

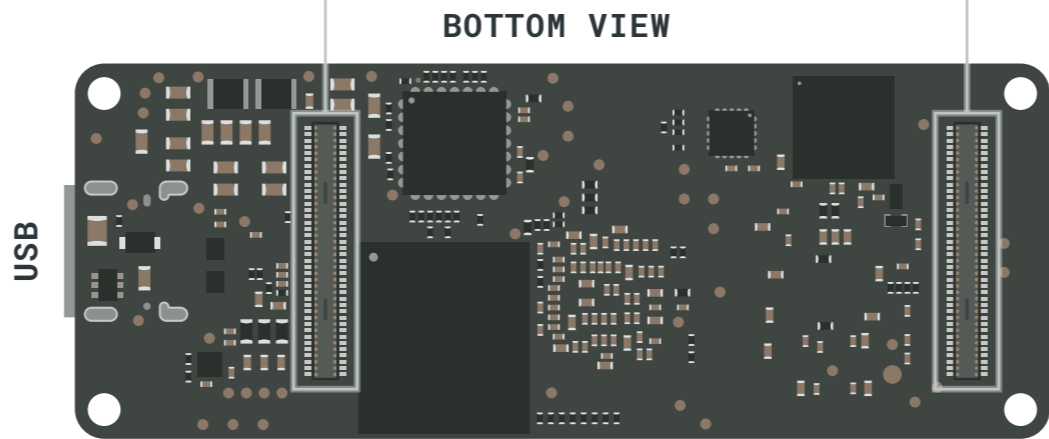
- | | | |
|--------------|------------------------|----------------|
| Ground | Digital Pin | Analog |
| Power | Analog Pin | Communication |
| LED | Other Pin | Timer |
| Internal Pin | Microcontroller's Port | Extra Features |
| SWD Pin | Default | Debug |
| | | GPIO |

- MAXIMUM** current per H7 pin is 20mA
- MAXIMUM** overall current per H7 is 140mA
- MAXIMUM** current per IMX8 pin is 12mA



J1

ETH A+	1	2	MIPI_DSI_D3_P
ETH A-	3	4	MIPI_DSI_D3_N
ETH B+	5	6	MIPI_DSI_D2_P
ETH B-	7	8	MIPI_DSI_D2_N
ETH C+	9	10	MIPI_DSI_D1_P
ETH C-	11	12	MIPI_DSI_D1_N
ETH D+	13	14	MIPI_DSI_D0_P
ETH D-	15	16	MIPI_DSI_D0_N
LED1_LINK	17	18	MIPI_DSI_CKL_P
LED2_ACT	19	20	MIPI_DSI_CKL_N
VSYS_5V	21	22	GND
USB1_VBUS	23	24	USB2_VBUS
USB1_DP	25	26	USB2_DP
USB1_DN	27	28	USB2_DN
USB1_ID	29	30	USB2_ID
GND	31	32	VSYS_5V
UART2_TXD	33	34	UART_STM32_TXD
UART2_RXD	35	36	UART_STM32_RXD
UART2_RTS	37	38	UART_STM32_RTS
UART2_CTS	39	40	UART_STM32_CTS
VSYS_5V	41	42	GND
I2C2_SDA	43	44	I2C3_SDA
I2C2_SCL	45	46	I2C3_SCL
GND	47	48	VSYS_5V
CAN1_TX	49	50	CAN0_TX
CAN1_RX	51	52	CAN0_RX
VSYS_5V	53	54	GND
USDHC2_CLK	55	56	SAI5_TXC
USDHC2_CMD	57	58	SAI5_TXFS
USDHC2_DATA0	59	60	SAI5_RXD0
USDHC2_DATA1	61	62	SAI5_TXD0
USDHC2_DATA2	63	64	VSYS_5V
USDHC2_DATA3	65	66	PDM_CLK
USDHC2_CD_B	67	68	PDM_D2
USDHC2_WP	69	70	PDM_D1
USDHC2_nRST	71	72	NVCC_SD2
LD01_VOUT/nRST	73	74	SPDIF_TX
JTAG_TMS	75	76	SPDIF_RF
JTAG_TCK	77	78	JTAG_TDI
JTAG_TDO	79	80	JTAG_TRST_B

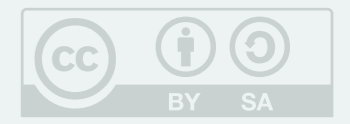


J2

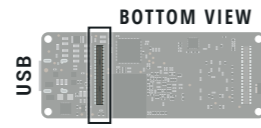
ADC3_INP4	80	79	ADC12_INP5
ADC3_INP2	78	77	ADC2_INP2
ADC3_INP3	76	75	ADC12_INP3
ADC12_INP4	74	73	ADC1_INP2
VREF-	72	71	VREF+
GND	70	69	VDD_3V3
TIM3_CH4_PWM	68	67	TIM1_CH4_PWM
TIM3_CH3_PWM	66	65	TIM2_CH3_PWM
TIM4_CH4_PWM	64	63	TIM2_CH1_PWM
TIM4_CH3_PWM	62	61	TIM4_CH1_PWM
TIM4_CH2_PWM	60	59	TIM3_CH2_PWM
GPIO_PE11	58	57	GND
GPIO_PE10	56	55	SAI1_D1
GPIO_PF12	54	53	SAI1_D0
GPIO_PF4	52	51	SAI1_FS
GPIO_PF3	50	49	SAI1_CK
GPIO_PF6	48	47	I2C4_SCL
GPIO_PF8	46	45	I2C4_SDA
GND	44	43	VDD_3V3
ECSPI1_COPI	42	41	ECSPI2_COPI
ECSPI1_CIP0	40	39	ECSPI2_CIP0
ECSPI1_SCLK	38	37	ECSPI2_SCLK
ECSPI1_SS0	36	35	ECSPI2_SS0
VDD_3V3	34	33	GND
	32	31	
	30	29	
UART3_RX	28	27	UART4_RXD
UART3_TX	26	25	UART4_TXD
GND	24	23	VDD_3V3
	22	21	PCIE_RESET
MIPI_CSI_CKL_N	20	19	PCIE_REF_PAD_CLK_N
MIPI_CSI_CKL_P	18	17	PCIE_REF_PAD_CLK_P
MIPI_CSI_D0_N	16	15	PCIE_RXN_N
MIPI_CSI_D0_P	14	13	PCIE_RXN_P
MIPI_CSI_D1_N	12	11	PCIE_TXN_N
MIPI_CSI_D1_P	10	9	PCIE_TXN_P
MIPI_CSI_D2_N	8	7	COINCELL
MIPI_CSI_D2_P	6	5	POWER_ON_REQ
MIPI_CSI_D3_N	4	3	BOOT_SOURCE
MIPI_CSI_D3_P	2	1	CTRL_BOOT

Ground	Digital Pin	Analog
Power	Analog Pin	Communication
LED	Other Pin	Timer
Internal Pin	Microcontroller's Port	Extra Features
SWD Pin	Default	Debug
		GPIO

