

A10-OLinuxino-Lime, 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)!

'A10 PIN FUNCTIONS' field has the pin names as per "A10 Datasheet V1.2". For full details about the pin (multiplexing, usage, registers, etc) please refer either to mentioned A10 datasheet or to the latest A10 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. 'A10 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

A10 PIN FUNCTIONS	SIGNAL # NAME	#	#	SIGNAL # NAME	A10 PIN FUNCTIONS
-	GND	2	0 0 1	5V	-
-	GND	4	0 0 3	3.3V	-
LCD0_D17/LVDS1_VNC/PD17	LCD_D17	6	0 0 5	LCD_D16	LCD0_D16/LVDS1_VPC/PD16
LCD0_D19/LVDS1_VN3/PD19	LCD_D19	8	0 0 7	LCD_D18	LCD0_D18/LVDS1_VP3/PD18
LCD0_D21/SMC_VPPEN/PD21	LCD_D21	10	0 0 9	LCD_D20	LCD0_D20/CSI_1_MCLK/PD20
LCD0_D23/SMC_DET/PD23	LCD_D23	12	0 0 11	LCD_D22	LCD0_D22/SMC_VPPPP/PD22
LCD0_D9/LVDS0_VN3/PD9	LCD_D9	14	0 0 13	LCD_D8	LCD0_D8/LVDS0_VP3/PD8
LCD0_D11/LVDS1_VN0/PD11	LCD_D11	16	0 0 15	LCD_D10	LCD0_D10/LVDS1_VP0/PD10
LCD0_D13/LVDS1_VN1/PD13	LCD_D13	18	0 0 17	LCD_D12	PD12
LCD0_D15/LVDS1_VN2/PD15	LCD_D15	20	0 0 19	LCD_D14	PD14
LCD0_D1/LVDS0_VN0/PD1	LCD_D1	22	0 0 21	LCD_D0	PD0
LCD0_D3/LVDS0_VN1/PD3	LCD_D3	24	0 0 23	LCD_D2	PD2
LCD0_D5/LVDS0_VN2/PD5	LCD_D5	26	0 0 25	LCD_D4	PD4
LCD0_D7/LVDS0_VNC/PD7	LCD_D7	28	0 0 27	LCD_D6	PD6
LCD0_VSYNC/SMC_SDA/PD27	LCD_VSYNC	30	0 0 29	LCD_HSYNC	PD26
LCD0_DE/SMC_RST/PD25	LCD_DE	32	0 0 31	LCD_CLK	PD24
R0_RX/PB4	PB4 (NC)	34	0 0 33	PB3 (NC)	IR0_TX/SPDI_F_MCLK/STANBYWFI/PB3
PWM0/PB2	PB2/PWM0	36	0 0 35	LCD_PWR	LCD1_D8/ATAD4/KP_IN0/MS_D0/EINT8/CSI1_D8/PH8
XN_TP	TPX2	38	0 0 37	TPX1	XP_TP
YN_TP	TPY2	40	0 0 39	TPY1	YP_TP

GPIO_1

A10 PIN FUNCTIONS	SIGNAL # NAME	#	#	SIGNAL # NAME	A10 PIN FUNCTIONS
-	GND	2	0 0 1	5V	-
-	AGND	4	0 0 3	3.3V	-
LRADC0	LRADC0	6	0 0 5	PG0	TS1_CLK/CSI1_PCLK/SDC1_CMD/PG0
LRADC1	LRADC1	8	0 0 7	PG1	TS1_ERR/CSI1_MCLK/SDC1_CLK/PG1
MICIN1	MICIN1	10	0 0 9	PG2	TS1_SYNC/CSI1_HSYNC/SDC1_D0/PG2
VMIC	VMIC	12	0 0 11	PG3	TS1_DVLD/CSI1_VSYNC/SDC1_D1/PG3
HPOUTL	HPOUTL	14	0 0 13	PG4	TS1_D0/CSI1_D0/SDC1_D2/CSI0_D8/PG4
HPCOM	HPCOM	16	0 0 15	PG5	TS1_D1/CSI1_D1/SDC1_D3/CSI0_D9/PG5
HPOUTR	HPOUTR	18	0 0 17	PG6	TS1_D2/CSI1_D2/UART3_TX/CSI0_D10/PG6
TVOUT0/VGA-G	VGA-G	20	0 0 19	PG7	TS1_D3/CSI1_D3/UART3_RX/CSI0_D11/PG7
TVOUT1/VGA-B	VGA-B	22	0 0 21	PG8	TS1_D4/CSI1_D4/UART3_RTS/CSI0_D12/PG8
TVOUT2/VGA-R	VGA-R	24	0 0 23	PG9	TS1_D5/CSI1_D5/UART3_CTS/CSI0_D13/PG9
UART0_TX/IR1_TX/PB22	UART0-RX	26	0 0 25	PG10	TS1_D6/CSI1_D6/UART4_TX/CSI0_D14/PG10
UART0_RX/IR1_RX/PB23	UART0-TX	28	0 0 27	PG11	TS1_D7/CSI1_D7/UART4_RX/CSI0_D15/PG11
TWI2_SDA/PB21	PB21	30	0 0 29	PC3 or SATA-PWR-	NCE1/PC3 or NC
TWI2_SCK/PB20	PB20	32	0 0 31	PC18	NCE3/PC18
TWI1_SDA/PB19	PB19	34	0 0 33	PC19	NCE4/SPI2_CS0/PC19
TWI1_SCK/PB18	PB18	36	0 0 35	PC20	NCE5/SPI2_CLK/PC20
NDQS/PC24	PC24	38	0 0 37	PC21	NCE6/SPI2_MOSI/PC21
SPI0_CS0/PC23	PC23	40	0 0 39	PC22	NCE7/SPI2_MISO/PC22

