## IMX6 - SAM3X PHYSICAL PINS



This table describes UDOO pinout functions. Some of these pins are shared between the two processors. Their function can be choosed via

software muxing.

Every i.Mx6 and SAM3X pin can carry an alternate function. Up to 8 alternate function are available for i.Mx6. The table below gives a quick over

	UDOC	) Pin																			
	Conne					CAMOV															
	Conne	SCIOI	s samax																		
									i.Mx6												
		-E	nig e e in																		
		<u>a</u>	75	Ě	9 5	pp pp	c	79	Ě				Pad Mode					5			
	¥	/Sic	Sic	ž	늘 중	gi Si	ㅇ 용	Si.	ž	0	Ξ	2	2	2	5	9	<u> </u>	으 쓩			
	Bank	운.	£	Æ	, k	, 5 E. 5	GPI	€	Ë	7	-	<u>.</u>	<u> </u>	-	F		F	GPIO			
	J17	1	27	URXD/PA8	RX0	URXD / PWMH0 / WKUP4	IN/OUT	M3	CSI0 DAT11	IPU1 CSI0 DATA11	AUD3 RXFS	ECSPI2 SS0	UART1 RX DATA		GPI05 102	20	ARM TRACE08				
	J17	2	2	UTXD/PA9		UTXD / PWMH3	IN/OUT	M1	CSIO DATTO	IPU1 CSI0 DATA10	AUD3 RXC	ECSPI2 MISO	UART1 TX DATA		GPI05 IO2		ARM TRACEO7				
	J17	3	144	PB25	PWM2	RTS0 / TIOA0		D20	SD1 CLK	SD1 CLK	ECSPI5 SCLK	OSC32K	GPT CLKIN		GPI01 IO2		741111_11010207	IN/OUT			
	J17	4	139	PC28	PWM3	A7 / TIOA7			SD1 DAT0	SD1 DATA0	ECSPI5 MISO	CAAM WRAPPER		PCIE CTRL	GPI01 IO			IN/OUT			
	J17	5	112 -137	PA29-PC26		SPI0 NPCS1 / NRD A5 / TIOB6	IN/OUT	C20	SD1 DAT1	SD1 DATA1	ECSPI5 SS0	PWM3 OUT	GPT CAPTURE2		GPI01 IO			IN/OUT			
	J17	6	136	PC25	PWM5	A4 / TIOA6	IN/OUT	B21	SD1 CMD	SD1 CMD	ECSPI5 MOSI	PWM4 OUT	GPT COMPARE1		GPI01 IO	18		IN/OUT			
	J17	7	135	PC24	PWM6	A3 / PWML7	IN/OUT		SD4_DAT1		SD4_DATA1	PWM3 OUT			GPI02_I00			IN/OUT			
	J17	8	134	PC23	PWM7	A2 / PWML6	IN/OUT	F17	SD4_DAT2		SD4_DATA2	PWM4_OUT			GPI02_I01	10		IN/OUT			
질	J21	1	133	PC22	PWM8	A1 / PWML5	IN/OUT		SD1_DAT3	SD1_DATA3	ECSPI5_SS2	GPT_COMPARE3				21 WDOG2_RESET_B_DEB		IN/OUT			
- 1	J21	2	132	PC21	PWM9	A0/NBS0 / PWML4			SD1_DAT2	SD1_DATA2	ECSPI5_SS1	GPT_COMPARE2				19 WDOG1_RESET_B_DEB		IN/OUT			
	J21	3	102	PB7	PWM10	ERXER	IN/OUT		GPIO_1	ESAI_RX_CLK	WDOG2_B	KEY_ROW5	USB_OTG_ID	PWM2_OUT				IN/OUT			
	J21	4	20	PD7	PWM11	A17/BA1 / TIOA8	IN/OUT		GPIO_9	ESAI_RX_FS	WDOG1_B	KEY COL6	CCM_REF_EN_B	PWM1_OUT				IN/OUT			
