

ARM-Based Motherboard For Professional Segment

- 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, RS232, I2C, GPIO, USB(OTG) I/O interface
- Ethernet 10/100 BaseT support
- Supports SATA storage interface applications
- Supports Android, Linux, Java ,GreenHills



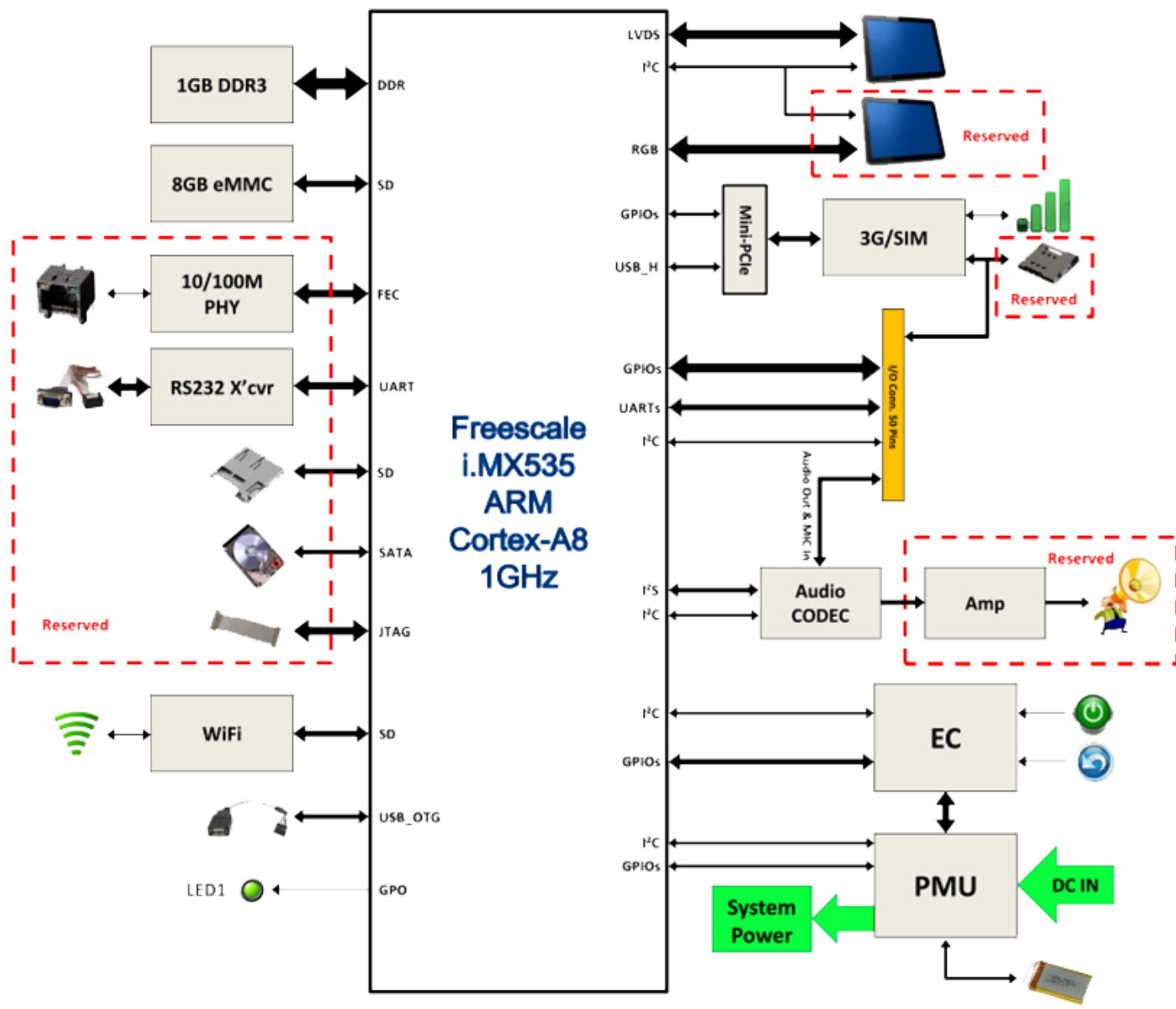
Java



KF8000 Board Function Block Diagram



Mobile Division



KF8000 Board Specification



Mobile Division

Operating System		Android/Linux/Java/GHS
Processor		Freescale i.MX535 1.0GHz ARM Cortex-A8
System Memory	SDRAM Internal Storage	1GB DDR3 Samsung 4GB e.MMC NAND flash
Display	Panel Size	8"
	Resolution Aspect	1028 x 768 4:3
	Viewing Angle (U/D/R/L)	75/75/75/75
	Contrast Brightness	700:1 250 nits (Typical)
	Surface Treatment	Hard Coating
	Backlight Interface	LED LVDS
User Interface	Touch Panel	Capacitive 2-point multi-touch Cover Glass thickness 1.1mm
	Power Switch/Return	x1 1x3pin
	Mic-in/Headphone	7 pin Via 50pin FFC
	MicroSD Slot	x1 push-push type (optional)
	Internal MiniCard slot	x1 Full Size
	SIM Slot	x1 (optional)
	Speaker	x1 1x2pin
	USB2.0	x1 1x5pin
	SATA	x1 (optional)
	JTAG	x1 (optional)
	RS232	x1(optional)
	Ethernet 10/100	x1 RJ45 (optional)
	HW reset switch	x1
	Wireless Connectivity	Wi-Fi
3.5G (Optional)		Huawei EM820W (Data communication)
Power Supply	DC-in Jack	via a 4-pin cable to base-board
	Adaptor	5V/3A WM type
	Battery Pack (System back-up power)	3.7V 1500mAh(min) 1S1P
Dimension	Mainboard	175.8 mm (W) x 114 mm (L)

