PIN	TYP	NAME	SOCKET	NUM	ALTERNATE_FUNC	USE	SIGNAL
1	G	PE2	PE2	2-15	----	GPIO	GPIO9
2	G	PE3	PE3	2-16	----	GPIO	GPIO10
3	G	PE4	PE4	2-13	----	GPIO	GPIO24
4	G	PE5	PE5	2-14	----	GPIO	GPIO22
5	G	PE6	PE6	2-11	----	GPIO	GPIO23
6	P	VBAT	---	---	----	----	----
7	G	PC13	PC13	2-12	----	GPIO	GPIO21
8	G	PC14	PC14	2-09	----	GPIO	GPIO18
9	O	PC15	PC15	2-10	----	EVTOUT	EVENTOUT
10	P	VSS	---	---	----	----	----
11	P	VDD	---	---	----	----	----
12	S	PH0	PH0	2-07	----	Crystal	OSC_IN
13	S	PH1	PH1	2-08	----	Crystal	OSC_OUT
14	D	NRST	NRST	1-06	----	SWITCH	Reset
15	U	PC0	PC0	1-08	----	MICROSD	Card-Detect
16	D	PC1	PC1	1-07	ETH_MDC	ETH	ETH_MDC
17	D	PC2	PC2	1-10	ADC123_IN12	ADC	ADC_IN1
18	D	PC3	PC3	1-09	ADC123_IN13	ADC	ADC_IN2
19	P	VDD	---	---	----	----	----
20	P	VSSA	---	---	----	----	----
21	P	VREF+	---	---	----	----	----
22	P	VDDA	---	---	----	----	----
23	D	PA0	PA0	1-12	----	SWITCH	User
24	D	PA1	PA1	1-11	ETH_RMII_REF_CLK	ETH	ETH_REF_CLK
25	D	PA2	PA2	1-14	ETH_MDIO	ETH	ETH_MDIO
26	G	PA3	PA3	1-13	----	GPIO	GPIO20
27	P	VSS	---	---	----	----	----
28	P	VDD	---	---	----	----	----
29	D	PA4	PA4	1-16	DAC_OUT1	DAC	DAC_OUT1
30	D	PA5	PA5	1-15	DAC_OUT2	DAC	DAC_OUT2
31	G	PA6	PA6	1-18	----	GPIO	GPIO11
32	D	PA7	PA7	1-17	ETH_RMII_CRS_DV	ETH	ETH_CRS_DV
33	D	PC4	PC4	1-20	ETH_RMII_RX_DO	ETH	ETH_RX_DO
34	D	PC5	PC5	1-19	ETH_RMII_RX_D1	ETH	ETH_RX_D1
35	D	PB0	PB0	1-22	TIM3_CH3	IFR	Infrared-PWM
36	D	PB1	PB1	1-21	TIM3_CH4	UHF	UHF-IN
37	S	PB2	PB2	1-24	----	BOOT	BOOT1
38	D	PE7	PE7	1-25	----	LED	Led-Red
39	G	PE8	PE8	1-26	----	GPIO	GPIO17
40	D	PE9	PE9	1-27	----	LED	Led-Green
41	G	PE10	PE10	1-28	----	GPIO	GPIO16
42	D	PE11	PE11	1-29	----	LED	Led-Yellow
43	G	PE12	PE12	1-30	----	GPIO	GPIO15
44	D	PE13	PE13	1-31	----	SWITCH	Switch1
45	G	PE14	PE14	1-32	----	GPIO	GPIO14
46	D	PE15	PE15	1-33	----	SWITCH	Switch2
47	D	PB10	PB10	1-34	SPI2_SCK	SPI	SPI_CK
48	D	PB11	PB11	1-35	ETH_RMII_TX_EN	ETH	ETH_TX_EN
49	P	VCAP_1	---	---	----	----	----
50	P	VDD	---	---	----	----	----

