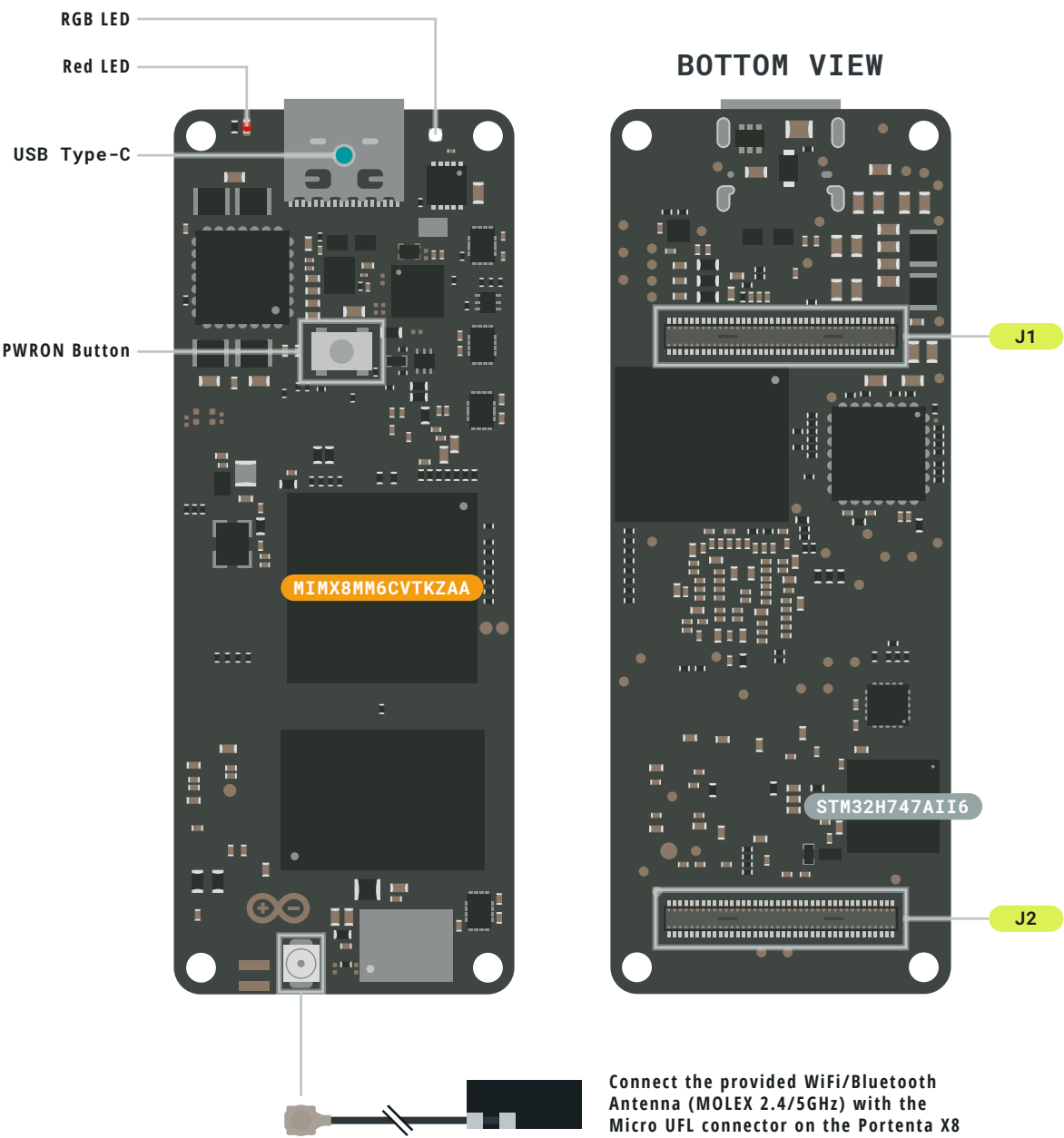




Ground	Digital Pin	Analog
Power	Analog Pin	Communication
LED	Other Pin	Timer
Internal Pin	Microcontroller's Port	Extra Features
SWD Pin	Default	Debug
		GPIO

- ⚠ **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
ETH A-	3
ETH B+	5
ETH B-	7
ETH C+	9
ETH C-	11
ETH D+	13
ETH D-	15
LED1 LINK	17
LED2 ACT	19
VSYS_5V	21
USB1_VBUS	23
USB1_DP	25
USB1_DN	27
USB1_ID	29
GND	31
UART2_TXD	33
UART2_RXD	35
UART2_RTS	37
UART2_CTS	39
VSYS_5V	41
I2C2_SDA	43
I2C2_SCL	45
GND	47
CAN1_TX	49
CAN1_RX	51
VSYS_5V	53
USDHC2_CLK	55
USDHC2_CMD	57
USDHC2_DATA0	59
USDHC2_DATA1	61
USDHC2_DATA2	63
USDHC2_DATA3	65
USDHC2_CD_B	67
USDHC2_WP	69
USDHC2_nRST	71
LD01_VOUT/nRST	73
JTAG_TMS	75
JTAG_TCK	77
JTAG_TDO	79

2	MIPI_DSI_D3_P
4	MIPI_DSI_D3_N
6	MIPI_DSI_D2_P
8	MIPI_DSI_D2_N
10	MIPI_DSI_D1_P
12	MIPI_DSI_D1_N
14	MIPI_DSI_D0_P
16	MIPI_DSI_D0_N
18	MIPI_DSI_CKL_P
20	MIPI_DSI_CKL_N
22	GND
24	USB2_VBUS
26	USB2_DP
28	USB2_DN
30	USB2_ID
32	VSYS_5V
34	UART_STM32_TXD
36	UART_STM32_RXD
38	UART_STM32_RTS
40	UART_STM32_CTS
42	GND
44	I2C3_SDA
46	I2C3_SCL
48	VSYS_5V
50	CAN0_TX
52	CAN0_RX
54	GND
56	SAI5_TXC
58	SAI5_TXFS
60	SAI5_RXD0
62	SAI5_TXD0
64	VSYS_5V
66	PDM_CLK
68	PDM_D2
70	PDM_D1
72	NVCC_SD2
74	SPDIF_TX
76	SPDIF_RF
78	JTAG_TDI
80	JTAG_TRST_B

BOTTOM VIEW

USB

J2	
ADC3_INP4	80
ADC3_INP2	78
ADC3_INP3	76
ADC12_INP4	74
VREF-	72
GND	70
TIM3_CH4_PWM	68
TIM3_CH3_PWM	66
TIM4_CH4_PWM	64
TIM4_CH3_PWM	62
TIM4_CH2_PWM	60
GPIO_PE11	58
GPIO_PE10	56
GPIO_PF12	54
GPIO_PF4	52
GPIO_PF3	50
GPIO_PF6	48
GPIO_PF8	46
GND	44
ECSPI1_COPI	42
ECSPI1_CIP0	40
ECSPI1_SCLK	38
ECSPI1_SS0	36
VDD_3V3	34
32	
30	
UART3_RX	28
UART3_TX	26
GND	24
22	
MIPI_CSI_CKL_N	20
MIPI_CSI_CKL_P	18
MIPI_CSI_D0_N	16
MIPI_CSI_D0_P	14
MIPI_CSI_D1_N	12
MIPI_CSI_D1_P	10
MIPI_CSI_D2_N	8
MIPI_CSI_D2_P	6
MIPI_CSI_D3_N	4
MIPI_CSI_D3_P	2

79	ADC12_INP5
77	ADC2_INP2
75	ADC12_INP3
73	ADC1_INP2
71	VREF+
69	VDD_3V3
67	TIM1_CH4_PWM
65	TIM2_CH3_PWM
63	TIM2_CH1_PWM
61	TIM4_CH1_PWM
59	TIM3_CH2_PWM
57	GND
55	SAI1_D1
53	SAI1_D0
51	SAI1_FS
49	SAI1_CK
47	I2C4_SCL
45	I2C4_SDA
43	VDD_3V3
41	ECSPI2_COPI
39	ECSPI2_CIP0
37	ECSPI2_SCLK
35	ECSPI2_SS0
33	GND
31	
29	
27	UART4_RXD
25	UART4_TXD
23	VDD_3V3
21	PCIE_RESET
19	PCIE_REF_PAD_CLK_N
17	PCIE_REF_PAD_CLK_P
15	PCIE_RXN_N
13	PCIE_RXN_P
11	PCIE_TXN_N
9	PCIE_TXN_P
7	COINCELL
5	POWER_ON_REQ
3	BOOT_SOURCE
1	CTRL_BOOT

