A20-OlinuXino-Lime2, board revision B - GPIO layout

Please double check the orientation of the connectors and the starting pin. Pin numbers 1 & 2 are printed on near the connector.

The pins indicating voltage values – either 5V or 3.3V – are outputs! Do not try to provide power at those pins (usually pins 1 and 3 of each connector)!

''A20 PIN FUNCTIONS'' field has the pin names as per "A20 Datasheet V1.0". For full details about the pin (multiplexing, usage, registers, etc) please refer either to mentioned A20 datasheet or to the latest A20 user's manual. It is highly recommended to refer to source documentation released by Allwinner.

Signals with (NC) in the name are routed to the corresponding processor pin but are disconnected by default.
''A20 PIN FUNCTIONS'' marked with ''-'' indicate that the signal is related to the power supply circuit. Such signals are not directly connected to the microcontroller and you should be careful when operating those signals. Improper use might lead to short-circuits.
PC3/SATA-PWR-EN and PB8/SATA-PWR-EN are controlled by an SMT jumper. By default PC3/PB8 is in position PC3.

LCD_CON

LIME2 LCD_CON rows of pins are swapped compared to those of LIME LCD_CON

A20 PIN FUNCTIONS	SIGNAL # NAME	#		#	SIGNAL # NAME	A20 PIN FUNCTIONS
-	5V	1	o o	2	GND	-
-	3.3V	3	o o	4	GND	-
LCD0_D16/LVDS1_VPC/PD16	LCD_D16	5	o o	6	LCD_D17	LCD0_D17/LVDS1_VNC/PD17
LCD0_D18/LVDS1_VP3/PD18	LCD_D18	7	o o	8	LCD_D19	LCD0_D19/LVDS1_VN3/PD19
LCD0_D20/CSI 1_MCLK/PD20	LCD_D20	9	o o	10	LCD_D21	LCD0_D21/SMC_VPPEN/PD21
LCD0_D22/SMC_VPPPP/PD22	LCD_D22	11	o o	12	LCD_D23	LCD0_D23/SMC_DET/PD23
LCD0_D8/LVDS0_VP3/PD8	LCD_D8	13	o o	14	LCD_D9	LCD0_D9/LVDS0_VN3/PD9
LCD0_D10/LVDS1_VP0/PD10	LCD_D10	15	o o	16	LCD_D11	LCD0_D11/LVDS1_VN0/PD11
PD12	LCD_D12	17	o o	18	LCD_D13	LCD0_D13/LVDS1_VN1/PD13
PD14	LCD_D14	19	o o	20	LCD_D15	LCD0_D15/LVDS1_VN2/PD15
PD0	LCD_D0	21	o o	22	LCD_D1	LCD0_D1/LVDS0_VN0/PD1
PD2	LCD_D2	23	o o	24	LCD_D3	LCD0_D3/LVDS0_VN1/PD3
PD4	LCD_D4	25	o o	26	LCD_D5	LCD0_D5/LVDS0_VN2/PD5
PD6	LCD_D6	27	o o	28	LCD_D7	LCD0_D7/LVDS0_VNC/PD7
PD26	LCD_HSYNC	29	o o	30	LCD_VSYNC	LCD0_VSYNC/SMC_SDA/PD27
PD24	LCD_CLK	31	o o	32	LCD_DE	LCD0_DE/SMC_RST/PD25
IR0_TX/SPDI F_MCLK/STANBYWFI/PB3	PB3 (NC)	33	o o	34	PB4 (NC)	R0_RX/PB4
LCD1_D8/ATAD4/KP_IN0/MS_D0/EINT8/CSI1_D8/PH8	LCD_PWR	35	o o	36	PB2/PWM0	PWM0/PB2
XP_TP	TPX1	37	o o	38	TPX2	XN_TP
YP_TP	TPY1	39	o o	40	TPY2	YN_TP