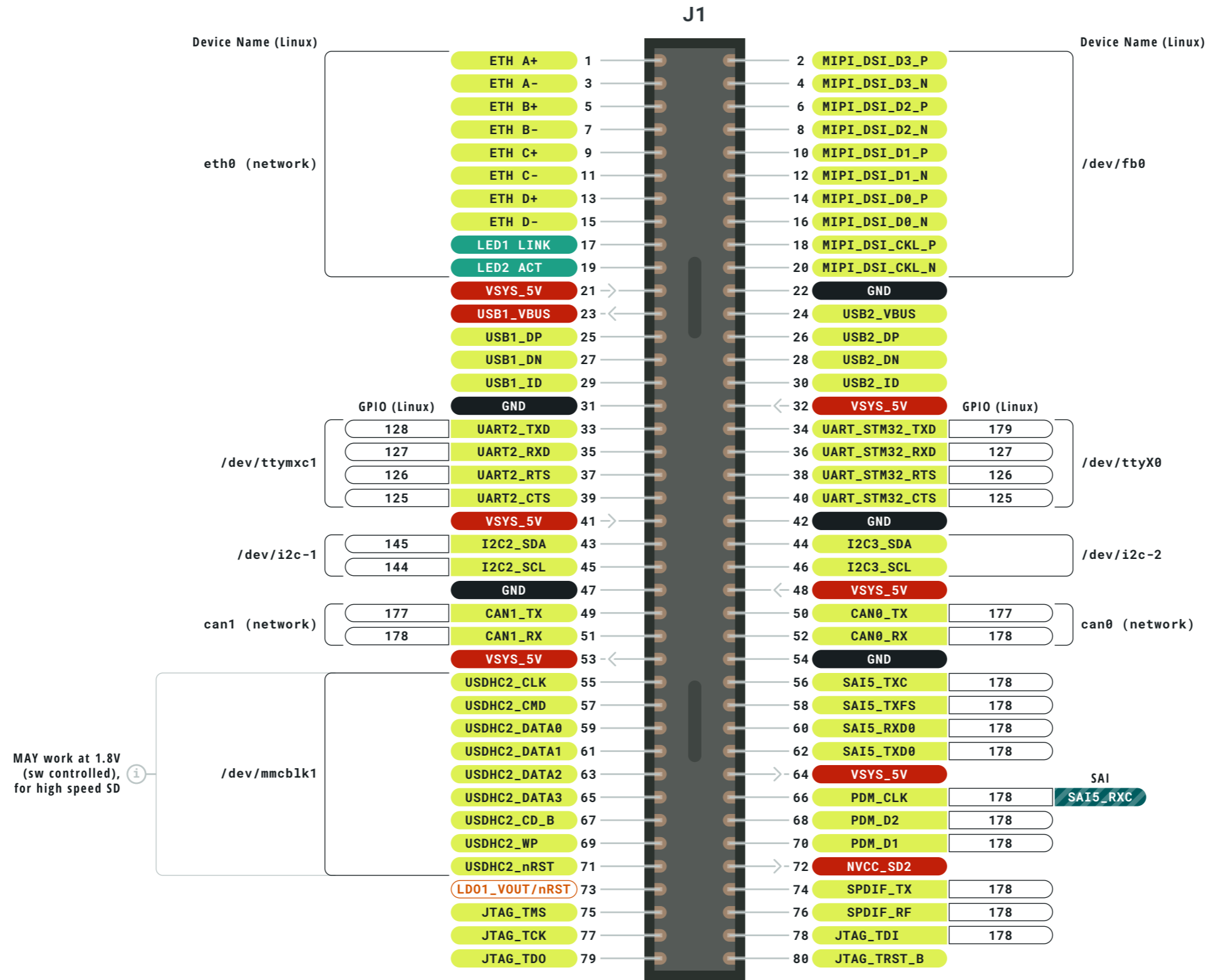
- MAXIMUM** current per H7 pin is 20mA
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J1 High Density Connector



MAY work at 1.8V (sw controlled), for high speed SD

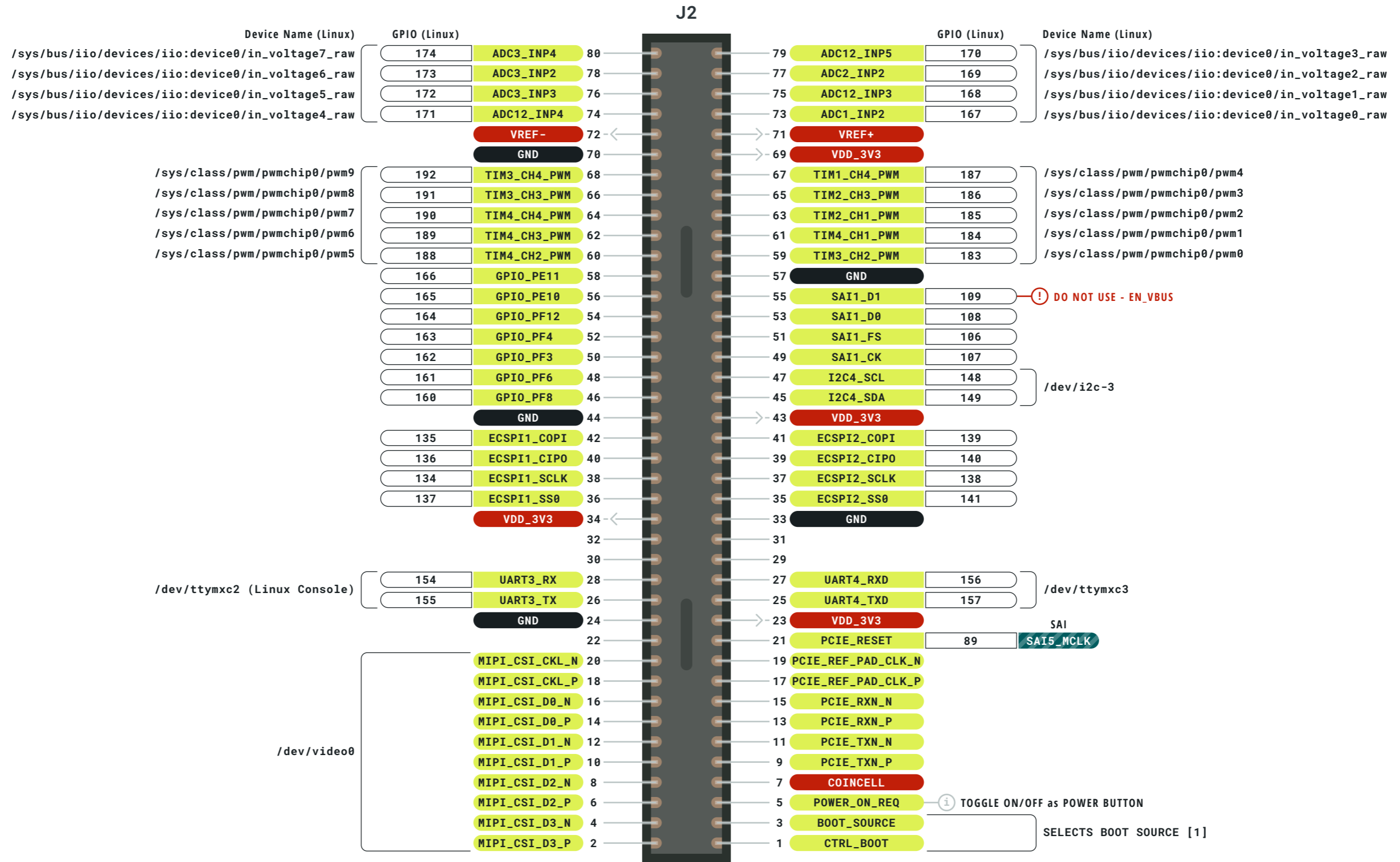
- Ground
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- Analog Pin
- Other Pin
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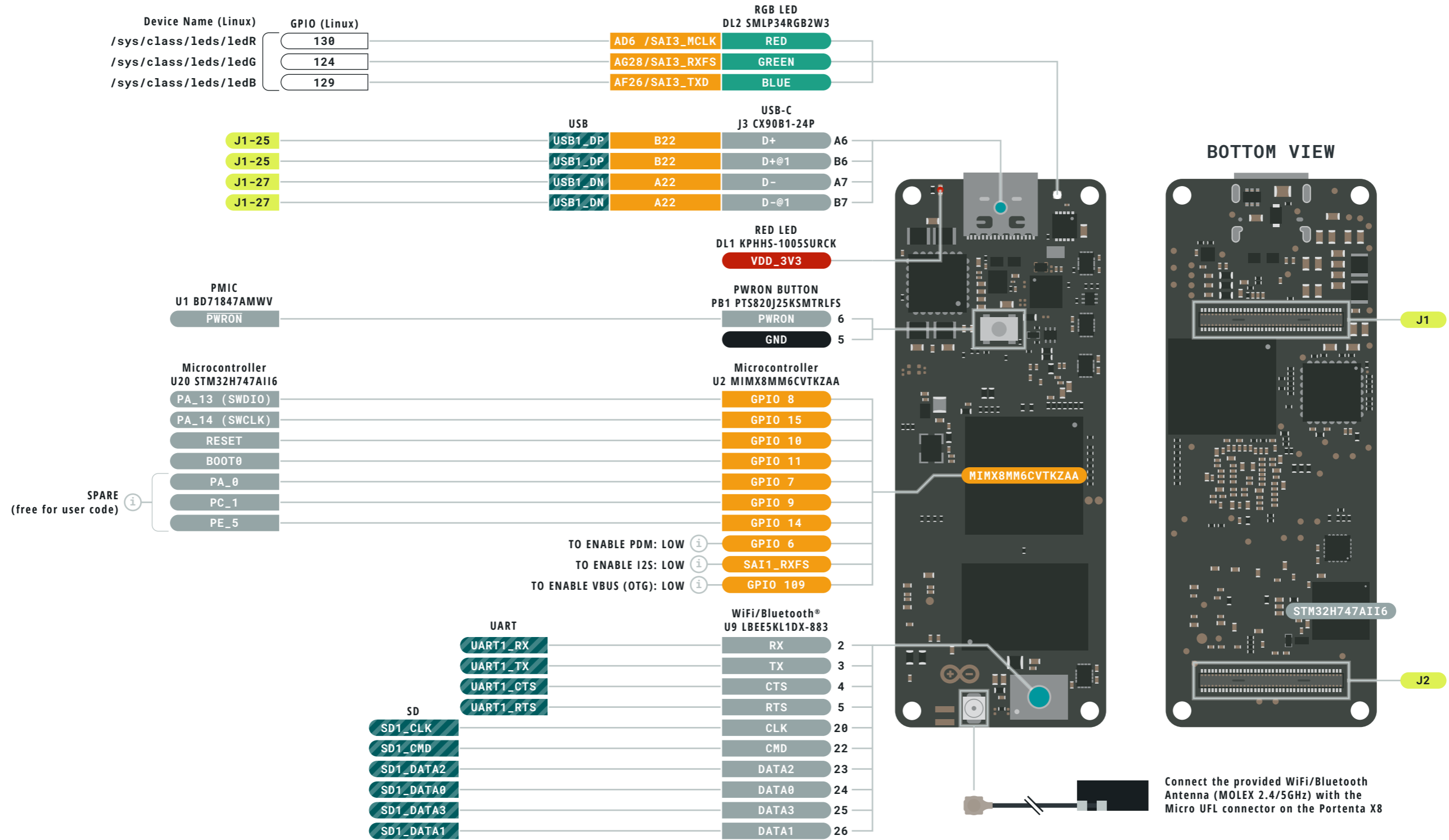
J2 High Density Connector