- Ground

Power

LED

Internal Pin

SWD Pin
- Digital Pin

Analog Pin

Other Pin

Microcontroller's Port

Default
- Analog

Communication

Timer

Extra Features

Debug

GPIO

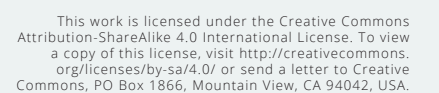
- ⚠

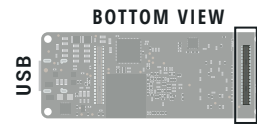
MAXIMUM current per H7 pin is 20mA
- ⚠

MAXIMUM overall current per H7 is 140mA
- ⚠

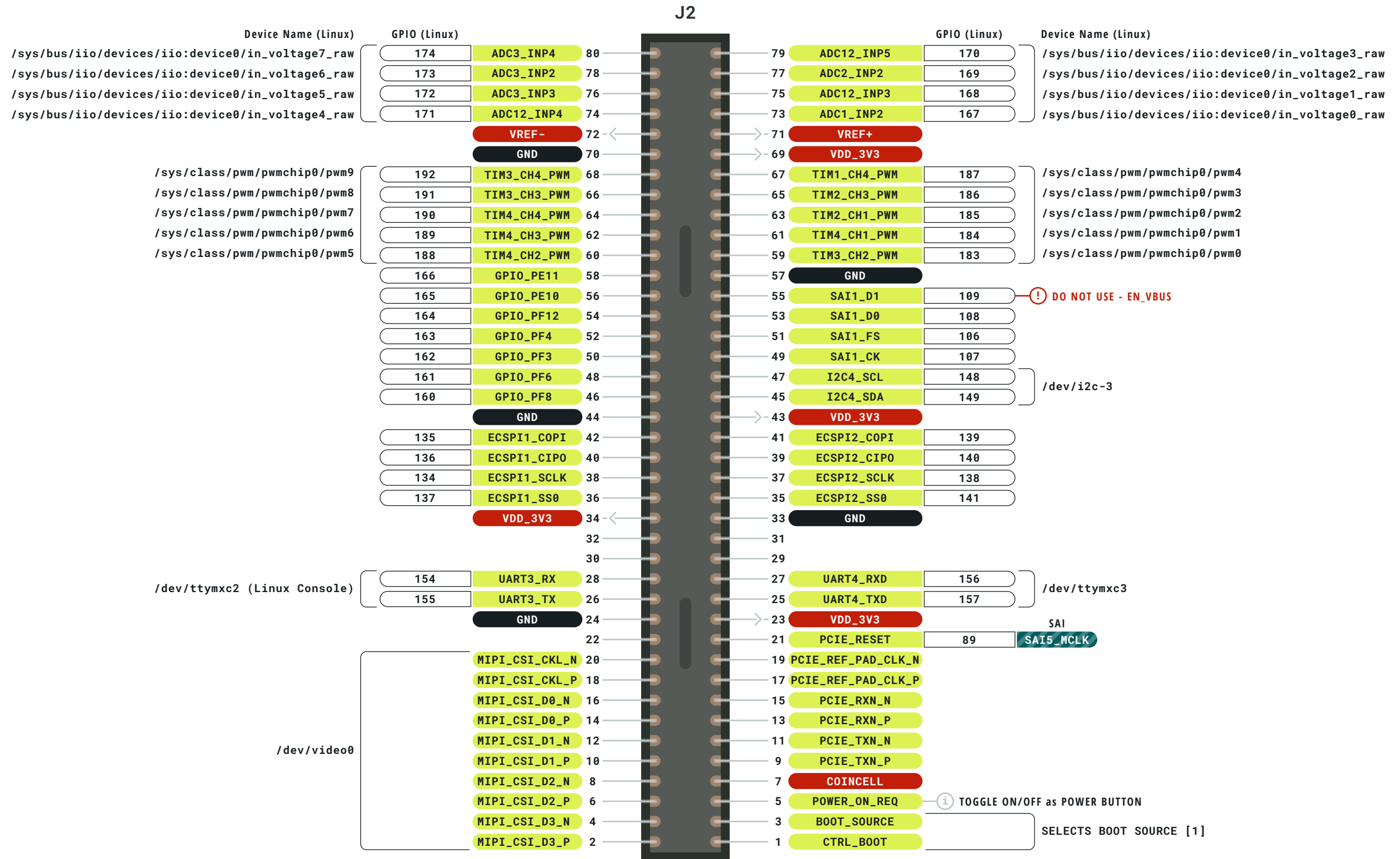
MAXIMUM current per IMX8 pin is 12mA







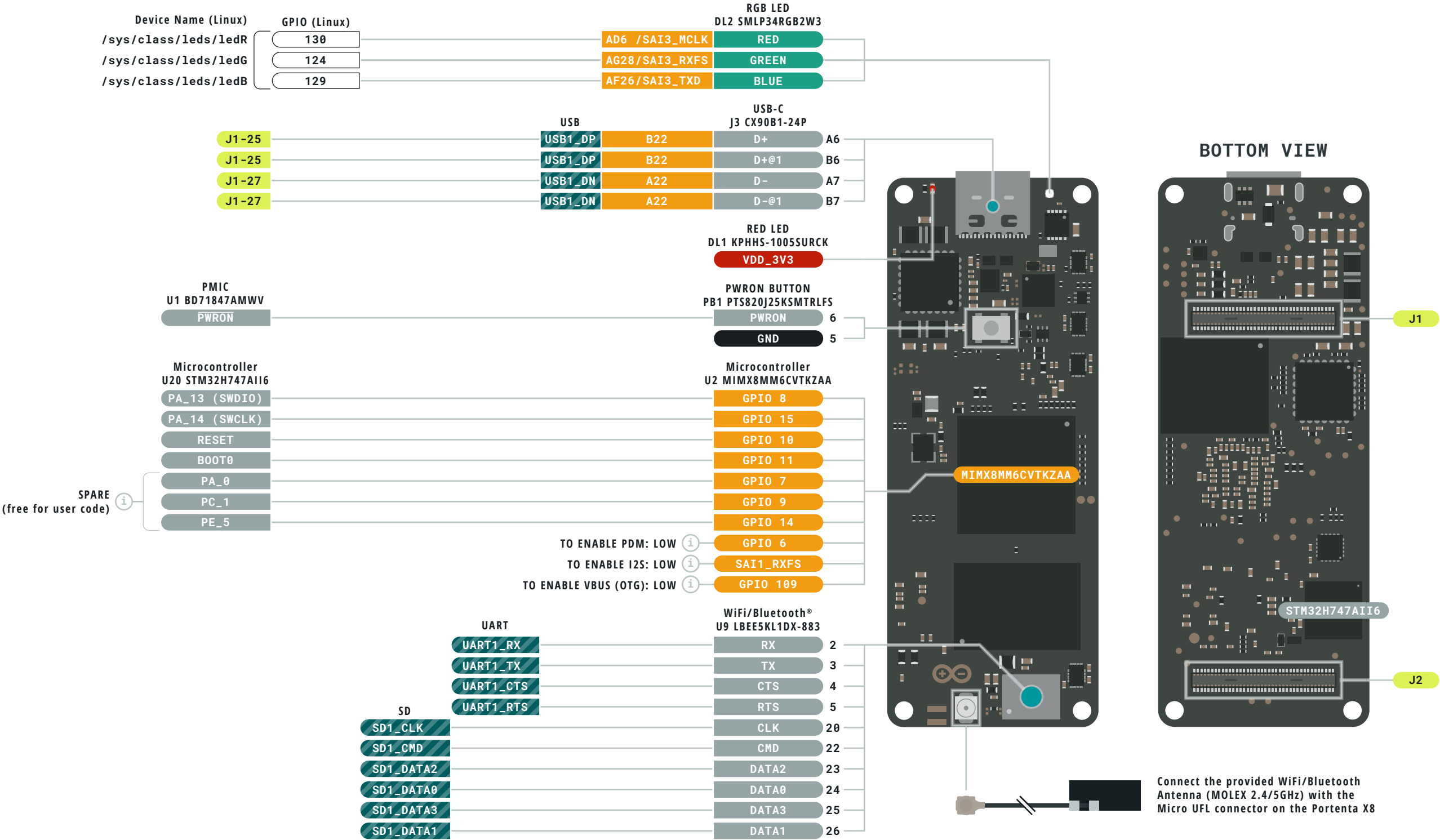
J2 High Density Connector



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

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





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

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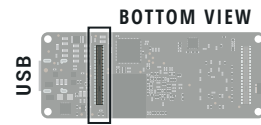
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W A R N I N G !