	J21	5	21	PD8	PWM12	A21/NANDALE / TIOB8	IN/OUT	R7	GPIO_3	ESAI_RX_HF_CLK	001 01710	I2C3 SCL	XTALOSC_REF_CLK_24M	CCM_CLKO2			MLB_CLK	IN/OUT			
	J21	6	68 GND	PB27	PWM13	NCS3 / TIOB0	IN/OUT	D18	SD4_DAT0		SD4_DATA0	NAND DQS			GPI02_I00	J8		IN/OUT			
	J21 J21	0 1	VDD SNV	2	GND AREF													IN/OUT			
	J21 J21	0	VDD_SNV	PA17	SDA1	TWD0 / SPCK0	IN/OUT											IN/OUT			
	J21	10	70	PA18	SCL1	TWCK0 / A20 / WKUP9	IN/OUT											IN/OUT			
	UZ I	10	70	1 / 10	UULI	TWORD AZOT WROPS	114/001														

	UDO					SAM3X														
	Com	ector	SAMSX					_	i.Mx6											
	Bank Physical pi		Physical pir	Pin Name	Arduino	Possible	GPIO	Physical pir	Pin Name	ALT0	ALT1	ALT2	Pad Mode £LT Y	ALT4	ALT5	ALT6	ALT7	GPIO		
z	J5	1	87	URXD/PA8	SCL	TWCK1 / PWMH1 / AD9	IN/OUT	H20	EIM D21	EIM DATA21	ECSPI4 SCLK	IPU1 DI0 PIN17	IPU2 CSI1 DATA1	1 USB OTG OC	GPI03 I021	I2C1 SCL	SPDIF IN	IN/OUT		
₫	J5	2	86	UTXD/PA9	SDA	TWD1 / PWMH0 / AD8	IN/OUT	G23	EIM_D28	EIM_DATA28	I2C1_SDA	ECSPI4_MOSI	IPU2_CSI1_DATA12			IPU1_EXT_TRIG	IPU1_DI0_PIN13			
F	J5	3	3	PB25	RX1	RXD0 / DATRG / WKUP5	IN/OUT	L1		IPU1_CSI0_DATA13	EIM_DATA09		UART4_RX_DATA		GPI05_I031		ARM_TRACE10			
ें [	J5	4	4	PC28	TX1	TXD0 ADTRG WKUP6		M2		IPU1_CSI0_DATA12	EIM_DATA08		UART4_TX_DATA		GPI05_I030		ARM_TRACE09			
Z	J5	5	5	PA29-PC26	RX2	RXD1 / PWML1 / WKUP7		M5		IPU1_CSI0_DATA15	EIM_DATA11		UART5_RX_DATA		GPI06_I001		ARM_TRACE12			
₹ [	J5	6	6	PC25	TX2	TXD1 / PWMH2		M4		IPU1_CSI0_DATA14	EIM_DATA10		UART5_TX_DATA		GPI06_I000		ARM_TRACE11			
6 L	J5	7	18	PC24	RX3	A15 / RXD3	IN/OUT	L4		IPU1_CSI0_DATA16	EIM_DATA12		UART4_RTS_B		GPI06_I002		ARM_TRACE13			
0	J5	8	17	PC23	TX3	A14 / TXD3	IN/OUT	N1	CSI0_DAT4	IPU1 CSI0 DATA04	EIM_DATA02	ECSPI1 SCLK	KEY_COL5	AUD3_TXC	GPI05_I022		ARM TRACE01	IN/OUT		

UDOO Pin Connector SAM3X  I Mv6  I d	ALT7 ALT76 Oil
Second   S	
ALT2  ALT1	
ALT1 ALT1 ALT1 ALT1 ALT1 ALT1 ALT1 ALT1	
ALT1 ALT1 ALT1 ALT1 ALT1 ALT1 ALT1 ALT1	
J8 1 VCC_SW PB26 5V	
J8 1 VCC_SW PB26 5V	
J8 1 VCC_SW PB26 5V	
	100   100   100   100   100   100   100
	1/0   1/0   1/0   1/0   1/0   1/0   1/0
	1/O 1/O 1/O 1/O 1/O