PIN	TYP	NAME	SOCKET	NUM	ALTERNATE_FUNC	USE	SIGNAL
51	D	PB12	PB12	1-36	ETH_RMII_TXD0	ETH	ETH_TXD0
52	D	PB13	PB13	1-37	ETH_RMII_TXD1	ETH	ETH_TXD1
53	D	PB14	PB14	1-38	SPI2_MISO	SPI	SPI_MISO
54	D	PB15	PB15	1-39	SPI2_MOSI	SPI	SPI_MOSI
55	D	PD8	PD8	1-40	USART3_TX	ASY4	ASY4_TX
56	D	PD9	PD9	1-41	USART3_RX	ASY4	ASY4_RX
57	G	PD10	PD10	1-42	----	GPIO	GPIO12
58	D	PD11	PD11	1-43	----	ASY4	ASY4_CTS
59	D	PD12	PD12	1-44	----	ASY4	ASY4_RTS
60	D	PD13	PD13	1-45	----	SWITCH	Switch3
61	G	PD14	PD14	1-46	----	GPIO	GPIO13
62	G	PD15	PD15	1-47	----	GPIO	GPIO19
63	D	PC6	PC6	2-47	USART6_TX	ASY3	ASY3_TX
64	D	PC7	PC7	2-48	USART6_RX	ASY3	ASY3_RX
65	G	PC8	PC8	2-45	----	GPIO	GPIO02
66	D	PC9	PC9	2-46	I2C3_SDA	I2C	I2C_SDA
67	D	PA8	PA8	2-43	I2C3_SCL	I2C	I2C_SCL
68	G	PA9	PA9	2-44	----	GPIO	GPIO1
69	G	PA10	PA10	2-41	----	GPIO	GPIO3
70	U	PA11	---	---	----	----	(unused)
71	U	PA12	---	---	----	----	(unused)
72	S	PA13	PA13	2-42	JTMS-SWDIO	JTAG	JTAG_JTMS
73	P	VCAP_2	---	---	----	----	----
74	P	VSS	---	---	----	----	----
75	P	VDD	---	---	----	----	----
76	S	PA14	PA14	2-39	JTCK	JTAG	JTAG_JTCK
77	S	PA15	PA15	2-40	JTDI	JTAG	JTAG_JTDI
78	D	PC10	PC10	2-37	UART4_TX	ASY1	ASY1_TX
79	D	PC11	PC11	2-38	UART4_RX	ASY1	ASY1_RX
80	D	PC12	PC12	2-35	UART5_TX	ASY2	ASY2_TX
81	D	PD0	PD0	2-36	CAN1_RX	CAN1	CAN1_RX
82	D	PD1	PD1	2-33	CAN1_TX	CAN1	CAN1_TX
83	D	PD2	PD2	2-34	UART5_RX	ASY2	ASY2_RX
84	G	PD3	PD3	2-31	----	GPIO	GPIO4
85	D	PD4	PD4	2-32	PD4	WIFI	WIFI_CHPD
86	D	PD5	PD5	2-29	USART2_TX	WIFI	WIFI_TX
87	D	PD6	PD6	2-30	USART2_RX	WIFI	WIFI_RX
88	D	PD7	PD7	2-27	PD7	WIFI	WIFI_RST
89	S	PB3	PB3	2-28	JTDO	JTAG	JTAG_JTDO
90	S	PB4	PB4	2-25	NJTRST	JTAG	JTAG_NJTRST
91	D	PB5	PB5	2-26	CAN2_RX	CAN2	CAN2_RX
92	D	PB6	PB6	2-23	CAN2_TX	CAN2	CAN2_TX
93	G	PB7	PB7	2-24	----	GPIO	GPIO5
94	S	BOOT0	BOOT00	2-21	----	BOOT	BOOT0
95	G	PB8	PB8	2-19	----	GPIO	GPIO6
96	D	PB9	PB9	2-20	SPI2_NSS	SPI	SPI_NSS
97	G	PE0	PE0	2-17	----	GPIO	GPIO7
98	G	PE1	PE1	2-18	----	GPIO	GPIO8
99	P	VSS	---	---	----	----	----
100	P	VDD	---	---	----	----	----