Advanced Section

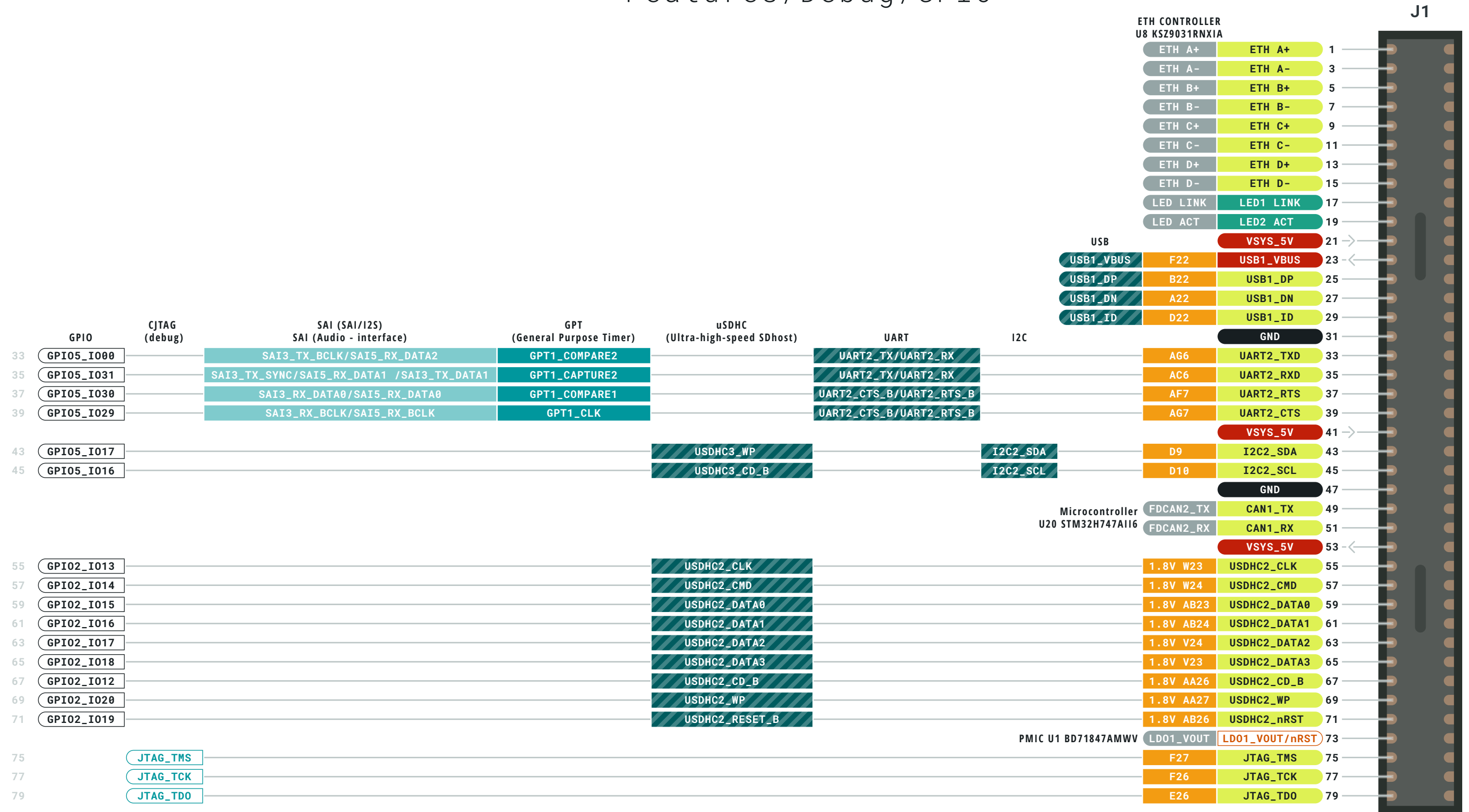
The following information is for advanced use only and
may not be officially supported by Arduino software





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

ARDUINO
PORTENTA X8



ARDUINO . CC

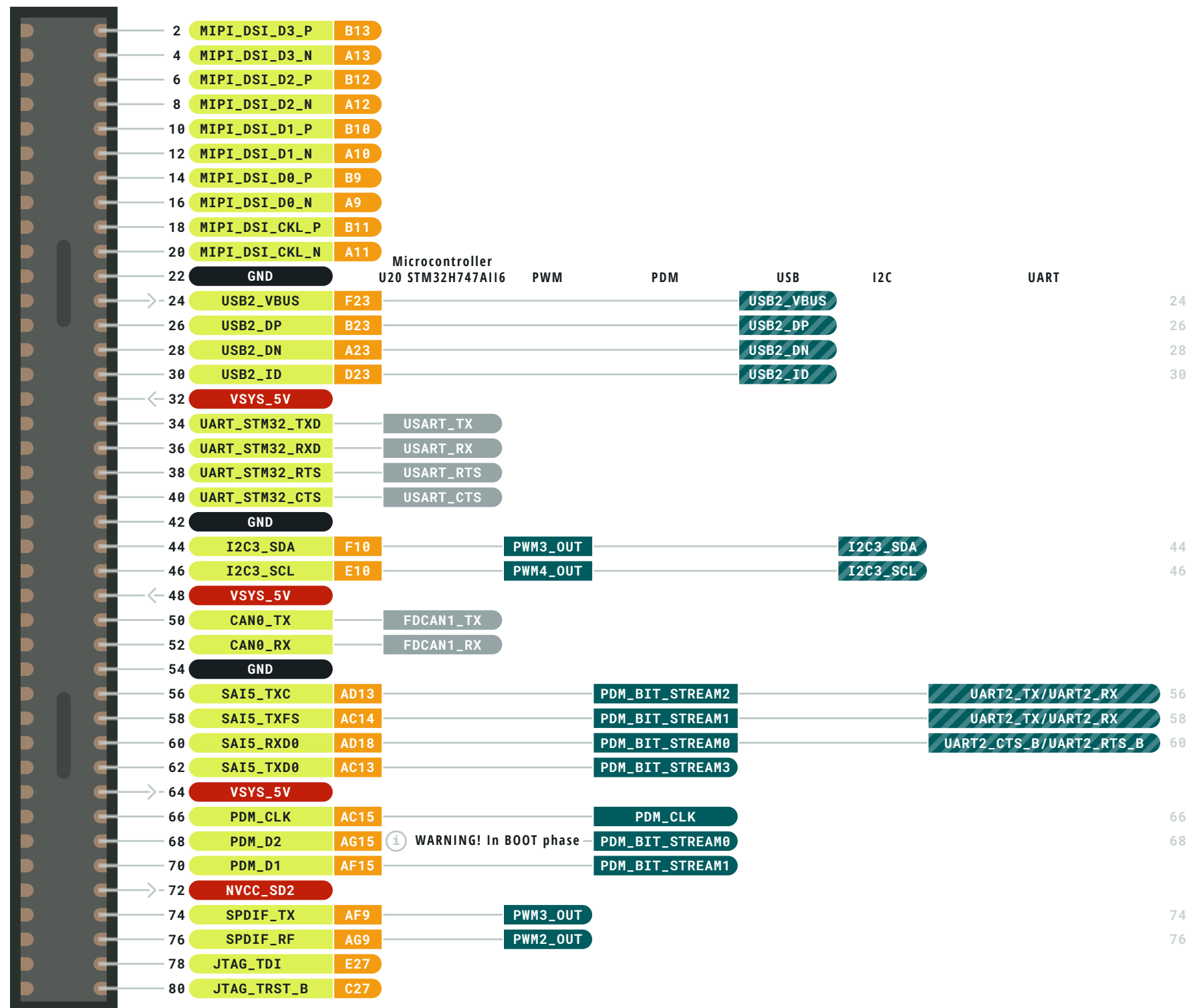
Last update: Mar 22, 2022



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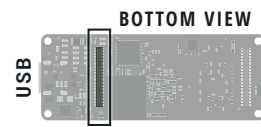
J1_even - Analog/Communication