J8 3 1 PA15 PIN22 CTS0/TCLK0/WKUP15 IN/OUT R23 DISP0 DAT6 IPU1 DISP0 DAT606 IPU2 DISP0 DATA06 ECSPI3 SS3 AUD6 RXC GPI04 I027	110 110 110 110
J8         4         7         PD0         PIN23         RTS1.1TK         IN/OUT         R24         DISPO DATA IPU1 DISPO DATAOY         PEV2 DISPO DATAOY         ECSPI3 RDY         GPI04 1028           J8         5         8         PD1         PIN/24         CTS1.1TF / IWKUPS         IN/OUT         R22         DISPO DATAO         BIVED 10SPO DATAOS         PWM         OUT         W0061 B         GPI04 1029	1/0 1/0 1/0 1/0
J8         5         8         PD1         PIN24         CTS1/TF/ IWKUP8         IN/OUT         R22         DISPO DAT6         IPU1 DISPO DATA08         IPU2 DISPO DATA08         PWM1 OUT         W00G1 B         GPIO4 1029           J8         6         13         PD2         PIN25         A10 / MCDA4         IN/OUT         T50 PO DAT6         IPU1 DISPO DATA09         IPU2 DISPO DATA09         PWM2 OUT         W00G2 B         GPIO4 1030	1/0 1/0
36 0 13 PUZ PINZS AIU/MCDA4 INIOUT IZS DISPO DATIO IPIU D	1/0
J8 8 15 PD6 PIN27 A12 MCDA6 IN/OUT T23 DISPO DAT11 IPU1 DISPO DAT101 IPU2 DISPO DAT101 DISPO DAT101 JBP0 DAT101 JB	1/0
J8 9 16 PD9 PIN28 A13/MCDA7 IN/OUT T24 DISP0 DATA12 IPU2 DISP0 DATA12 GPI05 DOG GRAND GRAN	1/0
J8 10 19 PA7 PIN29 A16/BA07 PVMF12 IN/OUT R20 DISPO DAT13 IPU1 DISPO DATA13 IPU2 DISPO DATA13 AUD5 RXFS GPIO5 1007	1/0
J8 11 22 PD10 PIN30 A22/NANDCLE / TCLK8 IN/OUT U25 DISP0 DAT14 IPU1 DISP0 DATA14 IPU2 DISP0 DATA14 AUD5 RXC GPIO5 IO08	1/0
J8 12 26 PC1 PIN31 TCLK2/NCS1/WKUP3 IN/OUT T22 DISPO DAT15 IPU1 DISPO DATA15 IPU2 DISPO DATA15 ECSPI1 SS1 ECSPI2 SS1 GPI05 IO09	1/0
J8 13 32 PC2 PIN32 NWR1/NBS1 IN/OUT T21 DISPO DAT16 IPU1 DISPO DATA16 IPU2 DISPO DATA16 ECSPI2 MOSI AUD5 TXC SDMA EXT EVENTO GPIO5 IO10	1/0
J8 14 55 PC3 PIN33 IN/OUT U24 DISPO DAT17 IPU1 DISPO DATA17 IPU2 DISPO DATA17 ECSPI2 MISO AUD5 TXD SDMA EXT EVENT1 GPIO5 IO11	I/O
T J8 15 59 PC4 PIN34 D0 / PWML0 IN/OUT V25 DISPO DAT18 IPU1 DISPO DATA18 IPU2 DISPO DATA18 ECSPI2 SSO AUD5 TXFS AUD4 RXFS GPI05 IO12	EIM CS2 I/O
