/decoding, and also support Gigabit Ethernet for networking. RSB-4410 also supports miniPCIe and SIM card slot for WiFi and 3G module. Advantech will provide Linux BSP V3.0.35 or Android BSP 4.2.2 for customer building up their own application software.

### Specifications

Form Factor		3.5" SBC
Processor System	CPU	Freescale ARM Cortex-A9 i.MX6 Solo/Dual 1GHz
	Technology	DDR3 1066 MHz
	Capacity	On-board DDR3 512 MB / 1GB
	Flash	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader
Graphics	LVDS	1 single channel 18/24-bit LVDS
	HDMI	1
	VGA	1
	Graphics Engine	3 IPU's. OpenGL ES 2.0 for 3D, BitBlit 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
Ethernet	Chipset	Freescale i.MX6 integrated RGMII
	Speed	1 x 10/100/1000 Mbps
WatchDog Timer		256-level timer interval, from 0 ~ 128 sec
I/O	SATA	-
	SATA Power	-
	USB	1 x USB Type A and 2 x USB pin header
	Audio	1 x Line-out
	SPDIF	-
	SDIO	2
	Serial Port	2 x 2 wires UART pin header 1 x 4 wires UART, DB9
	SPI	-
	CAN	-
	GPIO	-
	I2C	-
	System Bus	-
	Touch	-
I/R	1 I/R remote control pin header	
Button	1 x Reset button	
Expansion	Mini PCIe	1 x mini PCIe slot
	SD Socket	1 x SD slot
	SIM	1 x SIM slot
Power	Power Supply Voltage	12 V
	Power Type	DC-in
	Power Consumption	2.3 Watts
Environment	Operational Temperature	0 ~ 60° C
	Operating Humidity	5%-95% Relative Humidity, non-condensing
Mechanical	Dimensions (W x D)	146 x 102 x 20 mm
Operating System		Linux V3.0.35/ Android 4.2.2
Certifications		CE/FCC Class B

### Block Diagram



### Ordering Information

Part No.	CPU	Memory	Flash	HDMI	VGA	LVDS	LAN	Serial Port	SATA	USB Host	USB OTG	System bus	SD	CANbus	Operating Temperature
RSB-4410CD-MDA1E	Freescale i.MX6 Dual 1 GHz	1 GB	4 GB	1	1	1	1	2 x 2 wire UART, 1 x RS232	-	3	1	-	1	-	0 ~ 60° C
RSB-4410CS-MCA1E	Freescale i.MX6 Solo 1 GHz	512 MB	4 GB	1	1	1	1	2 x 2 wire UART, 1 x RS232	-	3	1	-	1	-	0 ~ 60° C

### Packing List

Part Number	Description	Quantity
RSB-4410	RSB-4410 SBC	1

### Optional Accessories

Part Number	Description
1757003553	Adapter 100-240V 36W 12V 3A W/O PFC 9NA0361603
170203183C	Power Code 3P Europe (WS-010+WS-083)183cm
170203180A	Power Cord 3P UK 2.5A/3A 250V 1.83M
1700001524	Power Cord 3P UL 10A 125V 180cm
1960051438N001	Cooler I-NB-ICH7 S-3W 31x31x12-WC DAC-BC05 40C
96LEDK-A070WV35NB1	Panel G070VW01 V1
1700021565-01	Debug cable
1700018730	USB cable
1700022161-01	UART cable
1700022130-01	LVDS cable
1700022131-01	Backlight cable