- Ground
- Power
- LED
- Internal Pin
- SWD Pin
- Digital Pin
- Analog Pin
- Other Pin
- Microcontroller's Port
- Default
- Analog
- Communication
- Timer
- Extra Features
- Debug
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Power	Analog Pin	Communication
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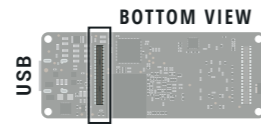


WARNING!

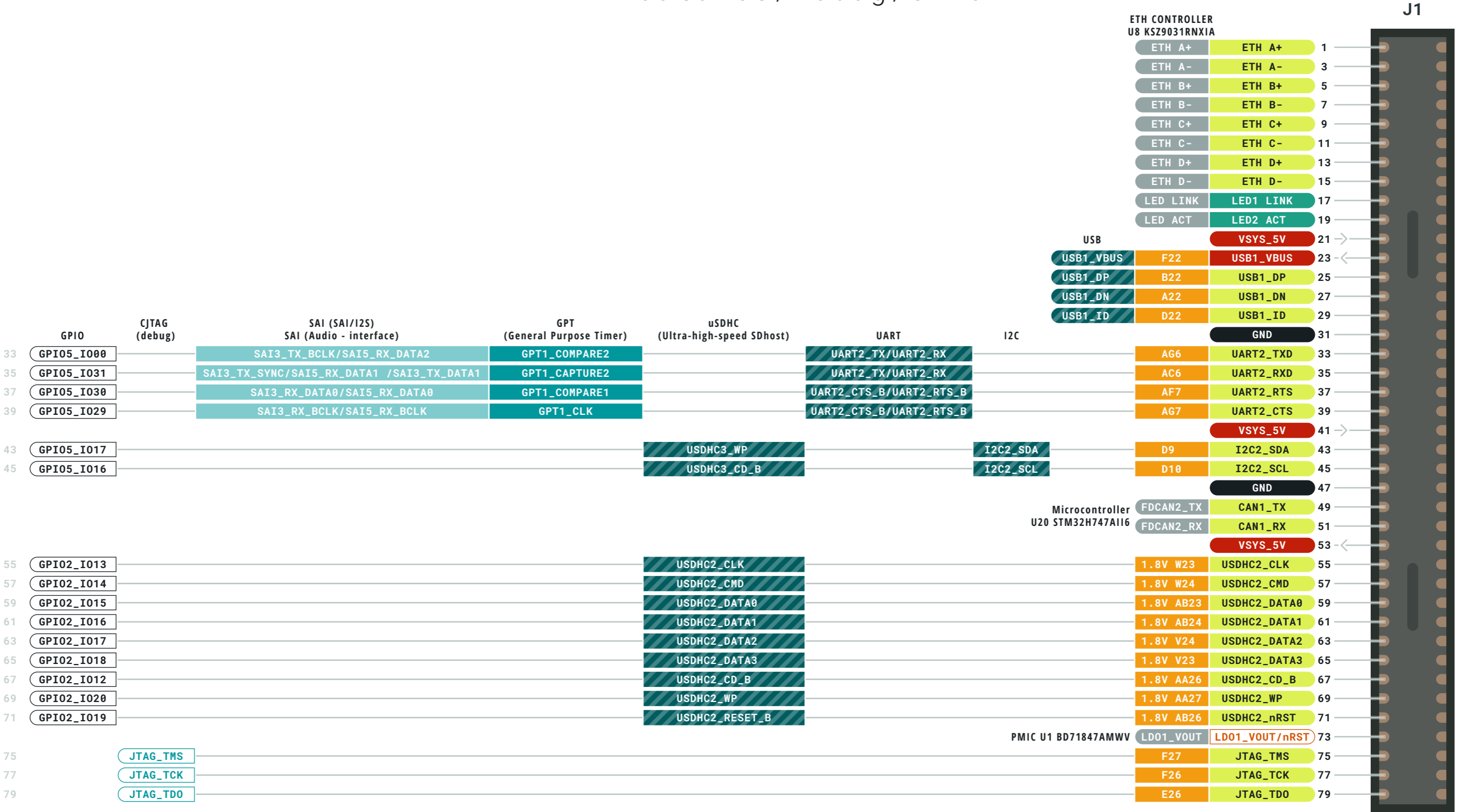
Advanced Section

The following information is for advanced use only and may not be officially supported by Arduino software