GPIO 2

A10 PIN FUNCTIONS	SIGNAL # NAME	#	#	SIGNAL # NAME	A10 PIN FUNCTIONS
-	GND	2	0 0 1	5V	-
-	LD03-2.8V	4	0 0 3	3.3V	-
TS0_CLK/CSI0_PCLK/PE0	PE0	6	0 0 5	TWI0-SCK	TWI0_SCK/PB0
TS0_ERR/CSI0_MCLK/PE1	PE1	8	0 0 7	TWI0-SDA	TWI0_SDA/PB1
TS0_SYNC/CSI0_HSYNC/PE2	PE2	10	0 0 9	PI0	GPS_CLK/PI0
TS0_DVLD/CSI0_VSYNC/PE3	PE3	12	0 0 11	PI1	GPS_SIGN/PI1
TS0_D0/CSI0_D0/PE4	PE4	14	0 0 13	PI2	GPS_MAG/PI2
TS0_D1/CSI0_D1/PE5	PE5	16	0 0 15	PI3	PWM1/PI3
TS0_D2/CSI0_D2/PE6	PE6	18	0 0 17	PI4	SDC3_CMD/PI4
TS0_D3/CSI0_D3/PE7	PE7	20	0 0 19	PI5	SDC3_CLK/PI5
TS0_D4/CSI0_D4/PE8	PE8	22	0 0 21	PI6	SDC3_D0/PI6
TS0_D5/CSI0_D5/PE9	PE9	24	0 0 23	PI7	SDC3_D1/PI7
TS0_D6/CSI0_D6/PE10	PE10	26	0 0 25	PI8	SDC3_D2/PI8
TS0_D7/CSI0_D7/PE11	PE11	28	0 0 27	PI9	SDC3_D3/PI9
HSDA/UART7_RX/PS2_SDA0/PI21	PI21	30	0 0 29	PI10	SPI0_CS0/UART5_TX/EINT22/PI10
HSLC/UART7_TX/PS2_SCK0/PI20	PI20	32	0 0 31	PI11	SPI0_CLK/UART5_RX/EINT23/PI11
EINT31/SPI1_MISO/UART2_RX/PI19	PI19	34	0 0 33	PI12	SPI0_MOSI/UART6_TX/EINT24/PI12
EINT30/SPI1_MOSI/UART2_TX/PI18	PI18	36	0 0 35	PI13	SPI0_MISO/UART6_RX/EINT25/PI13
EINT29/SPI1_CLK/UART2_CTS/PI17	PI17	38	0 0 37	PI14	PS2_SCK1/TCLKIN0/EINT26/SPI0_CS1/PI14
EINT28/SPI1_CS0/UART2_RTS/PI16	PI16	40	0 0 39	PI15	PS2_SDA1/TCLKIN1/EINT27/SPI1_CS1/PI15