J1

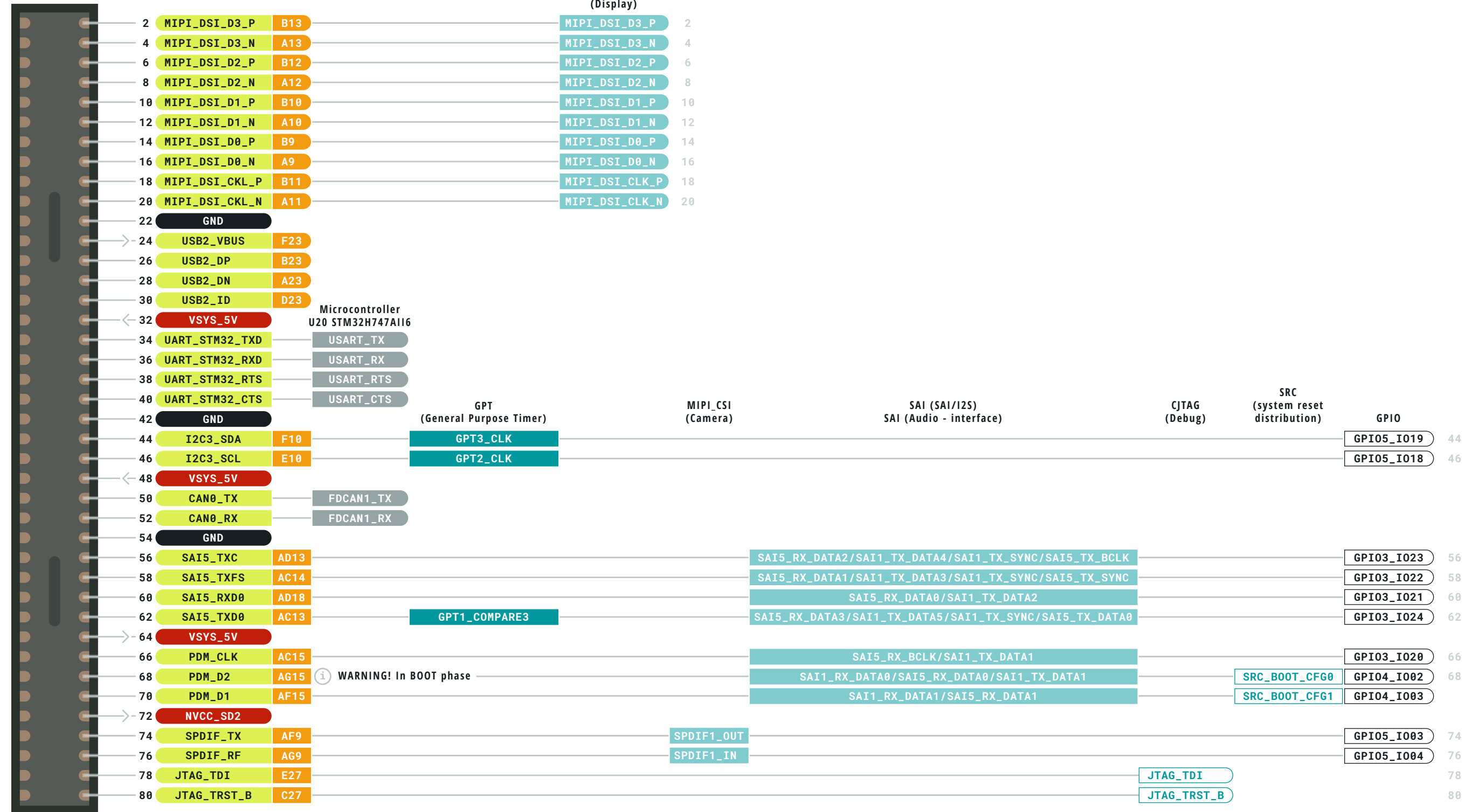


- Ground
- Power
- LED
- Internal Pin
- SWD Pin
- Digital Pin
- Analog Pin
- Other Pin
- Microcontroller's Port
- Default
- Analog
- Communication
- Timer
- Extra Features
- Debug
- GPIO

- MAXIMUM** current per H7 pin is 20mA
- MAXIMUM** overall current per H7 is 140mA
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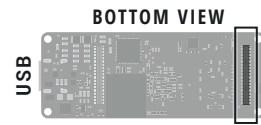
J1_even - Timer/Extra Features/ Debug/GPIO



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

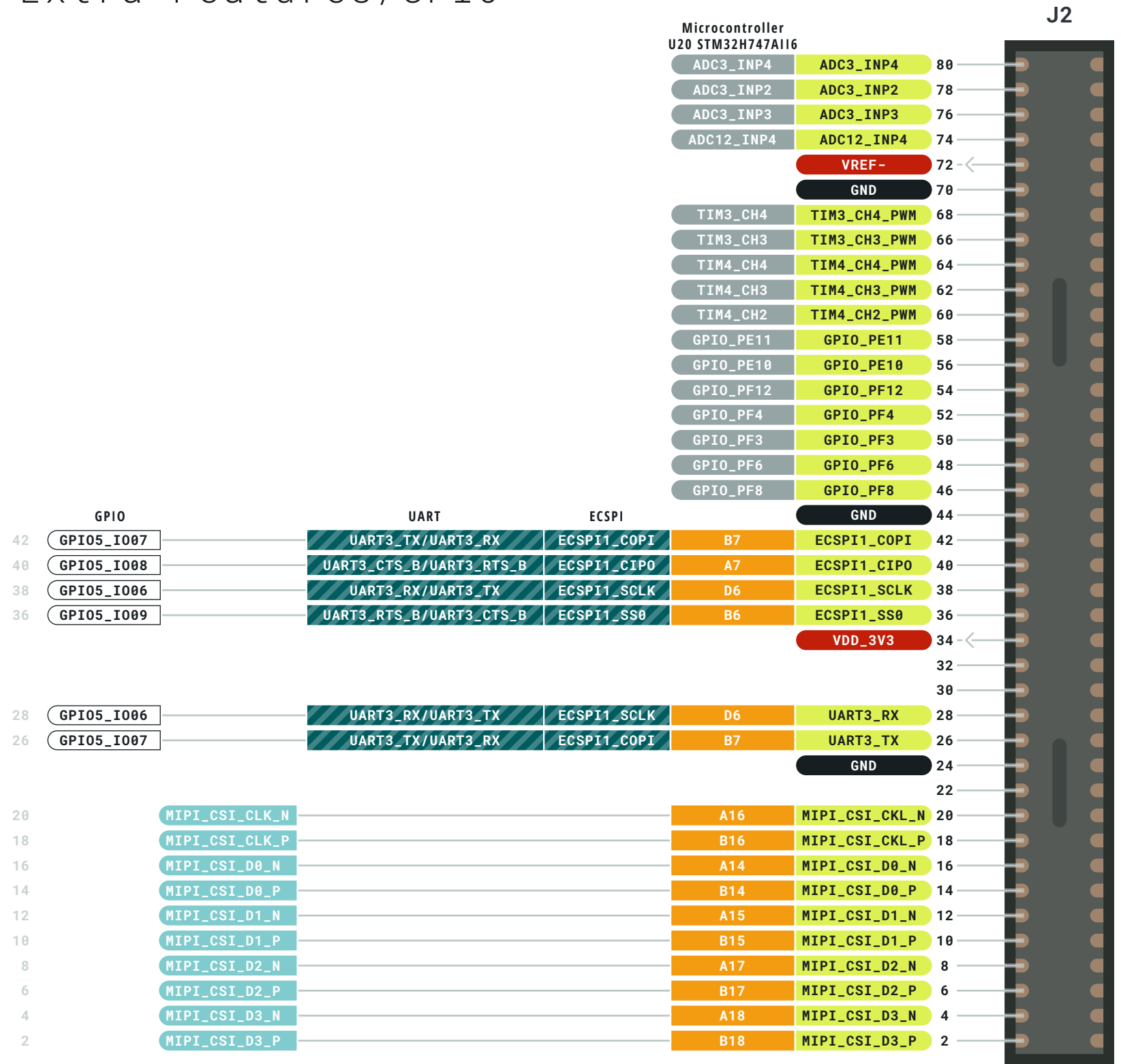
- MAXIMUM** current per H7 pin is 20mA
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- MAXIMUM** current per IMX8 pin is 12mA