Sheet: MCU
File: hyp-hcm4-mcu.sch

Sheet: Switchs and LED
File: hyp-hcm4-switch-led.sch

Sheet: LDO
File: hyp-hcm4-ldo.sch

Sheet: JTAG/Crystal/EEPROM/IFR
File: hyp-hcm4-infrared.sch

Sheet: CAN
File: hyp-hcm4-can.sch

Sheet: ETH and Wifi
File: hyp-hcm4-eth-wifi.sch

Sheet: Connectors
File: hyp-hcm4-connectors.sch

Sheet: Micro SD
File: hyp-hcm4-sd.sch

STM32F407 PIN TABLE

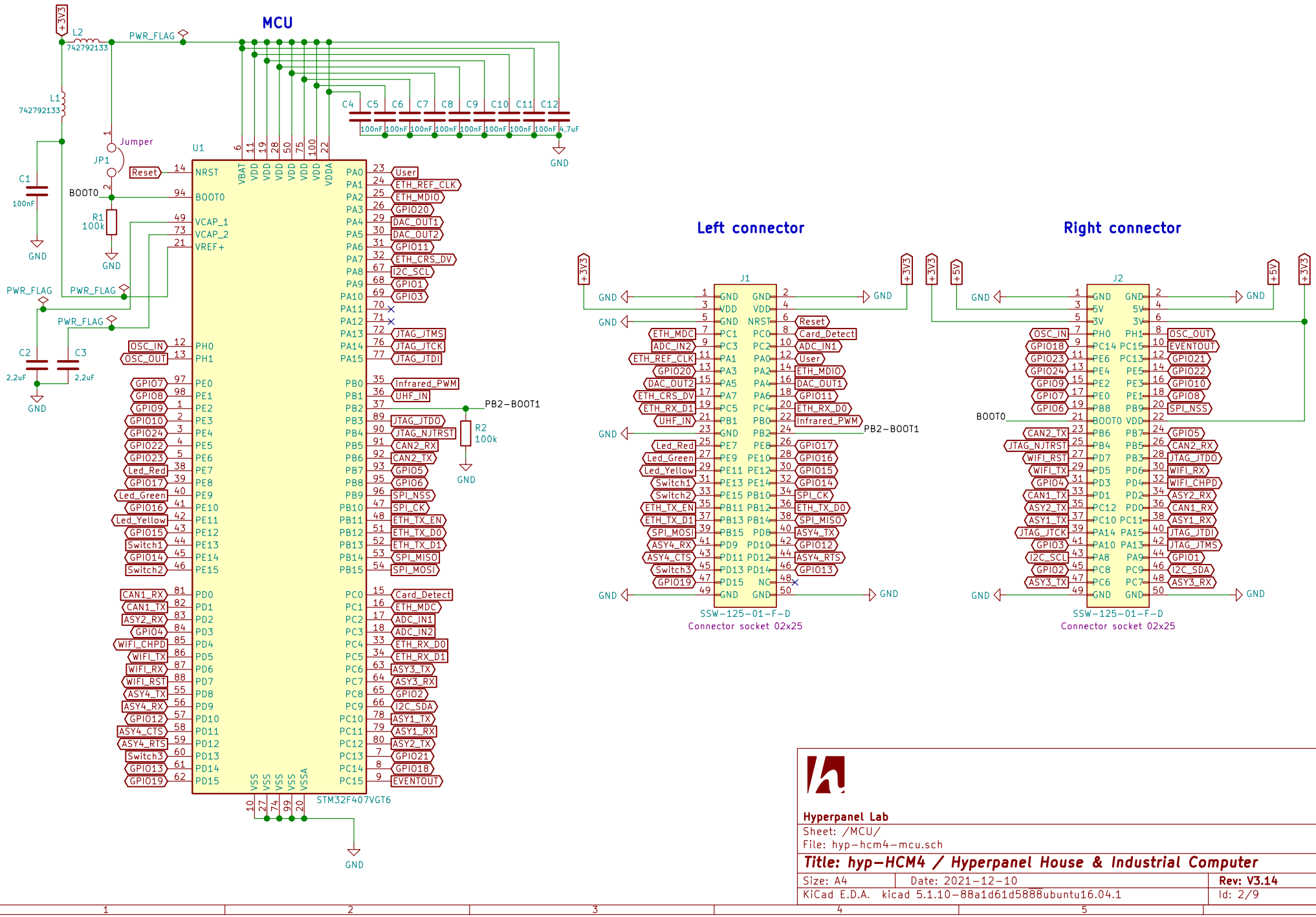
S - System (BOOT0, JTAG, CRYSTAL)	09
D - Data signal	47
G - Generic GPIO	24
P - Power (alim / ground)	16
U - Unused	03