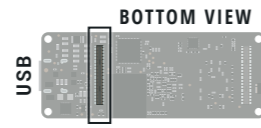
J1_odd - Communication/Timer/Extra Features/Debug/GPIO



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- SWD Pin
- Digital Pin
- Analog Pin
- Other Pin
- Microcontroller's Port
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- Debug
- GPIO

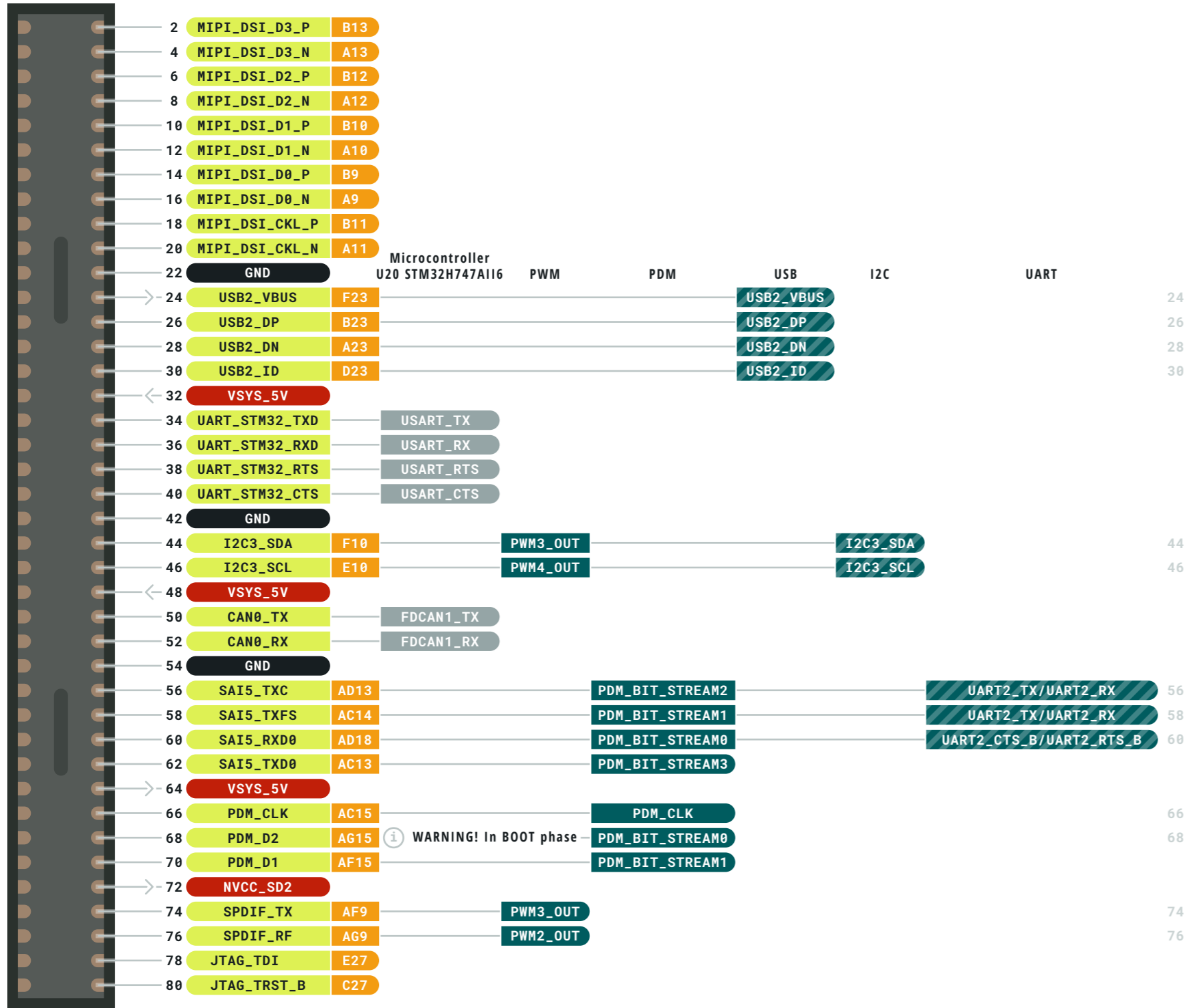
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J1_even - Analog/Communication

J1



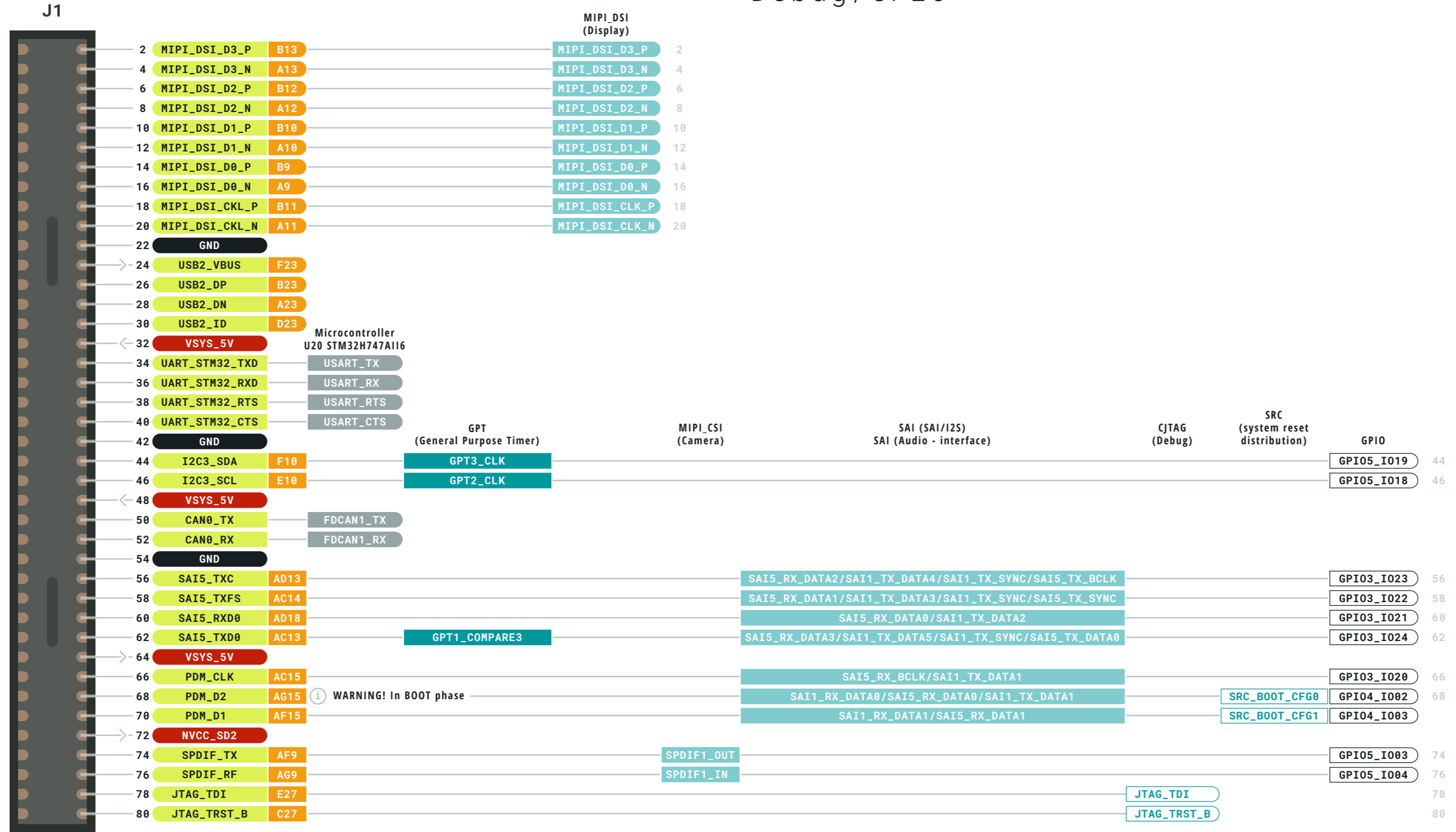
Ground	Digital Pin	Analog
Power	Analog Pin	Communication
LED	Other Pin	Timer
Internal Pin	Microcontroller's Port	Extra Features
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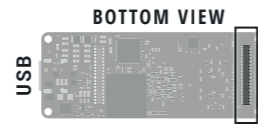
J1_even - Timer/Extra Features/ Debug/GPIO



