

## W220 Block Diagram Signal Description (US version)

Signal	From		To		Description
	Lower PCB	Upper PCB	Lower PCB	Upper PCB	
<b>Lower PCB</b>					
MAIN_CS	U201		R313		chip selection of LCM driver IC
MAIN_CS_1	U307		CON301	U2, LCM driver IC	chip selection of LCM driver IC
LCDC_RESET	U201		CON301,C302	U2, LCM driver IC	reset of LCM driver IC
V-FLASH	U202		U201,U204,U314,CON301,U501		1.8V, regulator output of IOTA
V-IO	U202		U101,U102,U103,U104,U105,U108,U109,U201,CON301,U313,U604		2.8V, regulator output of IOTA
V-DBB	U202		U201		1.5V, regulator output of IOTA
V-RTC	U202		U201		1.5V, regulator output of IOTA
V-SRAM	U202		U501		1.8V, regulator output of IOTA
VRSIM	U202		CON304		1.5V, regulator output of IOTA
V-ABB	U202				2.8V, regulator output of IOTA
SIM-IO3	U201		U202		SIM IO
SIM-CLK3	U201		U202		SIM Clock
SIM_RST3	U201		U202		SIM Reset
TDI	U201				JTAG data Input
TDO	U201				JTAG data Output
TCK	U201				JTAG data Clock
TMS	U201				JTAG Mode select
TXD	U201		U102		UART TX
RXD	U201		U103		UART RX
TXD2	U201		TP205		IRDA TX
RXD2	U201		TP206		IRDA RX
I2C_SCL	U201		C302,U313		I2C Clock
I2C_SDA	U201		C302,U313		I2C Serial Data & Address
VOICE_FM	U201		U104		VOICE/FM path Selection
OP_EN	U201		U105		OP Enable
EP_STATUS	U201		J102,U108		Earphone status
VOICE_UART	U201		U102,U103		VOICE/UART Selection
IRQ1	U201		U108		Earphone insert Interrupter
HOOK_SW	U201		U107		Hook SW detection
VDX	U201		U202		TX data
VDR	U201		U202		RX data
VFSRX	U201		U202		TX/RX Synchro
VCLKRX	U201		U202		TX/RX Clock
KBR[0..4]	U201		CON401		Keyboard matrix 5 by 5 row access.



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KBC[0..4]	U201			CON401		Keyboard matrix 5 by 5 column access.
BUS_EN	U201			U701		FM I2C bus enable
FM_GPIO1	U201			U701		GPIO simulate I2C bus Clock
FM_GPIO2	U201			U701		GPIO simulate I2C data bus
BL_EN	U201			CON301	U2, U3	LCM backlight enable
Hall_Sensor	U201			U109		Hall_Sensor output
LCM_DC	U201			U314		LCM data/command control
BFSR	U201			U202		Receiver synchro
BDR	U201			U202		Receiver data
BFSX	U201			U202		Transmit synchro
BDX	U201			U202		Transmit data
MCUDI	U201			U202		Input serial data
MCUDO	U201			U202		Output serial data
MCUEN	U201			U202		Configurable enable triggers(edge/level)
VIBRATOR_ON	U201			U312		Enable vibrator
/PDN	U201			U604		Transceiver enable
SPI_SDO	U201			U202,U604		3wire bus data in/out
/SEN	U201			U604		3wire bus enable
SPI_CLK	U201			U604		3wire bus clock
TCXOEN	U201			U601,U604		Enable SI4210 TCXO function
VC1B	U201			U608		GSM850 TX Enable
VC2B	U201			U608		PCS TX Enable
PA_ON	U201			U605		PA Enable
PA_BS	U201			U605		PA Band selection
TSPEN0	U201			U202		Configurable triggers (edge/level)
CLK32K_OUT	U201			U202,U701		RTC clock
CLK13M_OUT	U201			U202,U101		Main clock
26MHz	U604			U201		System clock
nRESPWON	U202			U201		Chip Power-On reset
EXT-FIQ	U202			U201		Fast external interrupt for ARM
EXT-IRQ	U202			U201		External interrupt for ARM
ONnOFF	U202			U201		Regulators activity
IT-WAKEUP	U201			U201		Wake-up interrupt of Real Time Clock
/CS1	U201			U101		Melody IC chip select
MELODY_RESET	U201			U101		Reset Melody
/RD	U201			U101,U501,CON301	U2, LCM driver IC	Read data
/WE	U201			U101,U501,CON301	U2, LCM driver IC	Write data
FDP	U201			U501		Flash deep low-power
/BHE	U201			U501		Ext RAM1/RAM2 chip select
/BLE	U201			U501		Ext RAM1/RAM2 chip select
/CS0	U201			U501		Flash chip selection

