Hyperpanel – hlora6ip – main – LoRaWAN 6–input metter transmitter

PIN	TYPE	NAME	FUNCTION	USE	SIGNAL
1	S	PB3	JTDO	JTAG	JTAG_JTDO
2	U	PB4	----	----	----
3	D	PB5	----	Led	UI_LED_G
4	D	PB6	USART1_TX	ASY	ASY_TX
5	D	PB7	USART1_RX	ASY	ASY_RX
6	U	PB8	----	----	----
7	D	PA0	----	Input_1	GPIO_1
8	D	PA1	----	Input_2	GPIO_2
9	D	PA2	USART2_TX	RS485	RS485_RO
10	D	PA3	USART2_RX	RS485	RS485_DI
11	P	VDD	----	Power	+3V3
12	D	PA4	----	Input_3	GPIO_3
13	D	PA5	----	Input_4	GPIO_4
14	U	PA6	----	Input_5	GPIO_5
15	U	PA7	----	Input_6	GPIO_6
16	U	PA8	----	RS485	RS485_CMD
17	D	PA9	I2C1_SCL	I2C	I2C1_SCL
18	S	NRST	NRST	Reset	RESET
19	S	BOOT0	BOOT0	BOOT	BOOT0
20	R	RFI_P	RFI_P	RF	RFI_P
21	R	RFI_N	RFI_N	RF	RFI_N
22	R	RFO_LP	RFO_LP	RF	RFO_LP
23	U	RFO_HP	----	----	----
24	R	VR_PA	----	----	VR_PA
25	P	VDDPA	----	Power	VDDPA (from VFBSMPS)
26	S	OSC_IN	OSC_IN	Resonator	OSC_IN
27	S	OSC_OUT	OSC_OUT	Resonator	OSC_OUT
28	P	VDDRF	----	Power	+3V3
29	P	VDDRF1V55	----	Power	VDDPA (from VFBSMPS)
30	D	PB0	----	Right_Link	SIG_RIGHT
31	D	PB2	----	Left_Link	SIG_LEFT
32	D	PB12	----	RFID	EEPROM_GPO
33	D	PA10	I2C1_SDA	I2C	I2C1_SDA
34	D	PA11	I2C2_SDA	I2C_Link	I2C2_SDA
35	D	PA12	I2C2_SCL	I2C_Link	I2C2_SCL
36	S	PA13	JTMS-SWDIO	JTAG	JTMS
37	P	VBAT	----	Power	+3V3
38	D	PC13	----	RF	RF_SW_RX
39	D	PC14	----	RF	RF_SW_TX
40	D	PC15	----	Led	UI_LED_R
41	P	VDDA	----	Power	+3V3
42	S	PA14	JTCK_SWCLK	JTAG	JTCK
43	S	PA15	JTDI	JTAG	JTDI
44	P	VDD	----	Power	+3V3
45	P	VFBSMPS	----	Power	VDDPA
46	P	VDDSMPS	----	Power	+3V3
47	U	VLXSMPS	----	----	----
48	P	VSSSMPS	----	Power	GND
49	P	EP	----	Power	GND

STM32LE5 PIN TABLE

S – System (BOOT, JTAG, Crystal)	08
D – Data signal	21
R – Radio signal	04
P – Power (alim / ground)	11
U – Unused	05