J2_even - Communication/ Extra Features/GPIO

ARDUINO
PORTENTA X8



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

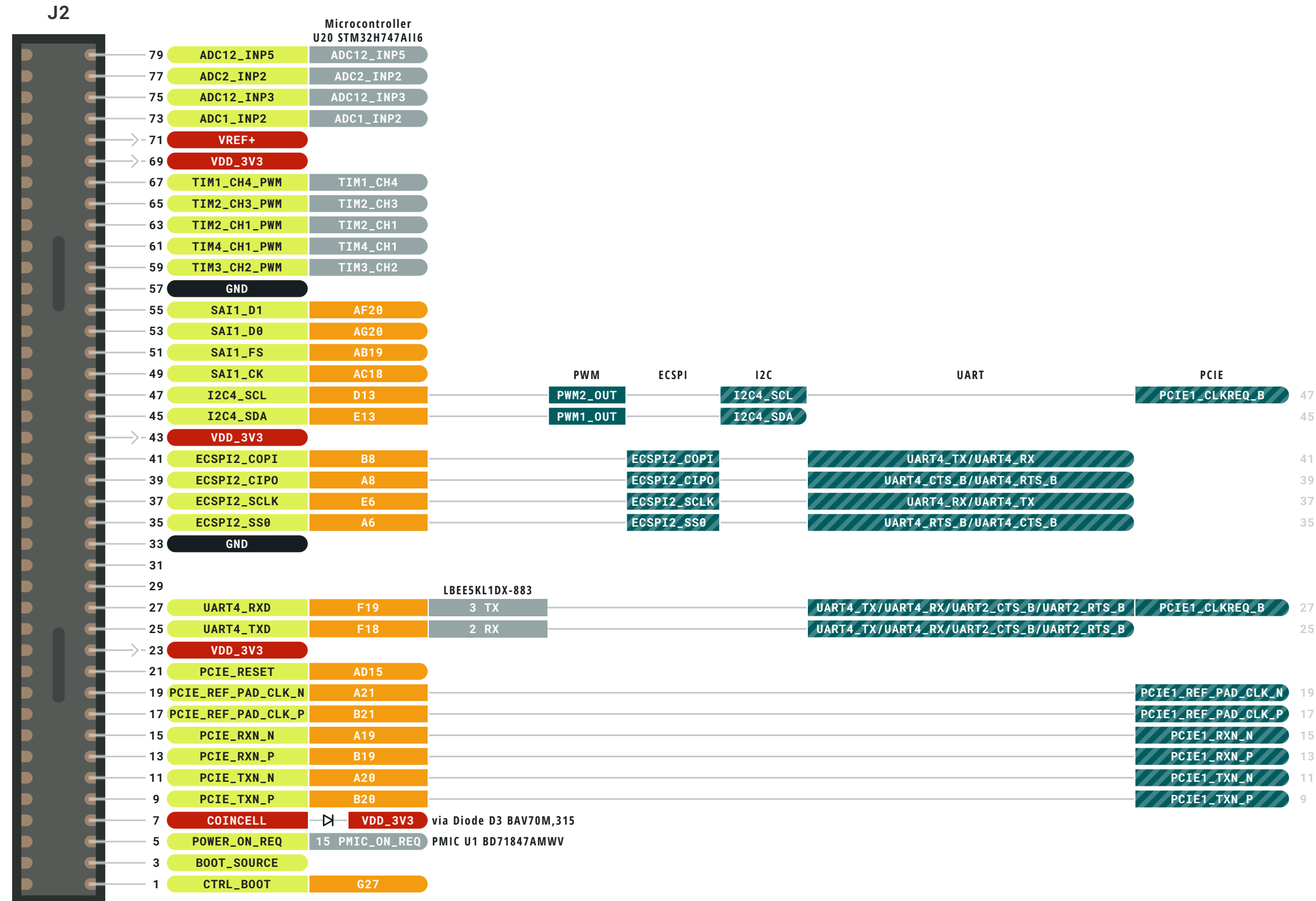
- ⚠️ **MAXIMUM** current per H7 pin is 20mA
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- ⚠️ **MAXIMUM** current per IMX8 pin is 12mA

ARDUINO . CC

Last update: Mar 22, 2022

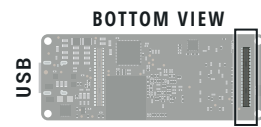


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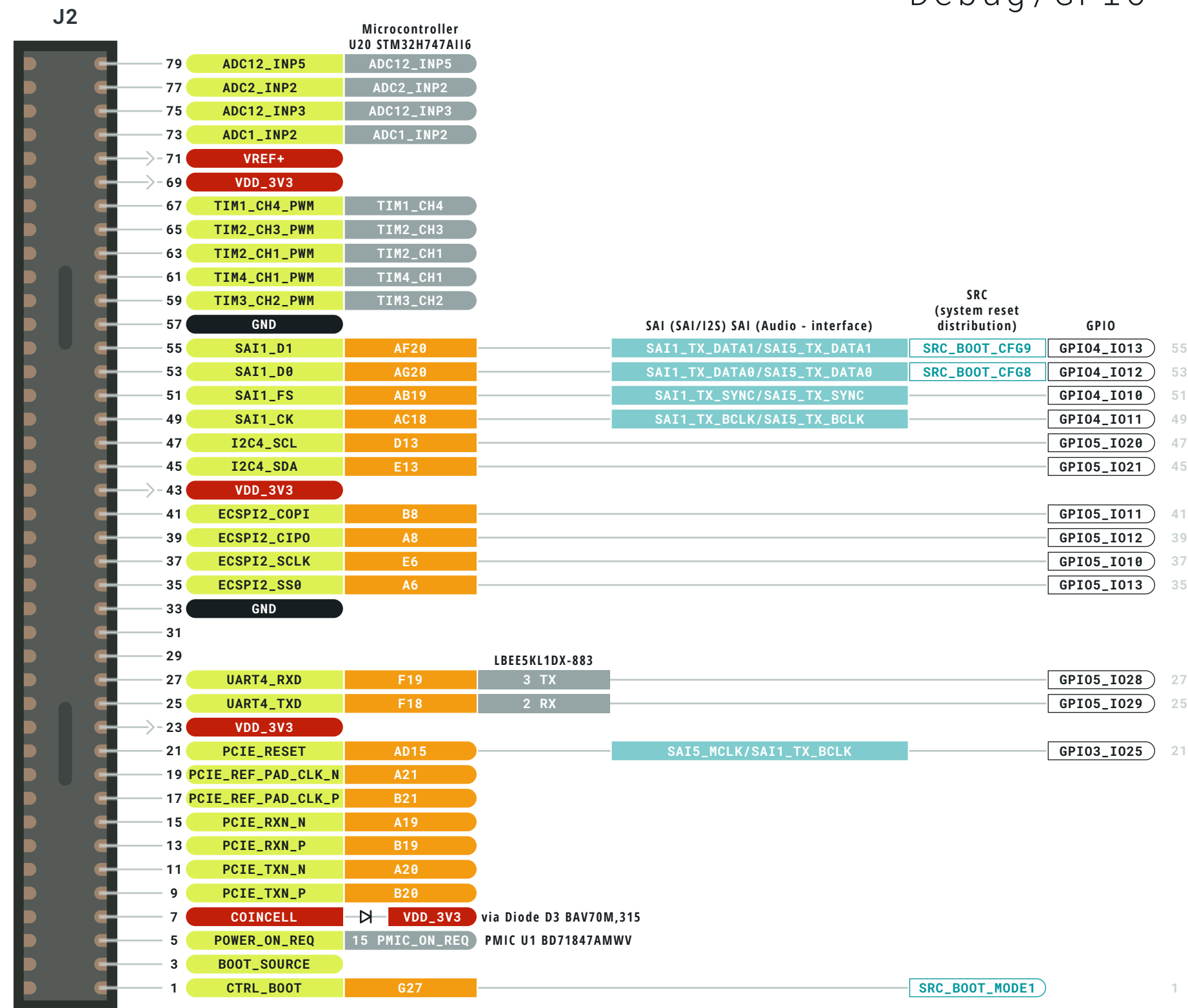