T 18 15 59 PC4 PIN34 D0/PWML0 IN/OUT V25 DISPO DAT18 IPU1 DISPO DATA18 IPU2 DISPO DATA18 ECSPI2 SSO AUD5 TXFS AUD4 RXFS GPIO5 I012  9 18 16 60 PC5 PIN35 D1/PWMH0 IN/OUT U23 DISPO DAT19 IPU1 DISPO DATA19 IPU2 DISPO DATA19 ECSPI2 SCIK AUD5 TXD AUD4 RXC GPIO5 I013    N	EIM CS3 I/O
	I/O
J8 18 63 PC7 PIN37 D3/PWMH1 IN/OUT T20 DISPO DAT21 IPU1 DISPO DATA21 IPU2 DISPO DATA21 ECSPI1 MOSI AUD4 TXD GPIO5 IO15	I/O
U 38 18 63 PC7 PIN37 D3/PWMH1 IN/OUT T20 DISPO DAT21 IPU1 DISPO DATA21 ECSPI1 MOSI AUD4 TXD GPIO5 IO15 U 38 19 64 PC8 PIN38 D4/PWML2 IN/OUT H25 EIM ADD16 IPU1 D1 DISP CLK IPU2 CSI1 PIXCLK GPIO2 IO22 U 38 19 64 PC8 PIN38 D4/PWML2 IN/OUT H25 EIM ADD16 IPU1 D1 DISP CLK IPU2 CSI1 PIXCLK GPIO2 IO22 U 38 19 64 PC8 PIN38 D4/PWML2 IN/OUT H25 EIM ADD16 IPU1 D1 DISP CLK IPU2 CSI1 PIXCLK GPIO2 IO23 SNIV	1/0
	SNVS_VIO_5_CTL_SRC_BOOT_CFG16_I/O
J8         21         66         PA19         PIN40         D6 / PWML3         IN/OUT         A18         NAND F D0         NAND DATA04         SD1 DATA4         SD1 DATA4         GPIO2 1000           J8         22         67         PA20         PIN41         D7 / PWML3         IN/OUT D17         NAND F D3         NAND DATA03         SD1 DATA7         GPIO2 1003	1/0
J6 22 07 PACU PINNI D7/PWWMP3 INVOUT D17 NAMD DATAQ2 SDI DATAG GPIQZ 1003 J8 23 71 PC19 PINN2 MCCK/PWMH1 INVOUT F16 NANDF D2 NAMD DATAQ2 SDI DATAG GPIQZ 1002	1/0
J8 24 72 PC18 PIN42 MCCR/PVMH1 INVOIT F10 INANDF D1 NAND DATA01 SD1 DATA5 GP102 1001	1/0
	ENET TX ER I/O
J8 26 100 PC16 PIN45 NWR0/NWE / PWMH6 IN/OUT V24 DISPO DAT22 IPU2 DISPO DAT222 EV21 MISO AUD4 TXFS GPIO5 IO16	I/O   ENET TX ER
J8 27 99 PC15 PIN46 D15/ETXER IN/OUT W24 DISP0 DAT23 IPU1 DISP0 DATA23 ECSPI1 SS0 AUD4 RXD GPI05 IO17	1/0
	AUD5 RXC I/O
J8 29 97 PC13 PIN48 D13/ETX2 IN/OUT U6 KEY ROW1 ECSPH SS0 ENET COL AUD5 RXD KEY ROW1 UART5 RX DATA GPIO4 1009 SD:	SD2 VSELECT UART1 DSR B I/O
J8 30 96 PC12 PIN49 D12/ERXCK IN/OUT U7 KEY COL1 ECSPI1 MISO ENET MDIO AUD5 TXFS KEY COL1 UART5 TX DATA GPIO4 IO08 SD	
J8 31 95 PB21 PIN50 D11 / ECOL IN/OUT J24 EIM OE EIM OE IPU1 DI1 PIN07 ECSPI2 MISO GPIO2 IO25	1/0
J8 32 94 PB14 PIN51 D10 / ERX3 IN/OUT J23 EIM CS1 EIM CS1 IPU1 DI1 PIN06 ECSPI2 MOSI GPIO2 IO24	I/O