Hyperpanel Lab

Sheet: /
File: hyp-hcm4.sch

Title: hyp-HCM4 / Hyperpanel House & Industrial Computer

Size: A4	Date: 2021-12-10	**Rev: V3.14**
KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu16.04.1		Id: 1/9



Hyperpanel Lab

Sheet: /MCU/
File: hyp-hcm4-mcu.sch

Title: hyp-HCM4 / Hyperpanel House & Industrial Computer

Size: A4	Date: 2021-12-10	**Rev: V3.14**
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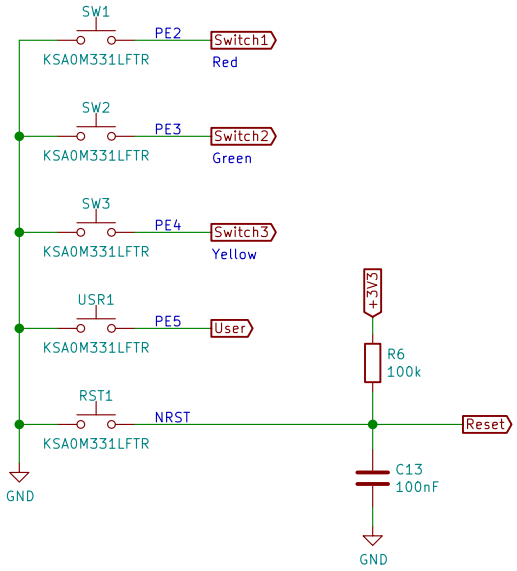
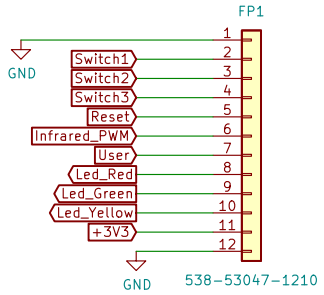
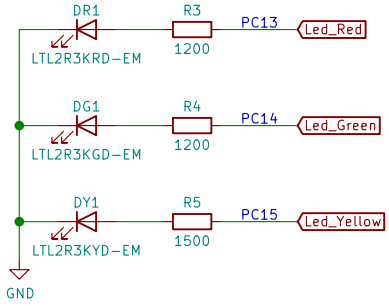
Switchs



Front panel connector



LEDs



Hyperpanel Lab

Sheet: /Switchs and LED/
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Title: hyp-HCM4 / Hyperpanel House & Industrial Computer

Size: A4	Date: 2021-12-10	**Rev: V3.14**
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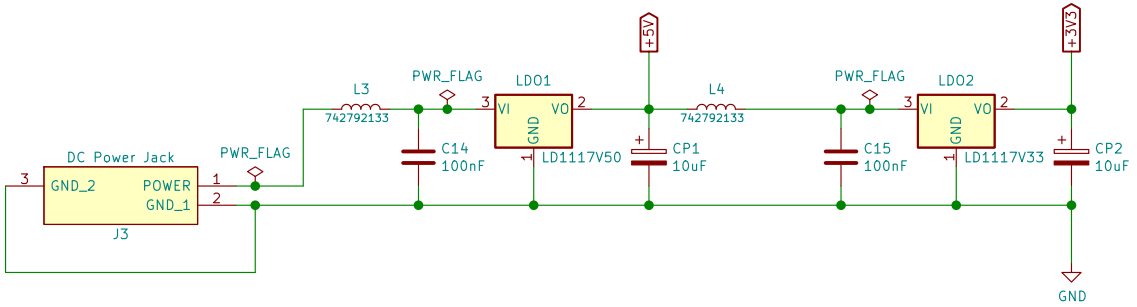
LDO



Hyperpanel Lab

Sheet: /LDO/
File: hyp-hcm4-ldo.sch

Title: hyp-HCM4 / Hyperpanel House & Industrial Computer

Size: A4	Date: 2021-12-10	**Rev: V3.14**
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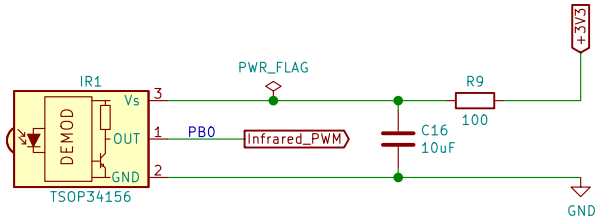
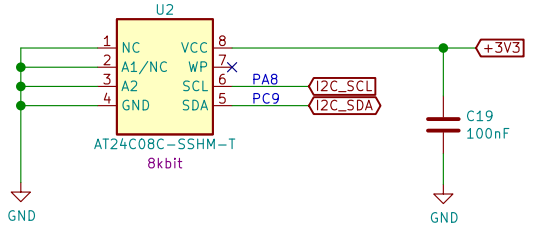
Infrared receiver