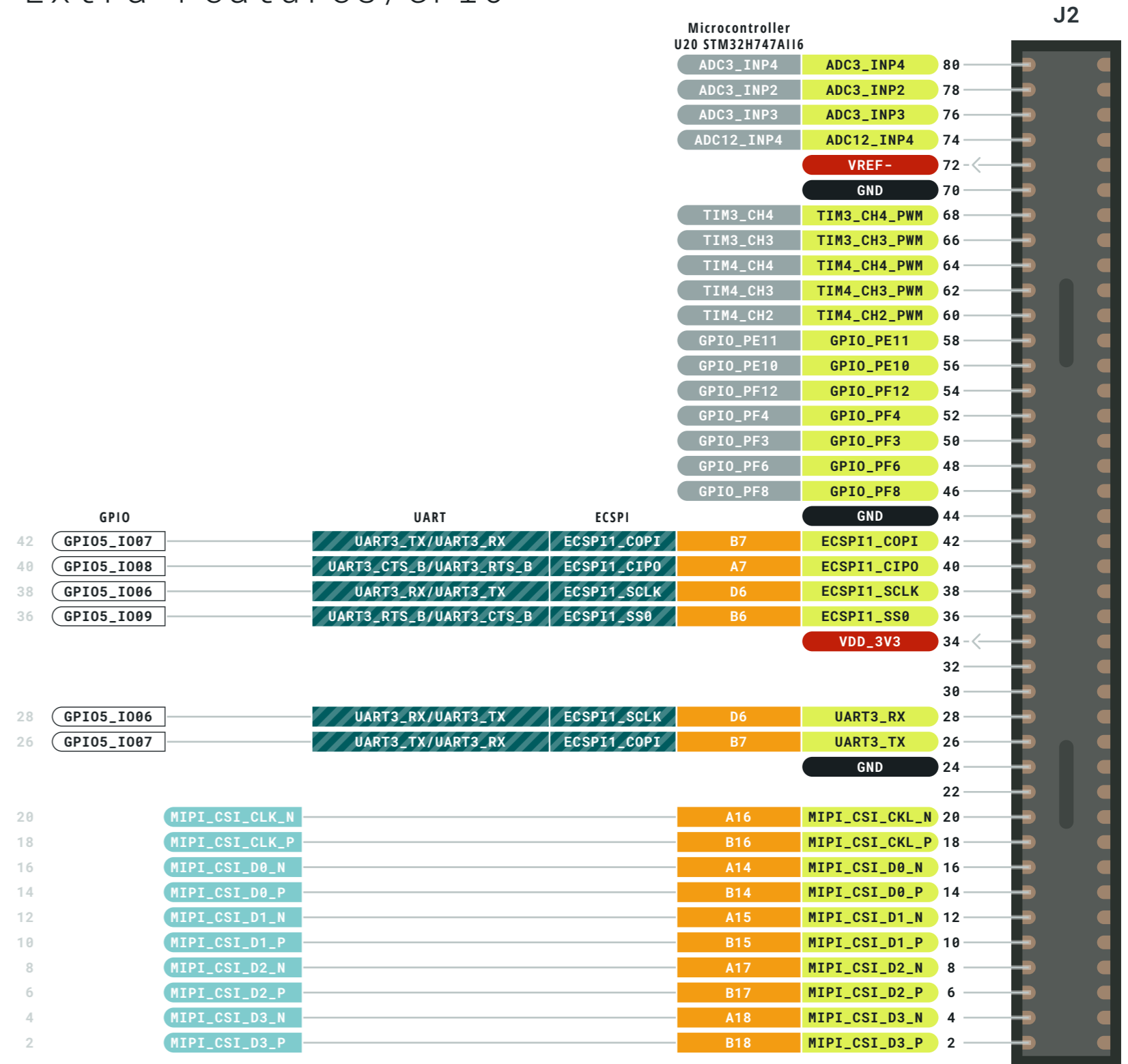
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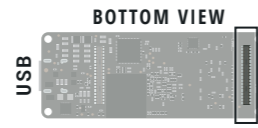
J2_even - Communication/ Extra Features/GPIO



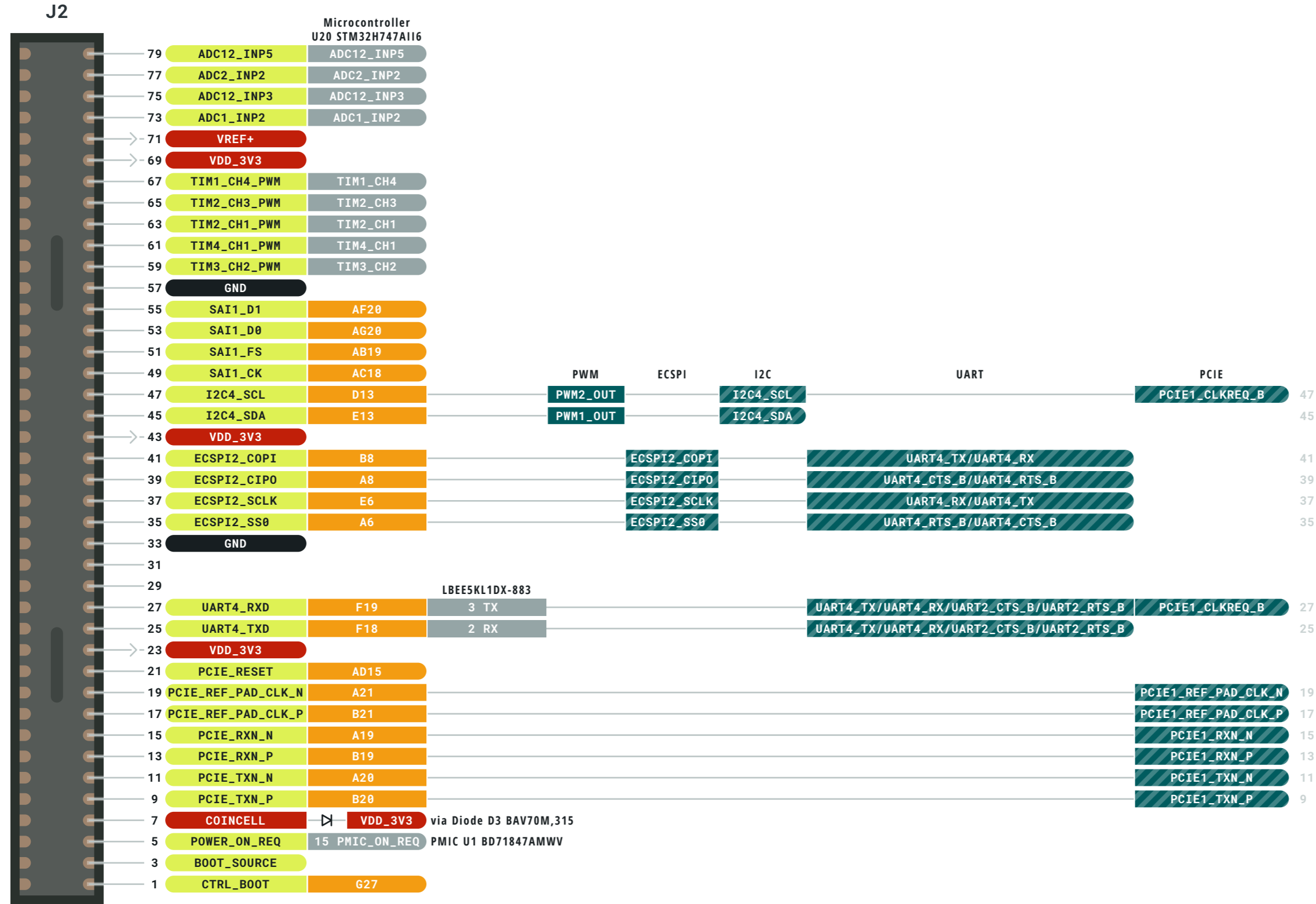
- Ground
- Power
- LED
- Internal Pin
- SWD Pin
- Digital Pin
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J2_odd - Analog/Communication