J8 33 92 PIN52 RXD2/SPIO NPCS2/AD14/MKUP13 IN/OUT H24 EIM CSO EIM CSO IPU1 DI1 PIN05 ECSP12 SCLK GPIO2 IO23	
	AUD5_RXFS UART1_DTR_B
<u>J8 35 GND GND</u>	
J8 36 GND GND	

		OO Pin																	
	Con	nector			SAM3X														
								I.Mx6											
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		<u>.</u>	<u>a</u>	9			_	늞	9				Pad Mode					_	
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	훞	age s	Sé.	-	무밀	SS SS	GP 10 functic	,Si	ië Z	ALT0	Ė	4LT2	ALT3	ALT4	4LT5	4LT6	F	GPIO	
	Ba	₫.	立	Œ.	₹₽	₹ ₫	ດ ⊋	문	ä.	₹	₹	₹	₹	₹	₹	₹	₹	0 2	
	J23	1			NOT USED														
	J23	2	VDD_SNVS	LIBOTE	IOREF														
POWER	J23	3	VDD SNVS	NRSTB	RESET														
₹	J23 J23	- 4	VCC SW		3.3V 5V														
0	J23	6	GND		GND														
	J23	7	GND		GND														
	J23	8	VIN		VIN														
	J11	1	78	PA16	A0	SPCK1/TD/AD7	IN/OUT												
	J11	2	79	PA24	A1	MCDA3 / PCK1 / AD6	IN/OUT												
	J11	3	80	PA23	A2	MCDA2 / TCLK4 / AD5	IN/OUT												
ADCL	J11	4	81	PA22	A3	MCDA1 / TCLK3 / AD4	IN/OUT												
⋖	J11 J11	5	82 83	PA6 PA4	A4 A5	TIOB2 / NCS0 / AD3 TCLK1 / NWAIT / AD2	IN/OUT												
	J11	7	84	PA4 PA3	A5 A6	TIOB1 / PWMFI1 / AD1/WKUP1	IN/OUT												
	J11	8	85	PA2	A7	TIOA1 / NANDRDY / AD0	IN/OUT												
	011	Ŭ		.,,,,	7.0	110/11/11/11/01/01/7/100													
	J15	1	88	PB17	A8	RF / PWML1 / AD10	IN/OUT												
	J15	2	89	PB18	A9	RD / PWML2 / AD11	IN/OUT												
I	J15	3	90	PB19	A10	RK / PWML3 / AD12	IN/OUT												
ADCH	J15	4	91	PB20	A11	TXD2 / SPI0_NPCS1 / AD13	IN/OUT												
¥	J15	5	76	PB15	DAC0	CANRX1 / PWMH3 /DAC0/WKUP12	IN/OUT												
	J15	6	77	PB16	DAC1	TCLK5 / PWML0 / DAC1	IN/OUT	D.O.	0010 3	E0.11 T// D//	EGODIE DOV	EDITE OUT	ELEVALUE TV	111 570 71/ 5171	00104 1000	00015 1 0017			
	J15	7	23	PA0	CANRX	CANTX0 / PWML3	IN/OUT		GPIO_7	ESAI_TX4_RX1	ECSPI5_RDY	EPIT1_OUT		UART2_TX_DATA	GPI01_I007	SPDIF_LOCK	USB OTG HOST MODE	IN/OUT	
	J15	8	24	PA1	CANTX	CANRX0 / PCK0 / WKUP0	IN/OUT	K5	GPIO_8	ESAI_TX5_RX0	XTALOSC REF CLK 32K	EPIT2_OUT	FLEXCAN1_RX	UART2 RX DATA	GPI01_I008	SPDIF SR CLK	USB OTG PWR CIL WAKE	IN/OUT	