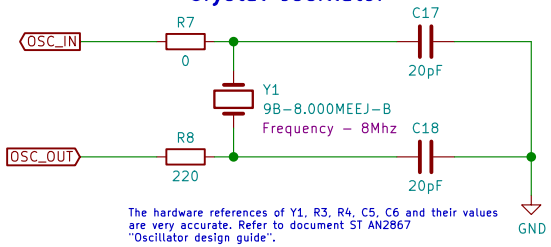


Note: IR demod carrier frequency
is here 56Khz

EEPROM



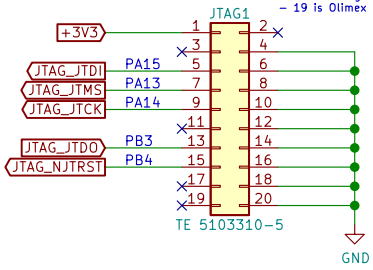
Crystal oscillator



The hardware references of Y1, R3, R4, C5, C6 and their values
are very accurate. Refer to document ST AN2867
"Oscillator design guide".

JTAG connector

In Olimex probe:
- 1 & 2 are connected
- 2 is the signals reference level
- 19 is Olimex provided 5V



Hyperpanel Lab

Sheet: /JTAG/Crystal/EEPROM/IFR/
File: hyp-hcm4-infrared.sch

Title: hyp-HCM4 / Hyperpanel House & Industrial Computer

Size: A4	Date: 2021-12-10	**Rev: V3.14**
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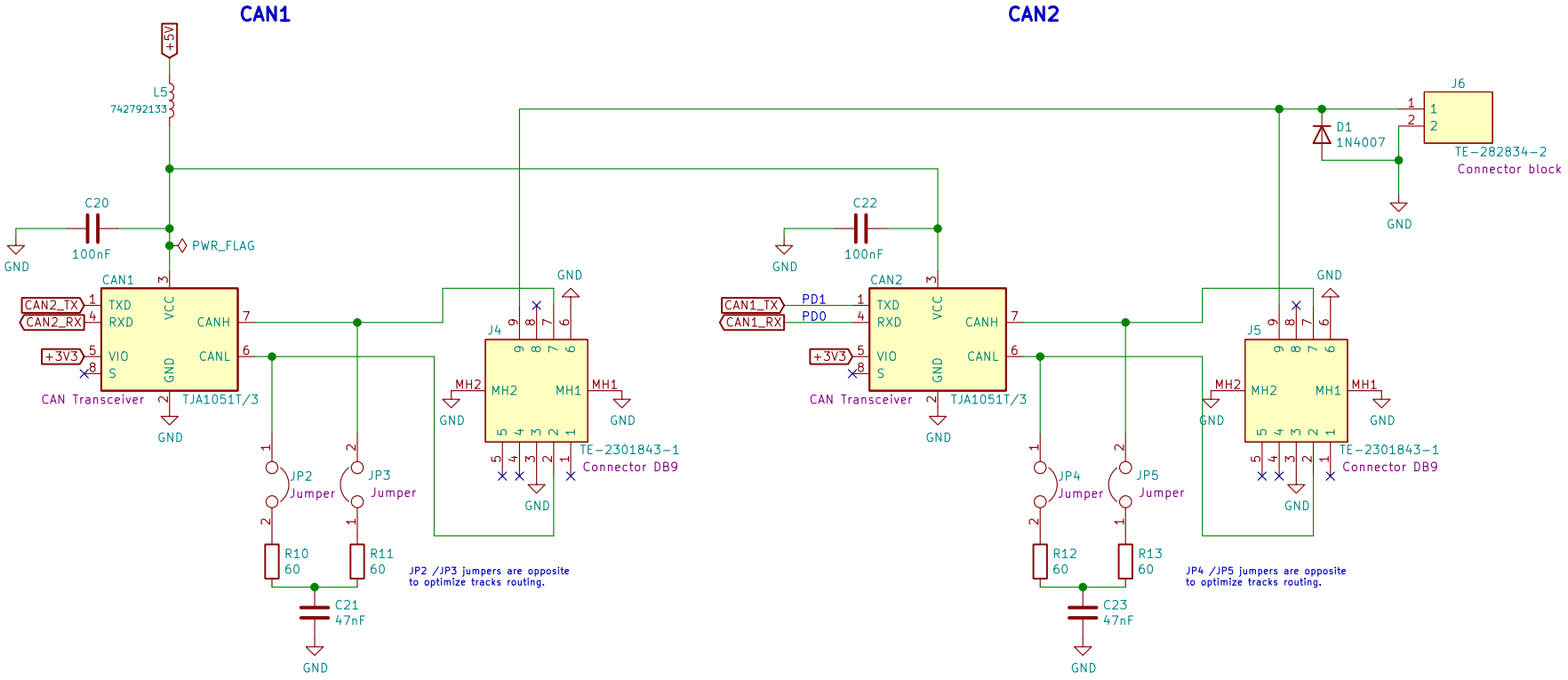