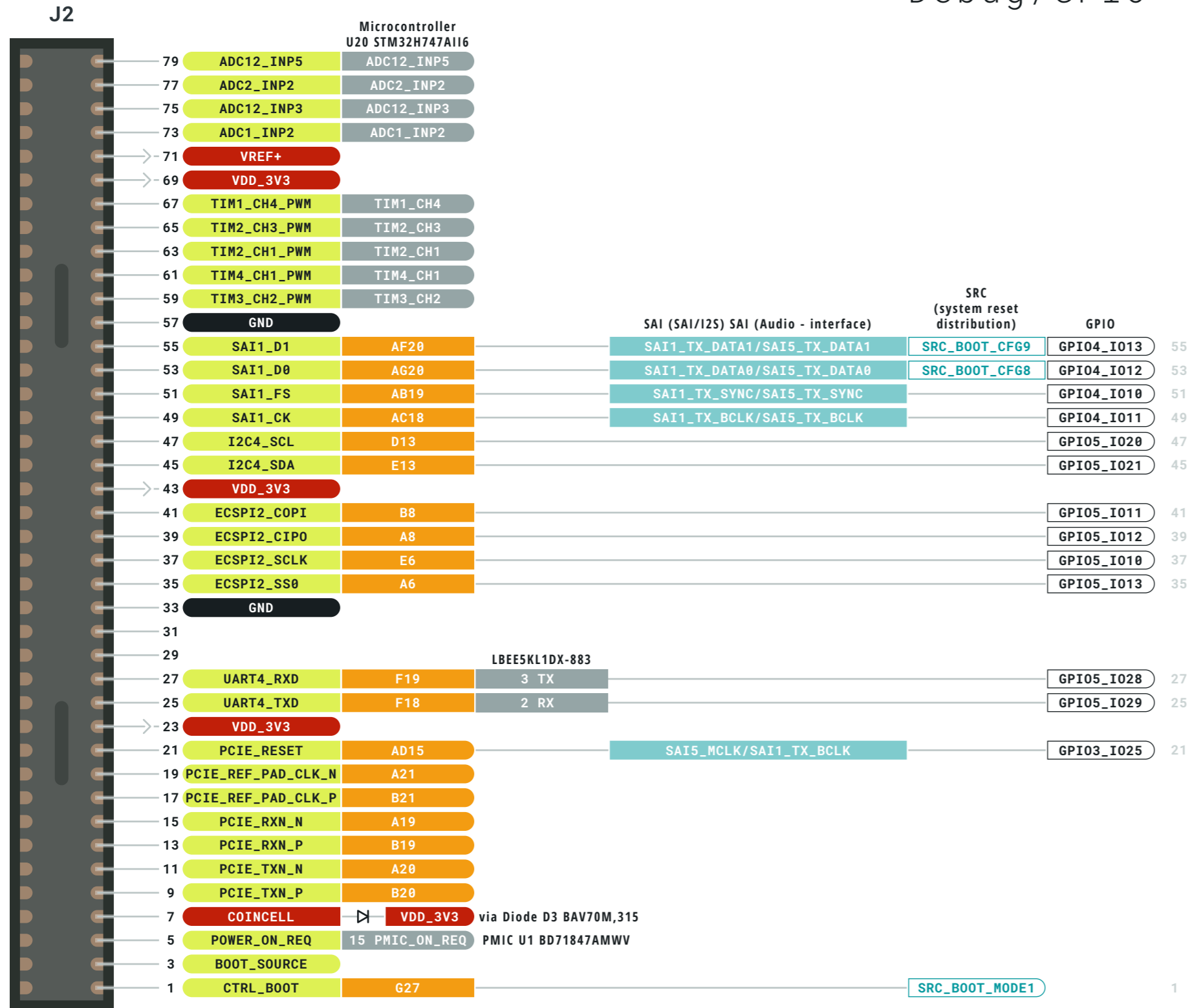
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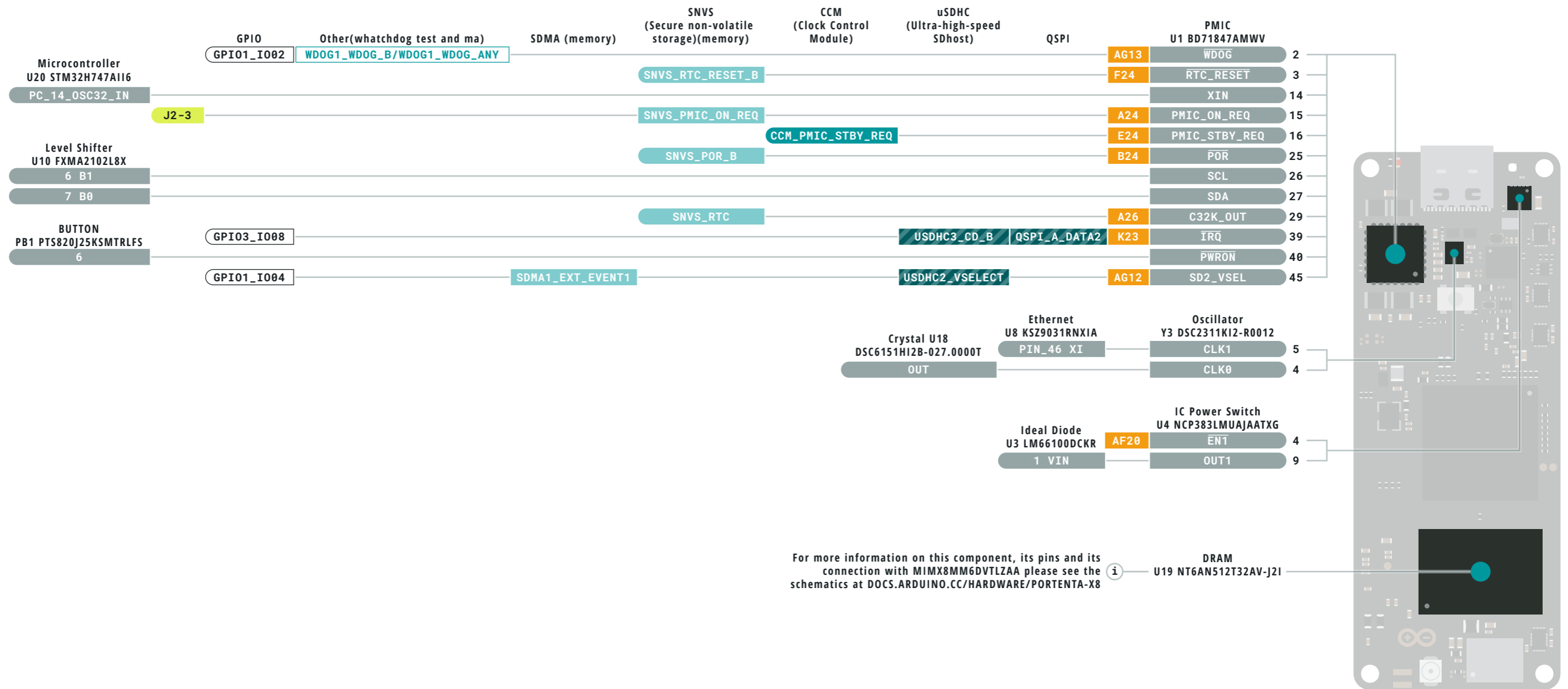
J2_odd - Extra Features/ Debug/GPIO