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/CS3	U201		U501		SRAM chip selection
A[1..22]	U201		U501		Address bus
A1	U201		U101		Command/address selection
D[0..15]	U201		U501		Data bus
D[0..7]	U201		U101,CON301	U2, LCM driver IC	Data bus
SIMIO	U202		CON304		SIM data in/out port
SIMCLK	U202		CON304		SIM Clock
SIMRST	U202		CON304		SIM reset
PWON	U202		S421		On button input
nTESTRESET	U202		U202		Reset input for test mode only
UPR	U202		U202		Uninterrupted power rail output
TXQN	U202		R601		TX differential Q-
TXQP	U202		R601		TX differential Q+
TXIN	U202		R601		TX differential I-
TXIP	U202		R601		TX differential I+
RXQN	U202		U604		RX differential Q-
RXQP	U202		U604		RX differential Q+
RXIN	U202		U604		RX differential I-
RXIP	U202		U604		Rx differential I+
MICBIAS	U202		U111		Micphone bias
MICIP	GND		U202		Micphone differential I+
MICIN	U110		U202		Micphone differential I-
EARP	U202		CON301	U2, L1	Earphone differential I+
EARN	U202		CON301	U2, L1	Earphone differential I-
HSO	U202		U104		Handset ouput
AUXI	U103		U202		Handset micphone
VBATS	U308, CON301		U202	U2, U3	Battery voltage sense
VBAT	U308, CON301		U202	U2, U3	Battery voltage sense input
ICTL	U202		U308		Charger external transistor control
VCHG	U306,U308		U202		Charger voltage input
VCCS	U306		U202		Charging current sense
BAT_TEMP	CON302		U202		Battery Temperature
RADIO_TEMP	R210		U202		System Temperature
MVBAT_ADC	R306		U202		Battery Voltage sense, function while charging.
APC	U202		U605		Automatic power control DAC output
SPEAKER_P	U101		L301		Melody differential output
SPEAKER_N	U101		L301		Melody differential output
SPEAKER_P2	L301		C344		Melody differential output
SPEAKER_N2	L301		C344		Melody differential output
BACKLIGHT	R402,R403		U401		Keypad backlight
LED1	U313		CON301, ESD304	U2, LED1, R15	Indicator LED driver output 1

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LED2	U313			CON301, ESD304	U2, LED2, R13	Indicator LED driver output 2
LED3	U313			CON301, ESD304	U2, LED3, R12	Indicator LED driver output 3
LED4	U313			CON301, ESD304	U2, LED4, R14	Indicator LED driver output 4
ANT_FM	J102			U701		FM Antenna
HOOK_ADC	U107			U202		Voltage level detection
AFR	U701			U104		Right channel of FM audio
AFL	U701			U104		Left channel of FM audio
COM1	U104			U105		Audio Amplifier input
COM2	U104			U105		Audio Amplifier input
OP_R1	U105			U102		Audio Amplifier output
OP_L1	U105			J102		Audio Amplifier output
VRF2V8	U601			U604,U608		RF LDO output
GSM850_IN	U605			R603		TXVCO GSM850 OUTPUT
PCS_IN	U605			R602		TXVCO PCS OUTPUT
GSM850_OUT	U605			U607		PA GSM850 output
PCS_OUT	U605			U607		PA PCS output
GSM850_RX	U607			SAW602		T/R Swtich GSM850 ouptut
PCS_RX	U607			SAW603		T/R Swtich PCS ouptut
VC1	U608			U607		GSM850 TX path enable
VC2	U608			U607		PCS TX path Enable