Hyperpanel Lab

Sheet: /CAN /

File: hyp-hcm4-can.sch

Title: hyp-HCM4 / Hyperpanel House & Industrial Computer

Size: A4	Date: 2021-12-10	**Rev: V3.14**
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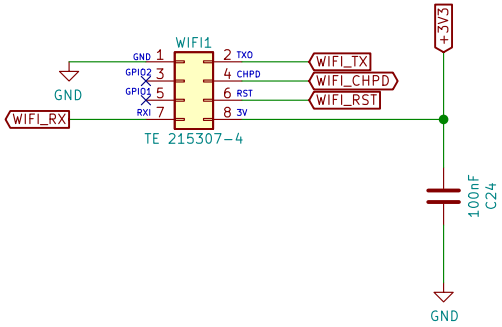
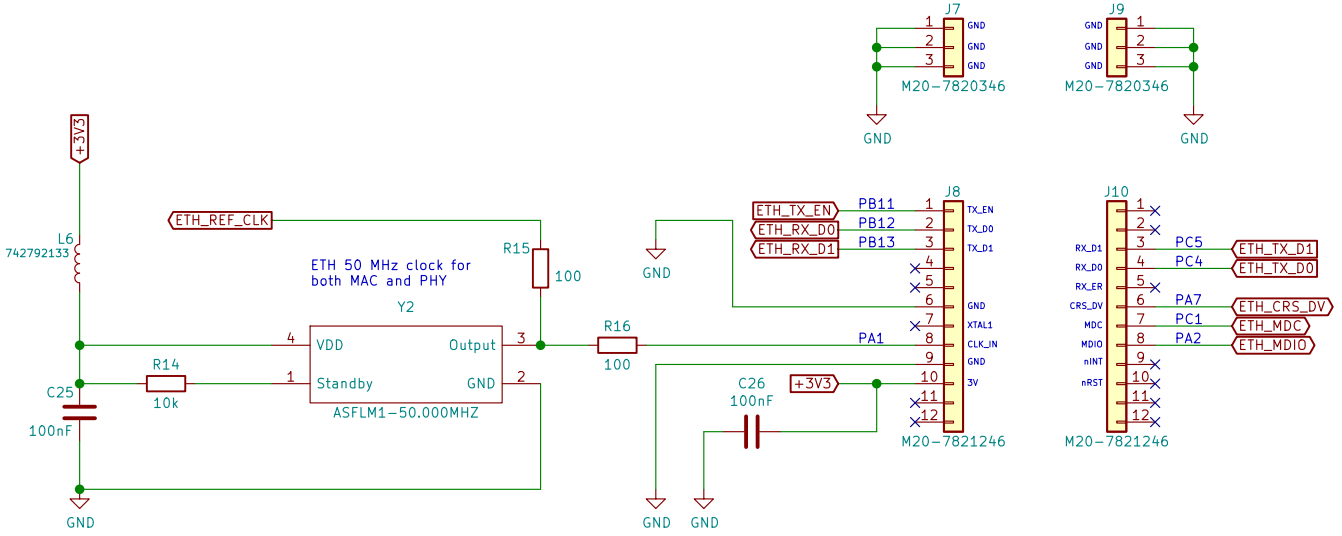
Wi-Fi module ESP8266 connector