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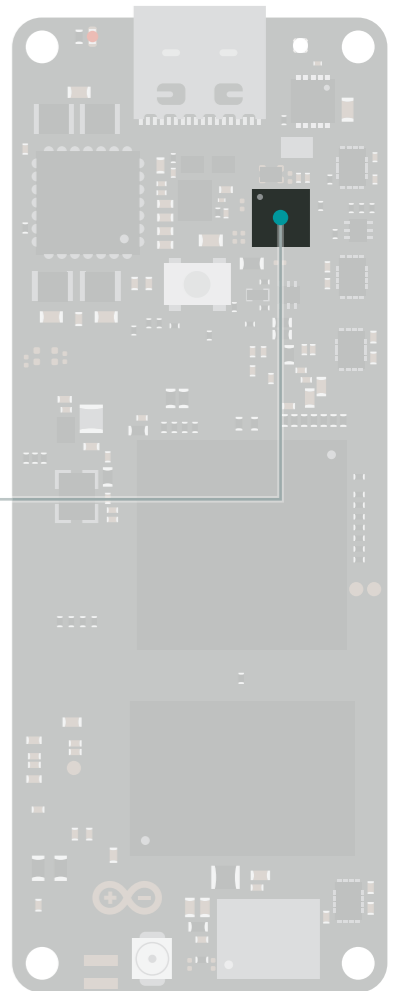
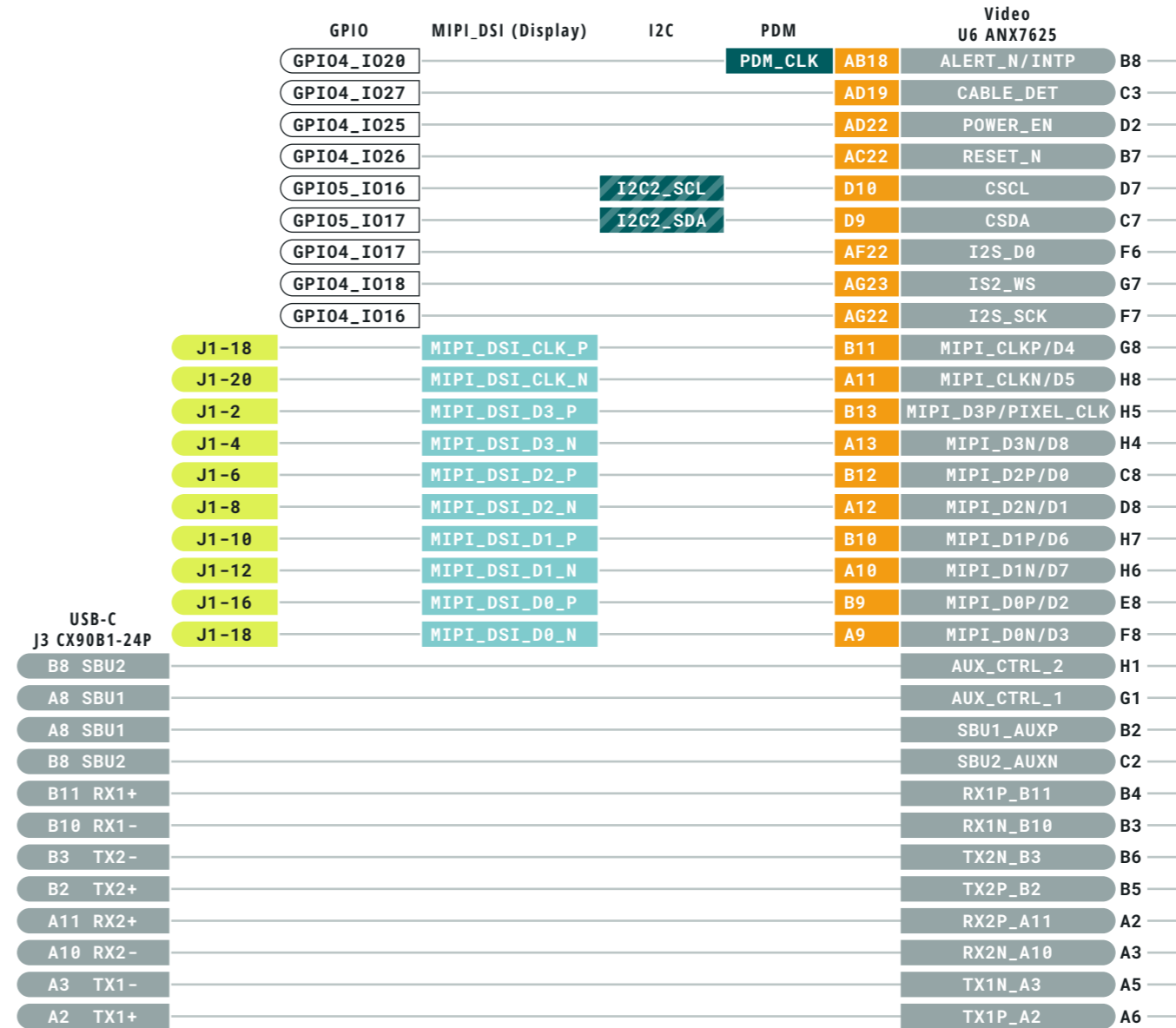


For more information on this component, its pins and its connection with MIMX8MM6DVTLZAA please see the schematics at [DOCS.ARDUINO.CC/HARDWARE/PORTENTA-X8](https://docs.arduino.cc/hardware/portenta-x8)