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50-pin definition

Pin Num	Define	Function	Pin Num	Define	Function
1	SIM_ON	SIM	27	GND4	SYS-KEY
2	Vccsim		28	GND5	
3	Simdata		29	GND6	
4	Simclk		30	GND7	
5	Simrst		31	GND8	
6	GND2	32	NC		
7	GPIO_1	33	NC		
8	GPIO_2	34	NC		
9	GPIO_3	35	NC		
10	GPIO_4	GPIO	36	NC	
11	GPIO_5		37	NC	
12	GPIO_6		38	NC	
13	GPIO_7		39	NC	
14	GPIO_8		40	NC	
15	GPIO_9		41	GND8	
16	GPIO_10		42	NC	
17	NC	I2C	43	GND9	
18	SCL		44	MIC_MUTE	
19	SDA		45	LHPOUT	
20	GND3	232	46	RHPOUT	
21	RXD4		47	MIC2P	
22	TXD4		48	MIC2N	
23	RXD1		49	HDST_DET	
24	TXD1		50	GND10	
25	RXD0				
26	TXD0				

Power, Speaker, Power-Key, battery and USB pin definition

Pin Num	Define	Function
1	ADPIN	POWER
2	ADPIN	(I=2A)
3	GND	GND
4	GND	

Pin Num	Define	Function
1	SPKOUTL_P_1	SPK
2	SPKOUTL_N_1	

Pin Num	Define	Function
1	PWR_WAKE	POWER-KEY/ RETURN
2	GND	
3	RETURN	

Pin Num	Define	Function
1	GND	Battery Connector
2	GND	
3	BIN1	
4	BAT_SMCLK	
5	BAT_SMDAT	
6	BAT	
7	BAT	

Pin Num	Define	Function
1	VBUS_5V	USB
2	USB_OTG_DN_C	
3	USB_OTG_DP_C	
4	USB_OTG_ID	
5	GND	

RS232, UART, Power-Key, RJ45 and JTAG pin definition

Pin Num	Define	Function
1	DSR	RS232
2	TX	
3	RX	
4	DCD	
5	GND	
6	DTR	
7	CTS	
8	RTS	
9	RI	
10	NC	

Pin Num	Define	Function
1	TxD	UART
2	+3.3V	
3	RxD	
4	GND	

Pin Num	Define	Function
1	Power_ON/WAKE	PWR+Return
2	GND	
3	Return	

Pin Num	Define	Function
1	MDIO+	RJ45
2	MDIO-	
3	MDI1+	
4	NC	
5	NC	
6	MDI1-	
7	NC	
8	NC	
LED right	LINK	
LED left	10/100Mbps	

Pin Num	Define	Function
1	+1.8V	JTAG
2	+3.3V	
3	nTRST	
4	GND	
5	TDI	
6	GND	
7	TMS	
8	GND	
9	TCK	
10	GND	
11	RTCK	
12	GND	
13	TDO	
14	GND	
15	nSRST	
16	GND	
17	DE	
18	GND	
19	DACK	
20	GND	

LVDS & RGB pin definition

Pin Num	Define	Pin Num	Define	Function
1	VCOM (+3.3V)	21	RXIN3+	LVDS
2	VDD (+3.3V)	22	GND	
3	VDD (+3.3V)	23	NC	
4	NC	24	NC	
5	RESET	25	GND	
6	STBYB	26	NC	
7	GND	27	DIMO	
8	RXIN0-	28	SELB	
9	RXIN0+	29	AVDD (+11.5V)	
10	GND	30	GND	
11	RXIN1-	31	VLED- (~0V)	
12	RXIN1+	32	VLED- (~0V)	
13	GND	33	L/R	
14	RXIN2-	34	U/D	
15	RXIN2+	35	VGL (-7V)	
16	GND	36	CABCEN1	
17	RXCLKIN-	37	CABCEN0	
18	RXCLKIN+	38	VGH (+22V)	
19	GND	39	VLED+ (+9.3V)	
20	RXIN3-	40	VLED+ (+9.3V)	

Pin Num	Define	Pin Num	Define	Function
1	NC	26	G1	RGB
2	NC	27	G0	
3	NC	28	R7	
4	NC	29	R6	
5	GND	30	R5	
6	VCOM	31	R4	
7	VCC (+3.3V)	32	R3	
8	MODE	33	R2	
9	DE	34	R1	
10	VSYNC	35	R0	
11	HSYNC	36	GND	
12	B7	37	DCLK	
13	B6	38	GND	
14	B5	39	L/R	
15	B4	40	U/D	
16	B3	41	VGH (+16V)	
17	B2	42	VGL (-7V)	
18	B1	43	AVDD (+10.4V)	
19	B0	44	RESET	
20	G7	45	NC	
21	G6	46	VCOM (+3.8V)	
22	G5	47	DITHB	
23	G4	48	GND	
24	G3	49	NC	
25	G2	50	NC	