# RSB-4210

## Freescale ARM Cortex-A8 i.MX53 SBC



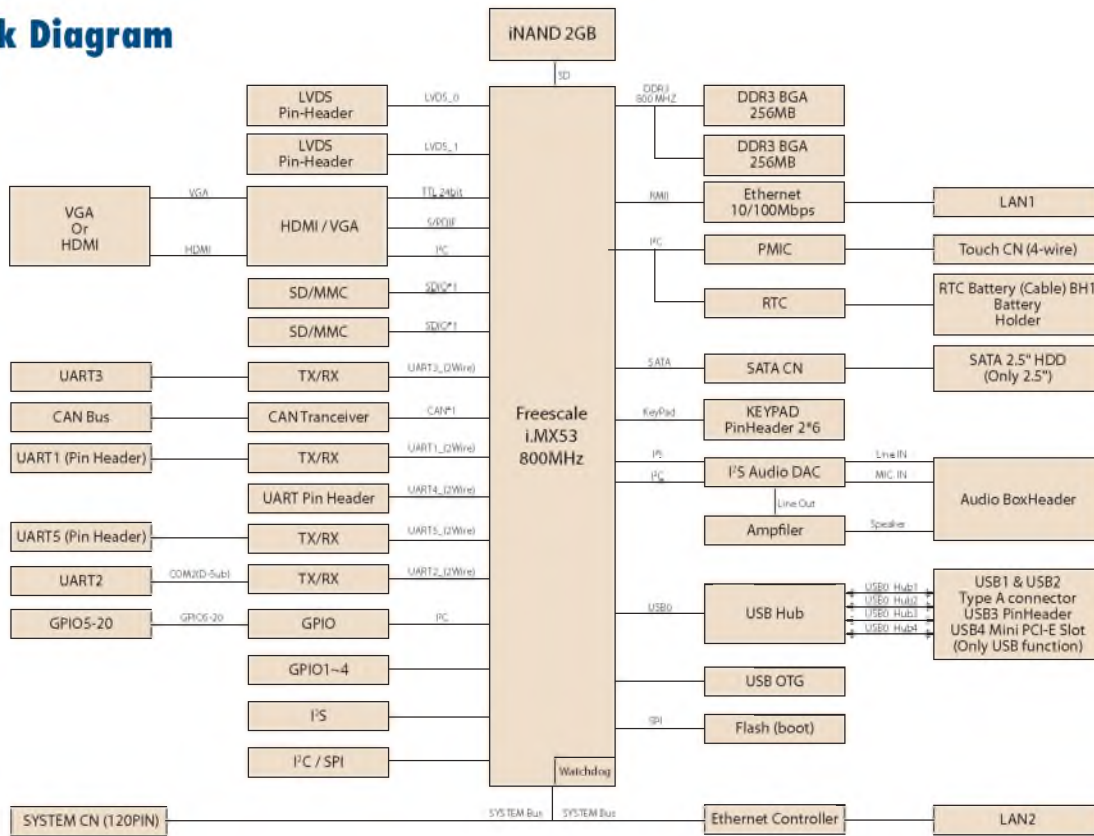
### Features

- Freescale ARM® Cortex-A8 i.MX53 800MHz 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 Embedded Linux 2.6, Windows® Embedded Compact 7

### Specifications

Form Factor		3.5" SBC
Processor System	CPU	Freescale i.MX53 800 MHz (ARM Cortex A8)
	Technology	DDR3 800 MHz
	Capacity	On-board DDR3 512 MB
	Flash	2 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader
Graphics	LVDS	2 x 24-bit LVDS
	HDMI	-
	VGA	1
	Graphics Engine	1 IPU, OpenGL ES 2.0 for 3D, BitBlit 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
Ethernet	Chipset	Freescale i.MX53 integrated MII
	Speed	2x 10/100 Mbps
WatchDog Timer		Yes
I/O	SATA	1
	SATA Power	Yes
	USB	3 x USB 2.0 Host 1 x USB 2.0 OTG
	Audio	Line-in, Speaker-out, Mic-in
	SPDIF	-
	SDIO	2x (SD slot x1, pin header x1)
	Serial Port	2 x 2 wire pin header 1 x RS-485, 1 x 2 wire DB9 connector
	SPI	1
	CAN	1
	GPIO	20-pin 3.3V TTL Level GPIOs
	I2C	1
	System Bus	Yes
	Touch	4-wire resistive type
	Keypad	6 x 6 matrix
Button	-	
Expansion	Mini PCIe	Only USB signal
	SD Socket	1 x SD slot
	SIM	1 x SIM slot
Power	Power Supply Voltage	9 – 24 V
	Power Type	DC-in
	Power Consumption	2.3 Watts
Environment	Operational Temperature	0 – 60° C/ -40 – 85° C
	Operating Humidity	5%–95% Relative Humidity, non-condensing
Mechanical	Dimensions (W x D)	146 x 102 x 20 mm
Operating System		Linux V2.6
Certifications		CE/FCC Class A

### Block Diagram

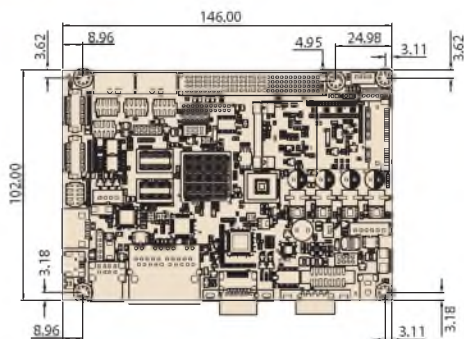


### Ordering Information

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

### Dimensions

Unit: mm



### 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, 2 GB 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

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