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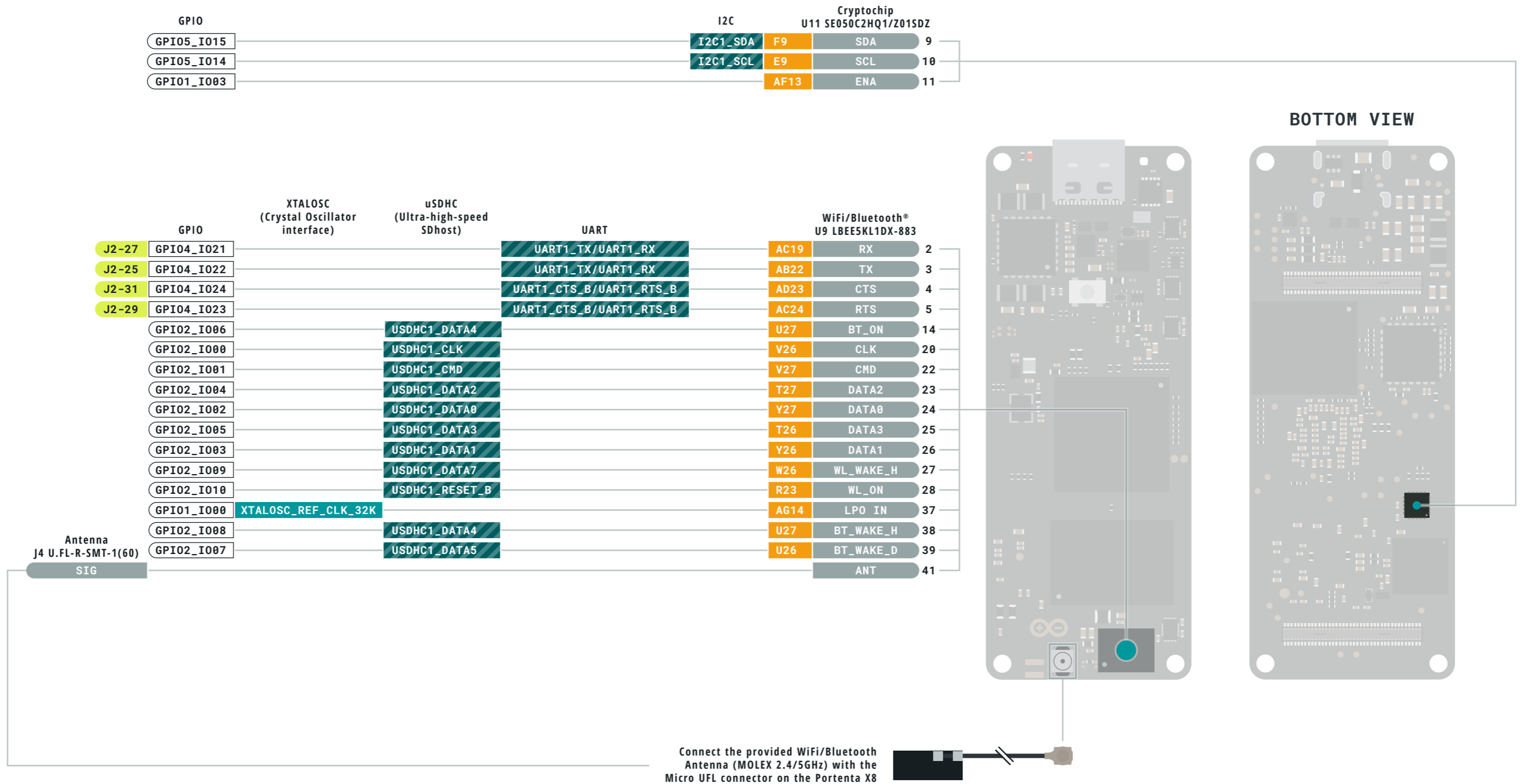




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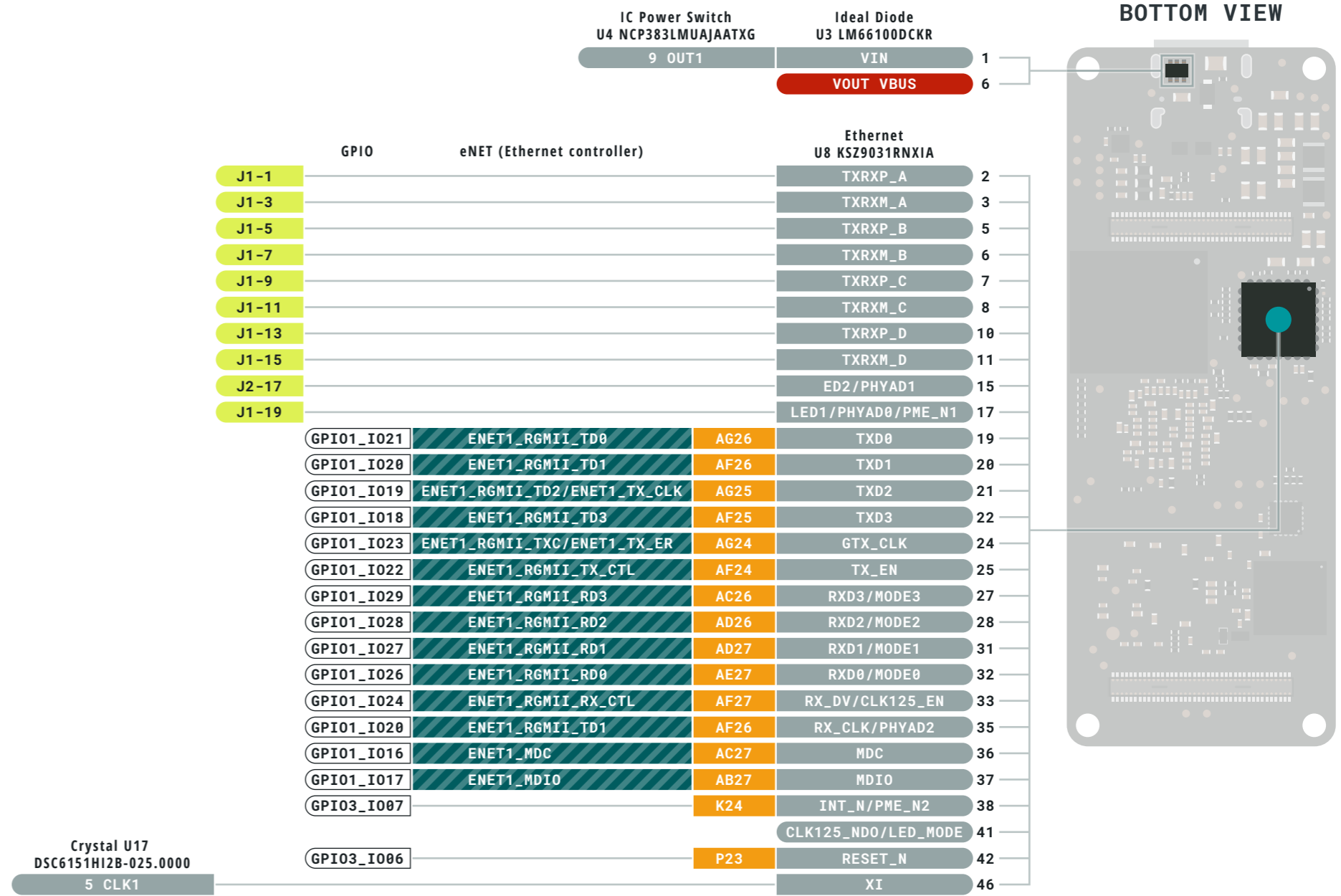




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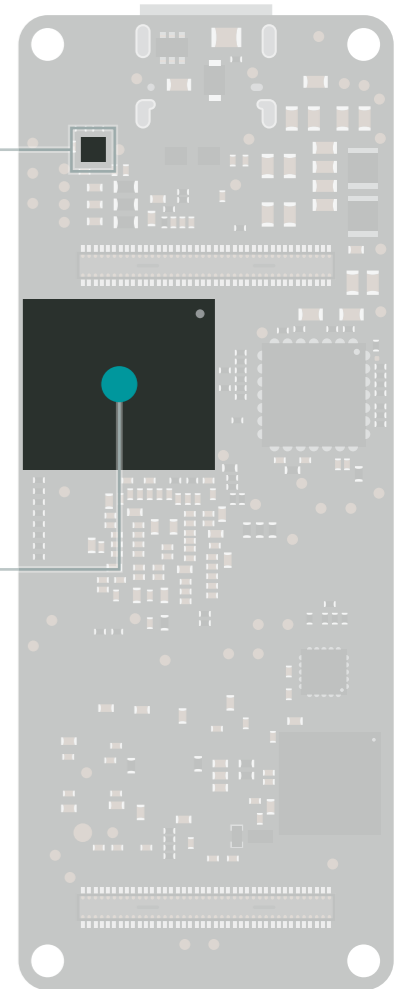


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BOTTOM VIEW



- Ground
- Power
- LED
- Internal Pin
- SWD Pin
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