- Ground
- Power
- LED
- Internal Pin
- SWD Pin
- Digital Pin
- Analog Pin
- Other Pin
- Microcontroller's Port
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- Analog
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- Timer
- Extra Features
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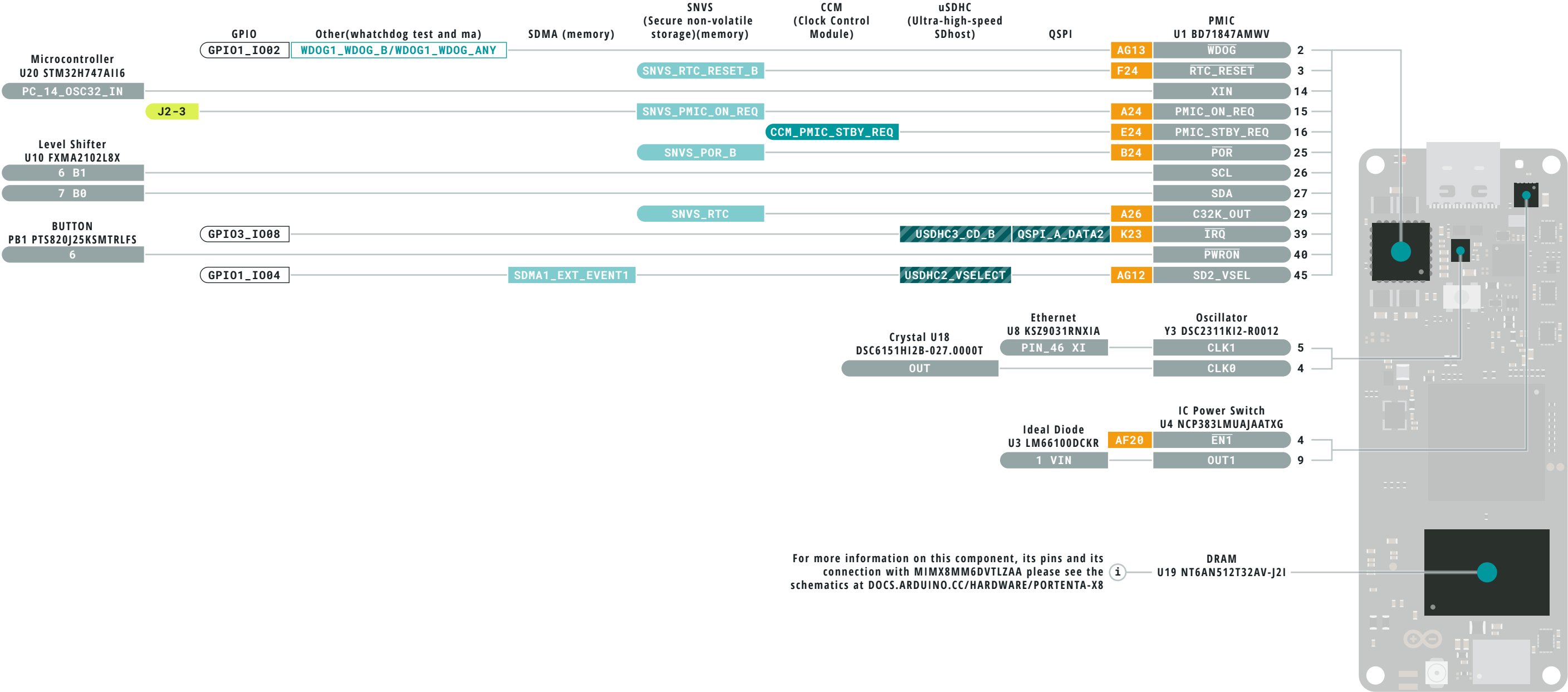
J2_odd - Extra Features/ Debug/GPIO



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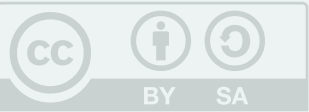


- Ground
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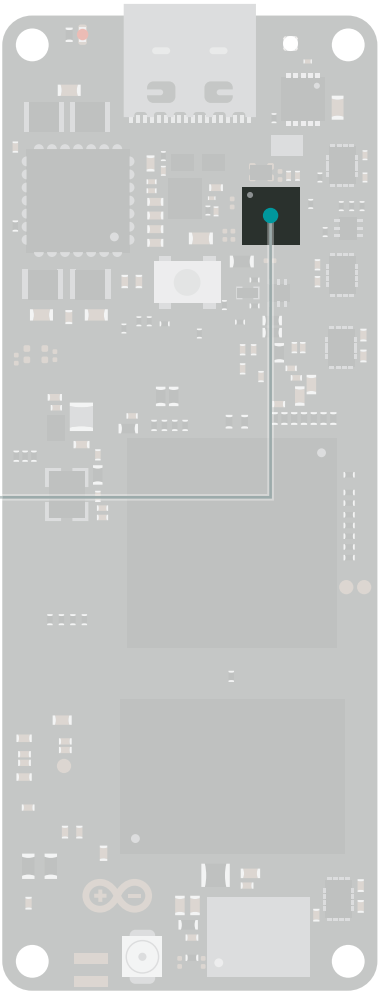
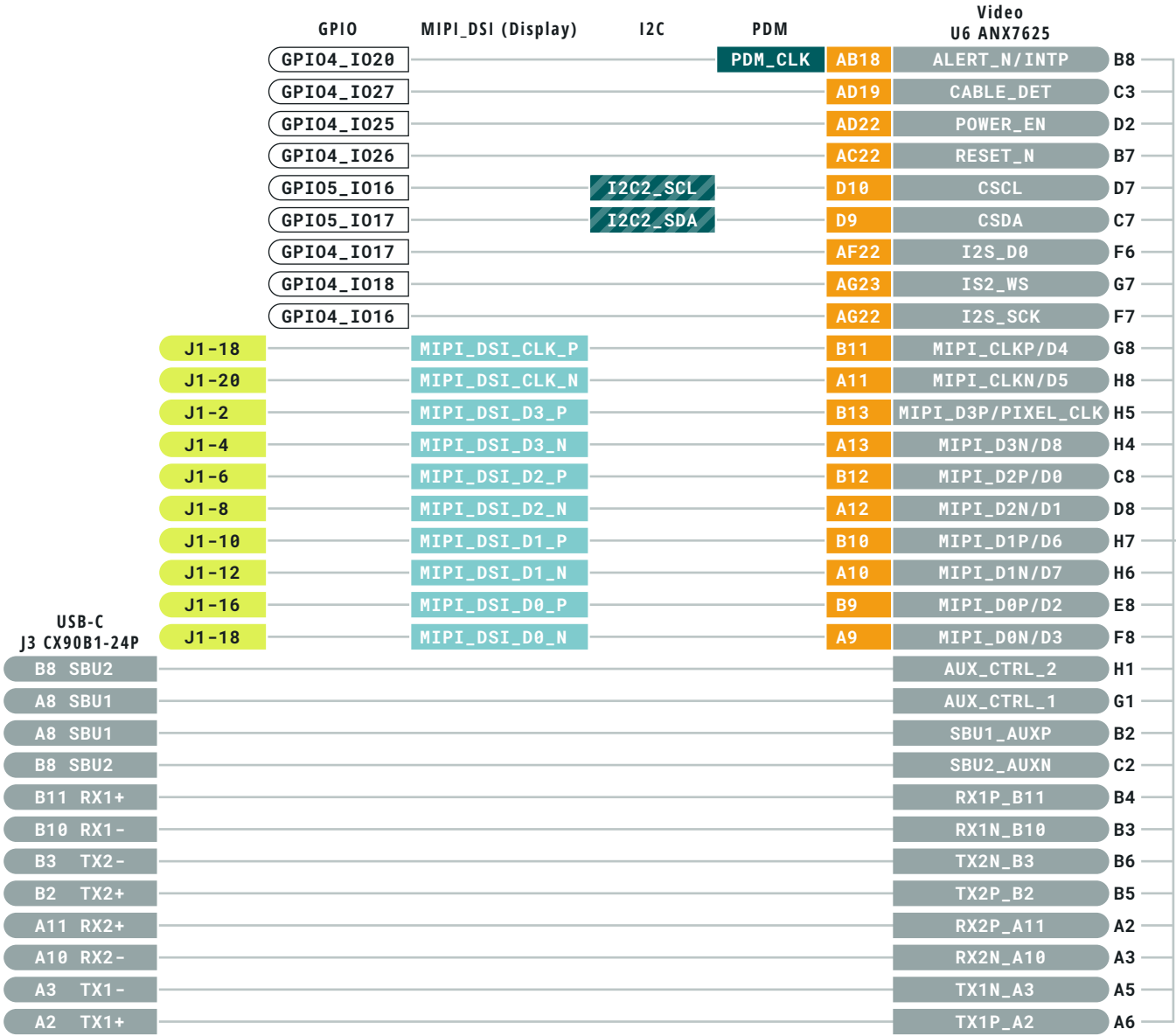
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Ground