GPIO_1

A20 PIN FUNCTIONS	SIGNAL # NAME	#		#	SIGNAL # NAME	A20 PIN FUNCTIONS
-	5V	1	o o	2	GND	-
-	3.3V	3	o o	4	AGND	-
TS1_CLK/CSI1_PCLK/SDC1_CMD/PG0	PG0	5	o o	6	LRADC0	LRADC0
TS1_ERR/CSI1_MLCK/SDC1_CLK/PG1	PG1	7	o o	8	LRADC1	LRADC1
TS1_SYNC/CSI1_HSYNC/SDC1_D0/PG2	PG2	9	o o	10	MICIN1	MICIN1
TS1_DVLD/CSI1_VSYNC/SDC1_D1/PG3	PG3	11	o o	12	VMIC	VMIC
TS1_D0/CSI1_D0/SDC1_D2/CSI0_D8/PG4	PG4	13	o o	14	HPOUTL	HPOUTL
TS1_D1/CSI1_D1/SDC1_D3/CSI0_D9/PG5	PG5	15	o o	16	HPCOM	HPCOM
TS1_D2/CSI1_D2/UART3_TX/CSI0_D10/PG6	PG6	17	o o	18	HPOUTR	HPOUTR
TS1_D3/CSI1_D3/UART3_RX/CSI0_D11/PG7	PG7	19	o o	20	VGA-G	TVOUT0/VGA-G
TS1_D4/CSI1_D4/UART3_RTS/CSI0_D12/PG8	PG8	21	o o	22	VGA-B	TVOUT1/VGA-B
TS1_D5/CSI1_D5/UART3_CTS/CSI0_D13/PG9	PG9	23	o o	24	VGA-R	TVOUT2/VGA-R
TS1_D6/CSI1_D6/UART4_TX/CSI0_D14/PG10	PG10	25	o o	26	UART0-RX	UART0_TX/IR1_TX/PB22
TS1_D7/CSI1_D7/UART4_RX/CSI0_D15/PG11	PG11	27	o o	28	UART0-TX	UART0_RX/IR1_RX/PB23
NCE1/PC3 or NC	PC3 or SATA-PWR-EN	29	o o	30	PB21	TWI2_SDA/PB21
NCE3/PC18	PC18	31	o o	32	PB20	TWI2_SCK/PB20
NCE4/SPI2_CS0/PC19	PC19	33	o o	34	PB19	TWI1_SDA/PB19
NCE5/SPI2_CLK/PC20	PC20	35	o o	36	PB18	TWI1_SCK/PB18
NCE6/SPI2_MOSI/PC21	PC21	37	o o	38	PC24	NDQS/PC24
NCE7/SPI2_MISO/PC22	PC22	39	o o	40	PC23	SPI0_CS0/PC23

GPIO_2

A20 PIN FUNCTIONS	SIGNAL # NAME	#		#	SIGNAL # NAME	A20 PIN FUNCTIONS
-	5V	1	o o	2	GND	-
-	3.3V	3	o o	4	LDO3-2.8V	-
TWI0_SCK/PB0	TWI0-SCK	5	o o	6	PE0	TS0_CLK/CSI0_PCLK/PE0
TWI0_SDA/PB1	TWI0-SDA	7	o o	8	PE1	TS0_ERR/CSI0_MCLK/PE1
GPS_CLK/PI0	PI0	9	o o	10	PE2	TS0_SYNC/CSI0_HSYNC/PE2
GPS_SIGN/PI1	PI1	11	o o	12	PE3	TS0_DVLD/CSI0_VSYNC/PE3
GPS_MAG/PI2	PI2	13	o o	14	PE4	TS0_D0/CSI0_D0/PE4
PWM1/PI3	PI3	15	o o	16	PE5	TS0_D1/CSI0_D1/PE5
SDC3_CMD/PI4	PI4	17	o o	18	PE6	TS0_D2/CSI0_D2/PE6
SDC3_CLK/PI5	PI5	19	o o	20	PE7	TS0_D3/CSI0_D3/PE7
SDC3_D0/PI6	PI6	21	o o	22	PE8	TS0_D4/CSI0_D4/PE8
SDC3_D1/PI7	PI7	23	o o	24	PE9	TS0_D5/CSI0_D5/PE9
SDC3_D2/PI8	PI8	25	o o	26	PE10	TS0_D6/CSI0_D6/PE10
SDC3_D3/PI9	PI9	27	o o	28	PE11	TS0_D7/CSI0_D7/PE11
SPI0_CS0/UART5_TX/EINT22/PI10	PI10	29	o o	30	PI21	HSDA/UART7_RX/PS2_SDA0/PI21
SPI0_CLK/UART5_RX/EINT23/PI11	PI11	31	o o	32	PI20	HSCL/UART7_TX/PS2_SCK0/PI20
SPI0_MOSI/UART6_TX/EINT24/PI12	PI12	33	o o	34	PI19	EINT31/SPI1_MISO/UART2_RX/PI19
SPI0_MISO/UART6_RX/EINT25/PI13	PI13	35	o o	36	PI18	EINT30/SPI1_MOSI/UART2_TX/PI18
PS2_SCK1/TCLKIN0/EINT26/SPI0_CS1/PI14	PI14	37	o o	38	PI17	EINT29/SPI1_CLK/UART2_CTS/PI17
PS2_SDA1/TCLKIN1/EINT27/SPI1_CS1/PI15	PI15	39	o o	40	PI16	EINT28/SPI1_CS0/UART2_RTS/PI16