ETH PHY module AC320004-3-ND connector



Hyperpanel Lab		
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Size: A4	Date: 2021-12-10	**Rev: V3.14**
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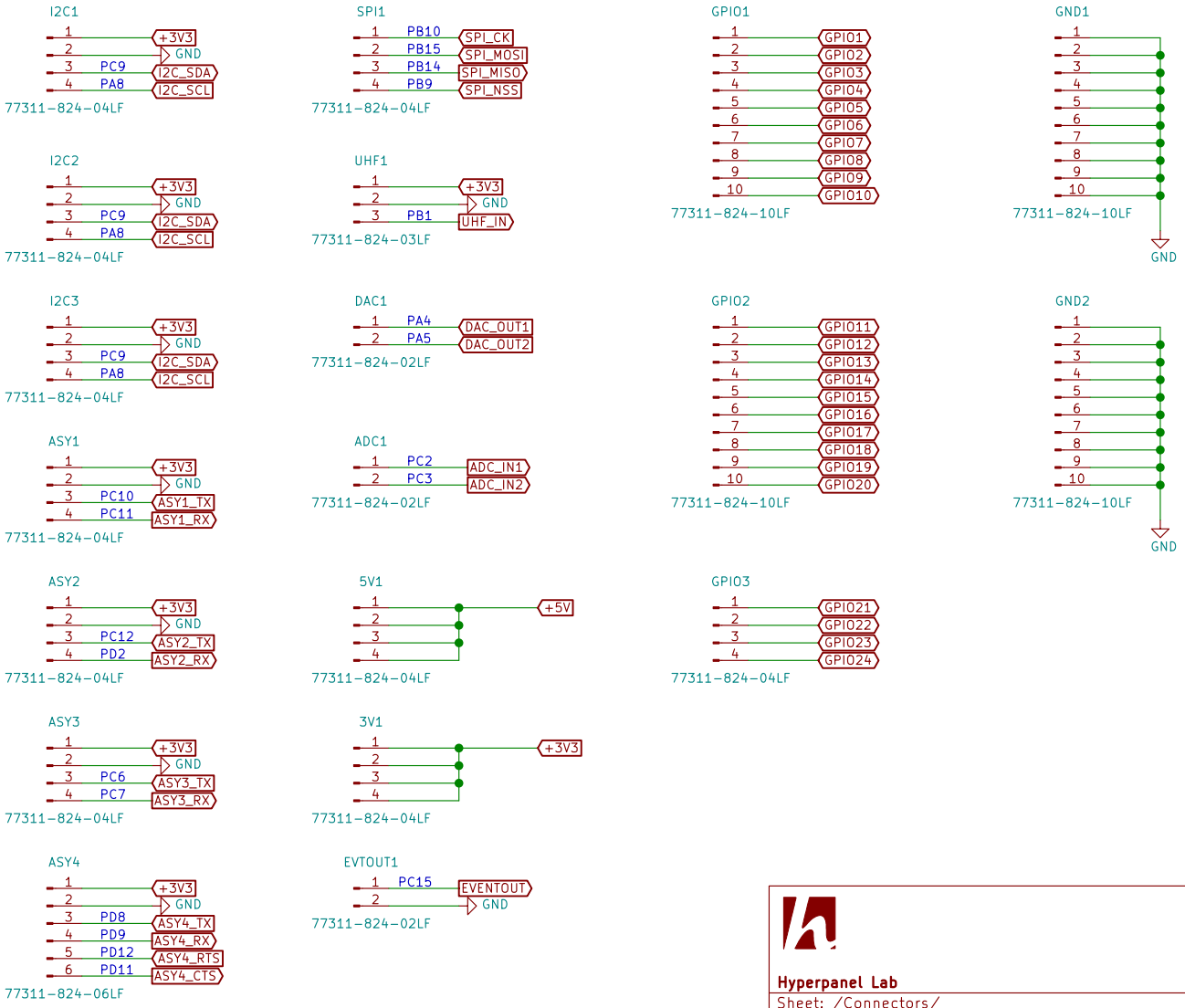

Hyperpanel Lab

Sheet: /Connectors/
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Title: hyp-HCM4 / Hyperpanel House & Industrial Computer