GPIO 3

A10 PIN FUNCTIONS	SIGNAL # NAME	#	#	SIGNAL # NAME	A10 PIN FUNCTIONS
-	GND	2	0 0 1	5V	-
-	GND	4	0 0 3	3.3V	-
IR0_TX/SPDIF_MCLK/STANBYWFI/PB3	PB3	6	0 0 5	RESET_N	RESET#
IR0_RX/PB4	PB4	8	0 0 7	PH0	LCD1_D0/ATAA0/UART3_TX/EINT0/CSI1_D0/PH0
I2S_MCLK/AC97_MCLK/PB5	PB5	10	0 0 9	PH7	LCD1_D7/ATAD3/UART5_RX/MS_CLK/EINT7/CSI1_D7/PH7
I2S_BCLK/AC97_BCLK/PB6	PB6	12	0 0 11	PH9	LCD1_D9/ATAD5/KP_IN1/MS_D1/EINT9/CSI1_D9/PH9
I2S_LRCK/AC97_SYNC/PB7	PB7	14	0 0 13	PH10	LCD1_D10/ATAD6/KP_IN2/MS_D2/EINT10/CSI1_D10/PH10
NC or I2S_D00/AC97_D0/PB8	PB8/SATA-PWR_EN	16	0 0 15	PH11	LCD1_D11/ATAD7/KP_IN3/MS_D3/EINT11/CSI1_D11/PH11
I2S_D02/PB10	PB10	18	0 0 17	PH12	LCD1_D12/ATAD8/PS2_SCK1/EINT12/CSI1_D12/PH12
I2S_D03/PB11	PB11	20	0 0 19	PH13	LCD1_D13/ATAD9/PS2_SDA1/SMC_RST/EINT13/CSI1_D13/PH13
I2S_DI/AC97_DI/SPDIF_DI/PB12	PB12	22	0 0 21	PH14	LCD1_D14/ATAD10/KP_IN4/SMC_VPPEN/EINT14/CSI1_D14/PH14
SPI2_CS1/SPDIF_D0/PB13	PB13	24	0 0 23	PH15	LCD1_D15/ATAD11/KP_IN5/SMC_VPPPP/EINT15/CSI1_D15/PH15
JTAG_MS0/SPI2_CS0/PB14	PB14	26	0 0 25	PH16	LCD1_D16/ATAD12/KP_IN6/SMC_DET/EINT16/CSI1_D16/PH16
JTAG_CK0/SPI2_CLK/PB15	PB15	28	0 0 27	PH17	LCD1_D17/ATAD13/KP_IN7/SMC_VCCEN/EINT17/CSI1_D17/PH17
JTAG_D00/SPI2_MOSI/PB16	PB16	30	0 0 29	PH18	LCD1_D18/ATAD14/KP_OUT0/SMC_SLK/EINT18/CSI1_D18/PH18
JTAG_DI0/SPI2_MISO/PB17	PB17	32	0 0 31	PH19	LCD1_D19/ATAD15/KP_OUT1/SMC_SDA/EINT19/CSI1_D19/PH19
LCD1_CLK/ATAACS1/KP_OUT4/SDC1_D0/CSI1_PCLK/PH24	PH24	34	0 0 33	PH20	LCD1_D20/ATAOE/CAN_TX/EINT20/CSI1_D20/PH20
LCD1_DE/ATAIORDY/KP_OUT5/SDC1_D1/CSI1_FIELD/PH25	PH25	36	0 0 35	PH21	LCD1_D21/ATADREQ/CAN_RX/EINT21/CSI1_D21/PH21
LCD1_HSYNC/ATAIOR/KP_OUT6/SDC1_D2/CSI1_HSYNC/PH26	PH26	38	0 0 37	PH22	LCD1_D22/ATADACK/KP_OUT2/SDC1_CMD/CSI1_D22/PH22
LCD1_VSYNC/ATAIOW/KP_OUT7/SDC1_D3/CSI1_VSYNC/PH27	PH27	40	0 0 39	PH23	LCD1_D23/ATACS0/KP_OUT3/SDC1_CLK/CSI1_D23/PH23

GPIO 4

A10 PIN FUNCTIONS	SIGNAL # NAME	#	#	SIGNAL # NAME	A10 PIN FUNCTIONS
-	GND	2	0 0 1	3.3V	-
NMI_N#	NMI_N	4	0 0 3	TVOUT3	TVOUT3
MIC1OUT_P	MIC1OUT_P	6	0 0 5	TVIN0	TVIN0
MIC1OUT_N	MIC1OUT_N	8	0 0 7	TVIN1	TVIN1
MICIN2	MICIN2	10	0 0 9	TVIN2	TVIN2
GPIO2	GPIO2	12	0 0 11	TVIN3	TVIN3
GPIO3	GPIO3	14	0 0 13	LINEINR	LINEINR
NRB1/SDC2_CLK/PC7	PC7	16	0 0 15	LINEINL	LINEINL
NWP/PC16	PC16	18	0 0 17	FMINR	FMINR
NCE2/PC17	PC17	20	0 0 19	FMINL	FMINL