GPIO_3

A20 PIN FUNCTIONS	SIGNAL # NAME	#		#	SIGNAL # NAME	A20 PIN FUNCTIONS
-	5V	1	o o	2	GND	-
-	3.3V	3	o o	4	PB3	IR0_TX/SPDIF_MCLK/STANBYWFI/PB3
RESET#	RESET_N	5	o o	6	PB4	IR0_RX/PB4
LCD1_D0/ATAA0/UART3_TX/EINT0/CSI1_D0/PH0	PH0	7	o o	8	PB5	I2S_MCLK/AC97_MCLK/PB5
LCD1_D7/ATAD3/UART5_RX/MS_CLK/EINT7/CSI1_D7/PH7	PH7	9	o o	10	PB6	I2S_BCLK/AC97_BCLK/PB6
LCD1_D9/ATAD5/KP_IN1/MS_D1/EINT9/CSI1_D9/PH9	PH9	11	o o	12	PB7	I2S_LRCK/AC97_SYNC/PB7
LCD1_D10/ATAD6/KP_IN2/MS_D2/EINT10/CSI1_D10/PH10	PH10	13	o o	14	PB8/SATA-PWR_EN	NC or I2S_DO0/AC97_DO/PB8
LCD1_D11/ATAD7/KP_IN3/MS_D3/EINT11/CSI1_D11/PH11	PH11	15	o o	16	PB9	I2S_DO1/PB9
LCD1_D12/ATAD8/PS2_SCK1/EINT12/CSI1_D12/PH12	PH12	17	o o	18	PB10	I2S_DO2/PB10
LCD1_D13/ATAD9/PS2_SDA1/SMC_RST/EINT13/CSI1_D13/PH13	PH13	19	o o	20	PB11	I2S_DO3/PB11
LCD1_D14/ATAD10/KP_IN4/SMC_VPPEN/EINT14/CSI1_D14/PH14	PH14	21	o o	22	PB12	I2S_DI/AC97_DI/SPDIF_DI/PB12
LCD1_D15/ATAD1 1/KP_IN5/SMC_VPPPP/EINT15/CSI1_D15/PH15	PH15	23	o o	24	PB13	SPI2_CS1/SPDIF_DO/PB13

LCD1_D16/ATAD12/KP_IN6/SMC_DET/EINT16/CSI1_D16/PH16	PH16	25	o o	26	PB14	JTAG_MS0/SPI2_CS0/PB14
LCD1_D17/ATAD13/KP_IN7/SMC_VCCEN/EINT17/CSI1_D17/PH17	PH17	27	o o	28	PB15	JTAG_CK0/SPI2_CLK/PB15
LCD1_D18/ATAD14/KP_OUT0/SMC_SLK/EINT18/CSI1_D18/PH18	PH18	29	o o	30	PB16	JTAG_DO0/SPI2_MOSI/PB16
LCD1_D19/ATAD15/KP_OUT1/SMC_SDA/EINT19/CSI1_D19/PH19	PH19	31	o o	32	PB17	JTAG_DI0/SPI2_MISO/PB17
LCD1_D20/ATAOE/CAN_TX/EINT20/CSI1_D20/PH20	PH20	33	o o	34	PH24	LCD1_CLK/ATACS1/KP_OUT4/SDC1_D0/CSI1_PCLK/PH24
LCD1_D21/ATADREQ/CAN_RX/EINT21/CSI1_D21/PH21	PH21	35	o o	36	PH25	LCD1_DE/ATAIORDY/KP_OUT5/SDC1_D1/CSI1_FIELD/PH25
LCD1_D22/ATADACK/KP_OUT2/SDC1_CMD/CSI1_D22/PH22	PH22	37	o o	38	PH26	LCD1_HSYNC/ATAIOR/KP_OUT6/SDC1_D2/CSI1_HSYNC/PH26
LCD1_D23/ATACS0/KP_OUT3/SDC1_CLK/CSI1_D23/PH23	PH23	39	o o	40	PH27	LCD1_VSYNC/ATAIOW/KP_OUT7/SDC1_D3/CSI1_VSYNC/PH27

GPIO_4

A20 PIN FUNCTIONS	SIGNAL # NAME	#		#	SIGNAL # NAME	A20 PIN FUNCTIONS
-	3.3V	1	o o	2	GND	-
TVOUT3	TVOUT3	3	o o	4	NMI_N	NMI_N#
TVIN0	TVIN0	5	o o	6	MIC1OUT_P	MIC1OUT_P
TVIN1	TVIN1	7	o o	8	MIC1OUT_N	MIC1OUT_N
TVIN2	TVIN2	9	o o	10	MICIN2	MICIN2
TVIN3	TVIN3	11	o o	12	GPIO2	GPIO2
LINEINR	LINEINR	13	o o	14	GPIO3	GPIO3
LINEINL	LINEINL	15	o o	16	PC7	NRB1/SDC2_CLK/PC7
FMINR	FMINR	17	o o	18	PC16	NWP/PC16
FMINL	FMINL	19	o o	20	PC17	NCE2/PC17