Power

LED

Internal Pin

SWD Pin

Digital Pin

Analog Pin

Other Pin

Microcontroller's Port

Default

Analog

Communication

Timer

Extra Features

Debug

GPIO

- ⚠

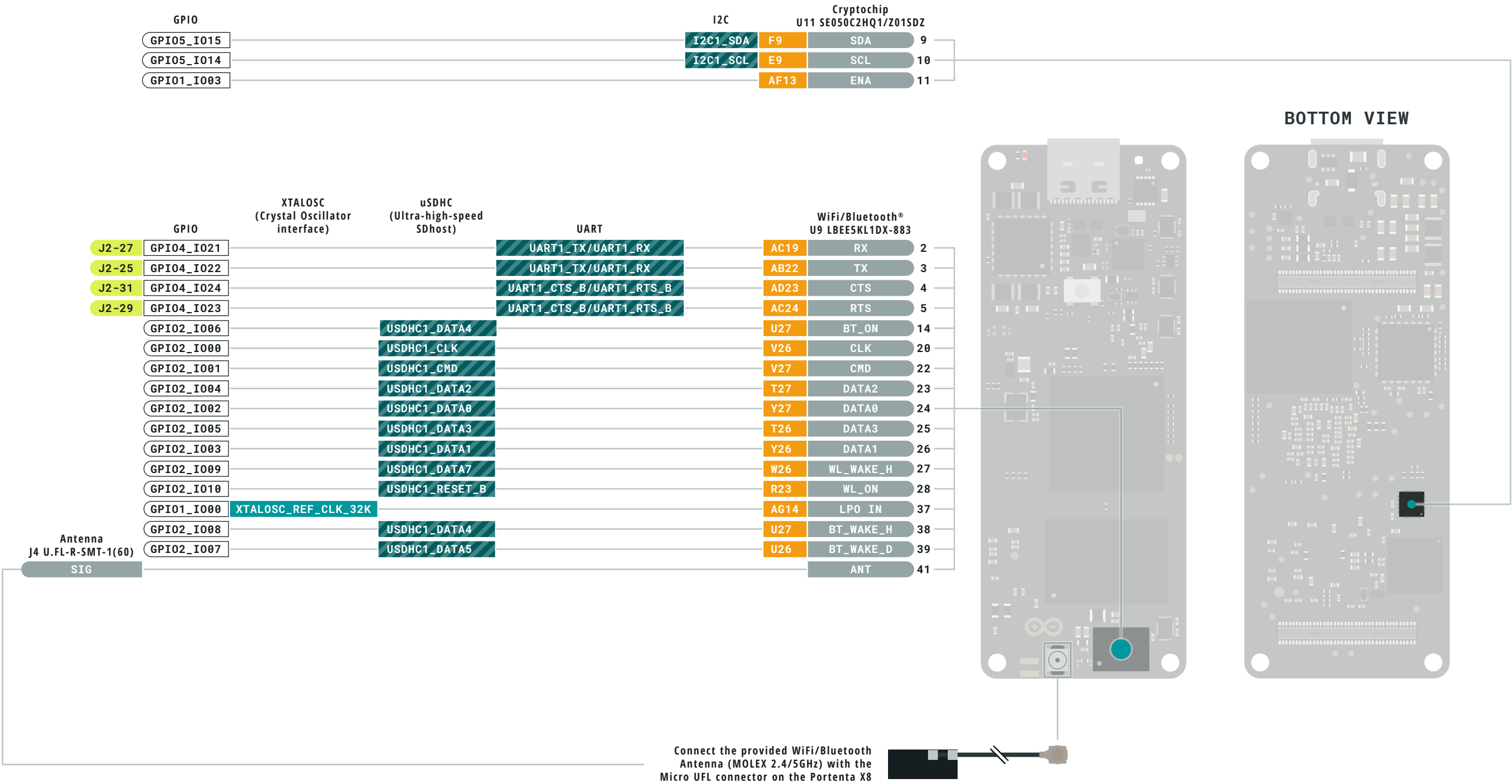
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- ⚠