Size: A4	Date: 2021-12-10	**Rev: V3.14**
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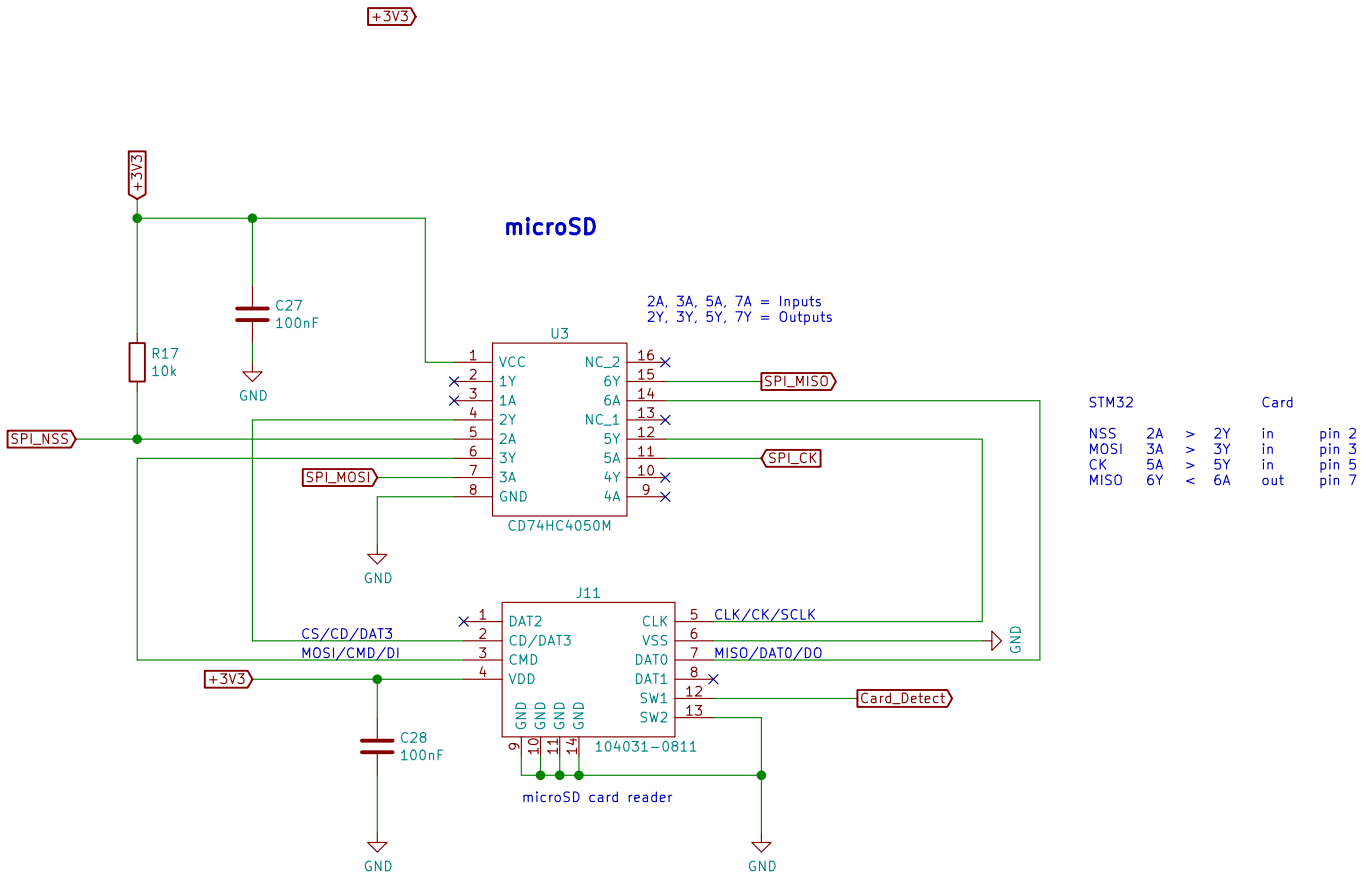

Hyperpanel Lab		
Sheet: /Micro SD/		
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Title: hyp-HCM4 / Hyperpanel House & Industrial Computer		
Size: A4	Date: 2021-12-10	**Rev: V3.14**
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