MAXIMUM current per IMX8 pin is 12mA



BOTTOM VIEW

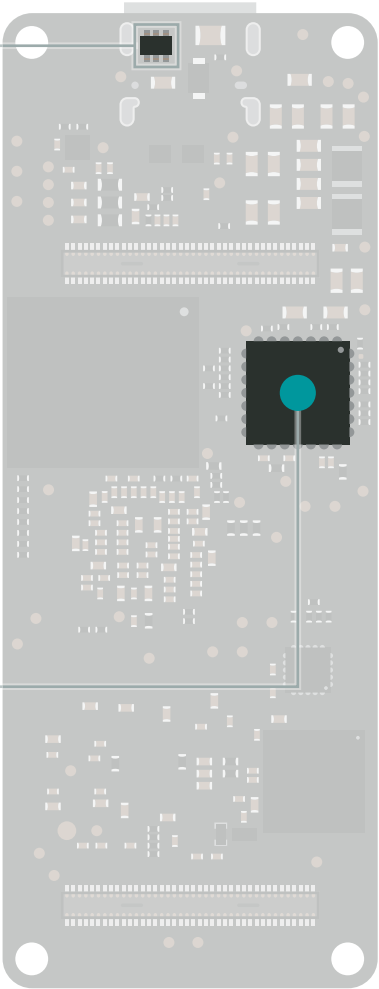
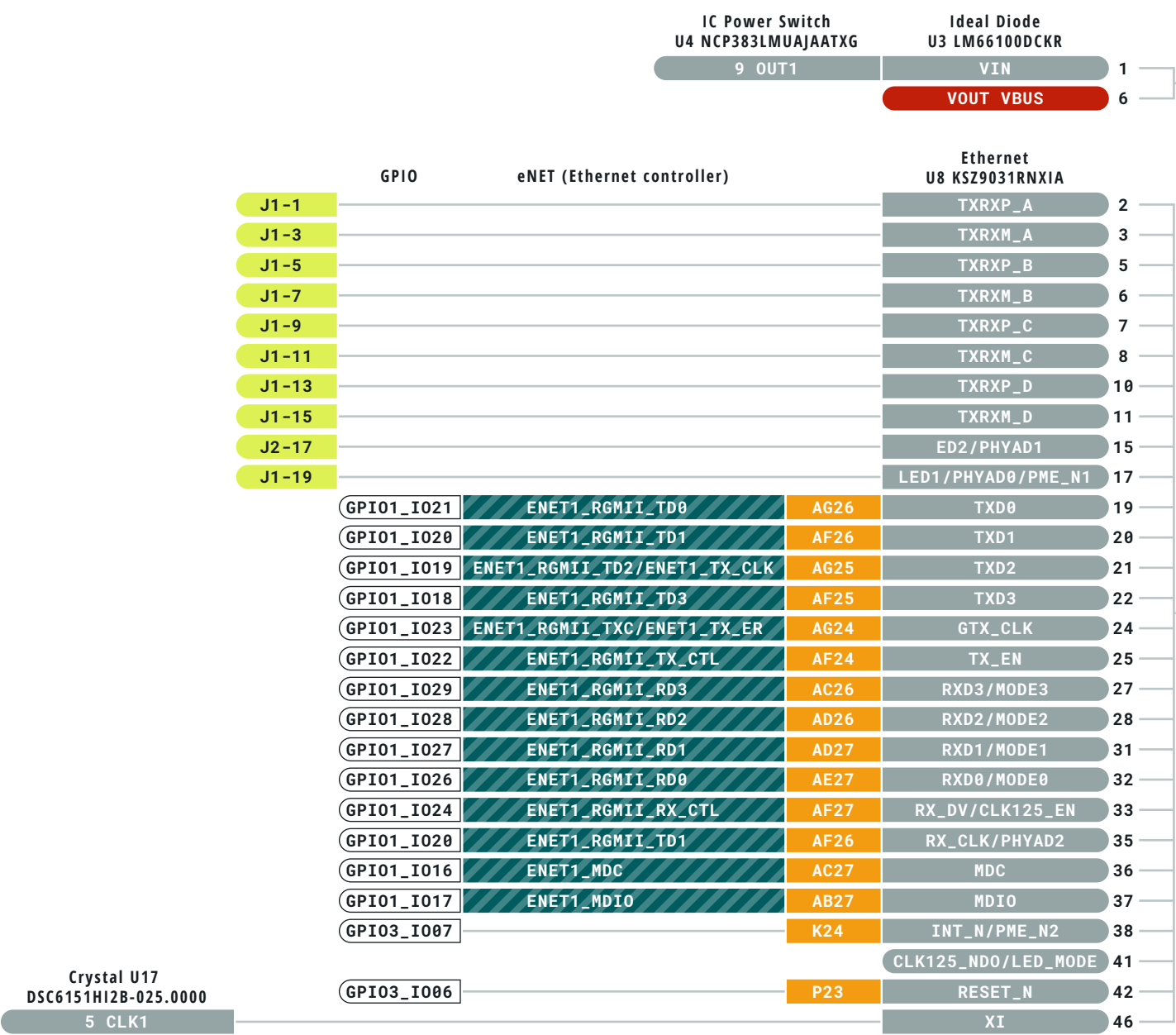


- Ground
- Power
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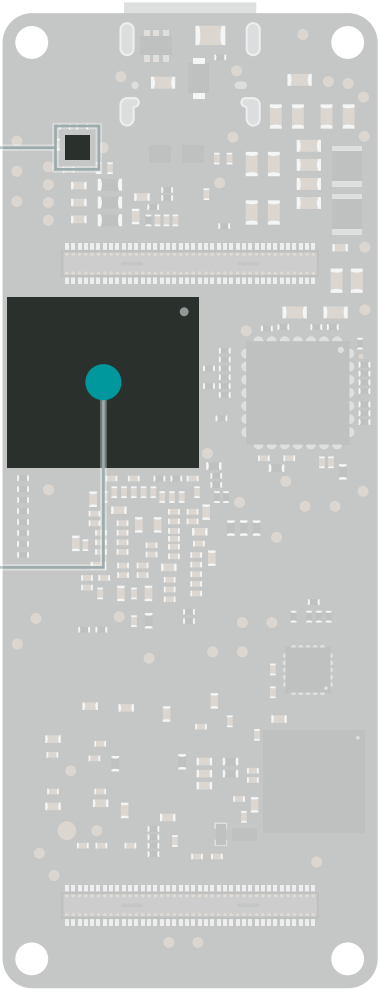
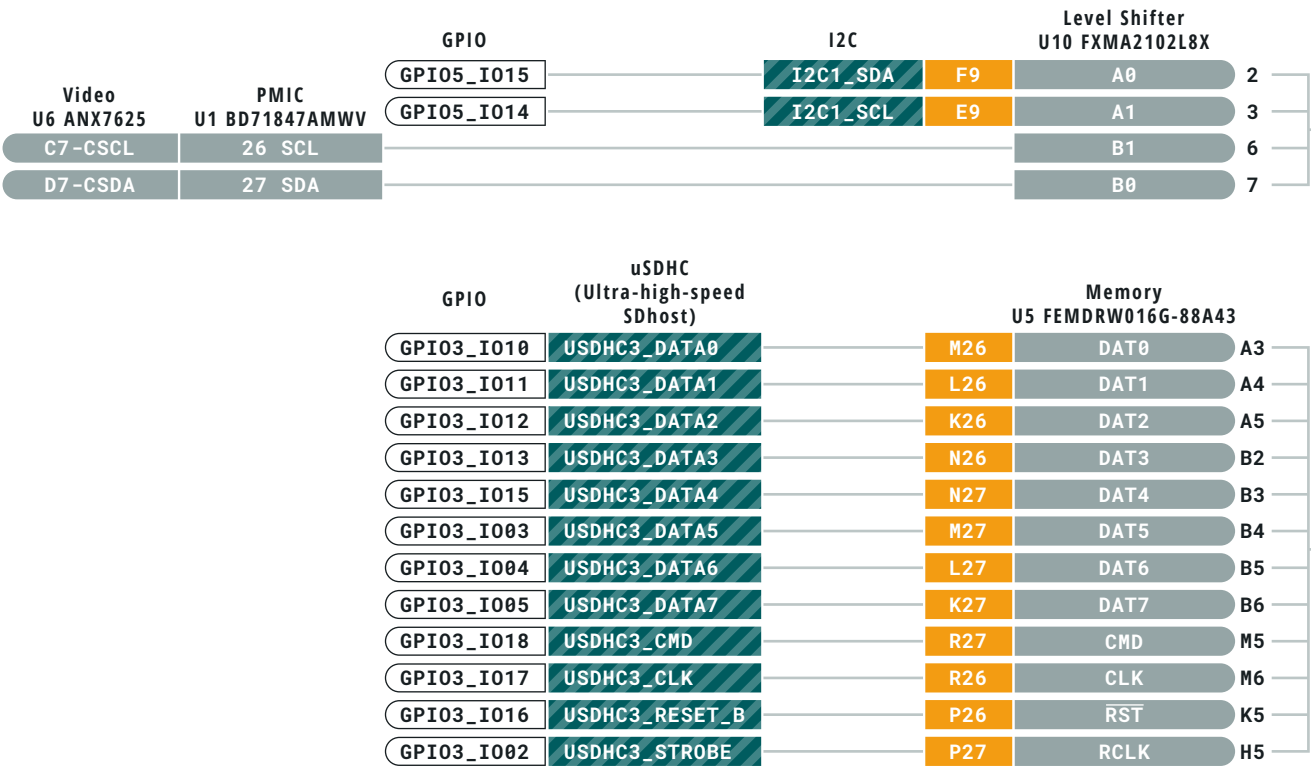
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BOTTOM VIEW



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