MCU / Radio

Sheet: hlora6ip-main-mcu

File: hlora6ip-main-mcu.sch

Power

Sheet: hlora6ip-main-power

File: hlora6ip-main-power.sch

I/O Interfaces

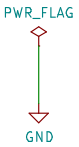
Sheet: hlora6ip-main-ios

File: hlora6ip-main-ios.sch

Connectors

Sheet: hlora6ip-main-connectors

File: hlora6ip-main-connectors.sch



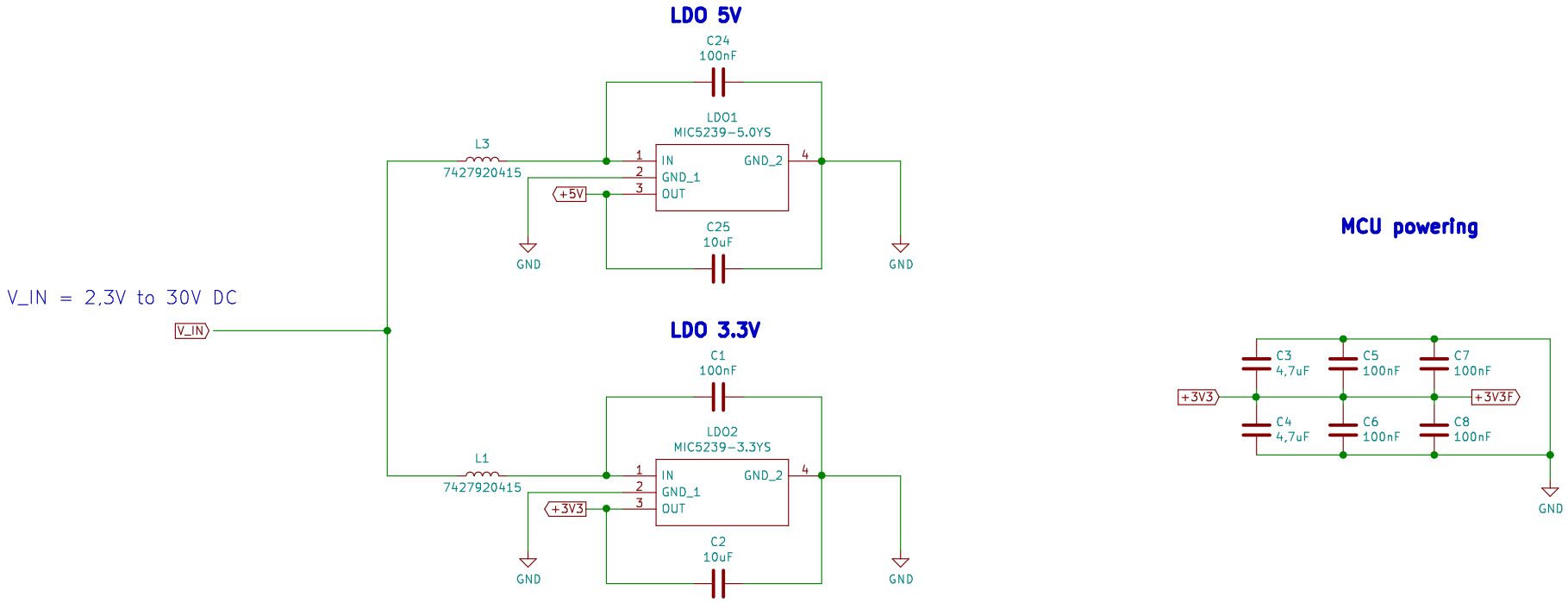
Hyperpanel Lab

Sheet: /
File: hlora6ip-main.sch

Title: hlora6ip-main – LoRaWAN 6-input metter transmitter

Size: A4	Date: 2024-02-07	**Rev: V2.08**
KiCad E.D.A. kicad 5.1.12-84ad8e8a8692ubuntu16.04.1		Id: 1/5

Hyperpanel – hlora6ip – main – Power



Hyperpanel Lab

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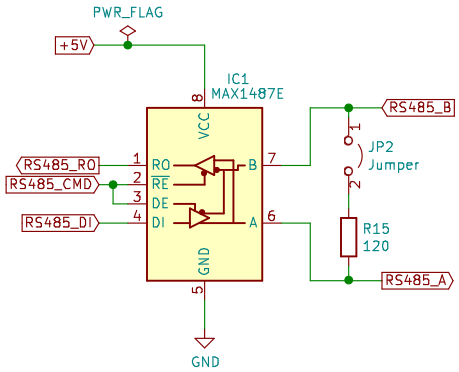
Title: hlora6ip-main – LoRaWAN 6-input metter transmitter

Size: A4	Date: 2024-02-07	**Rev: V2.08**
KiCad E.D.A. kicad 5.1.12-84ad8e8a8692ubuntu16.04.1		Id: 2/5

Hyperpanel – hlora6ip – main – I/O interfaces

RS485



Energy meter inputs

Electric meter 1

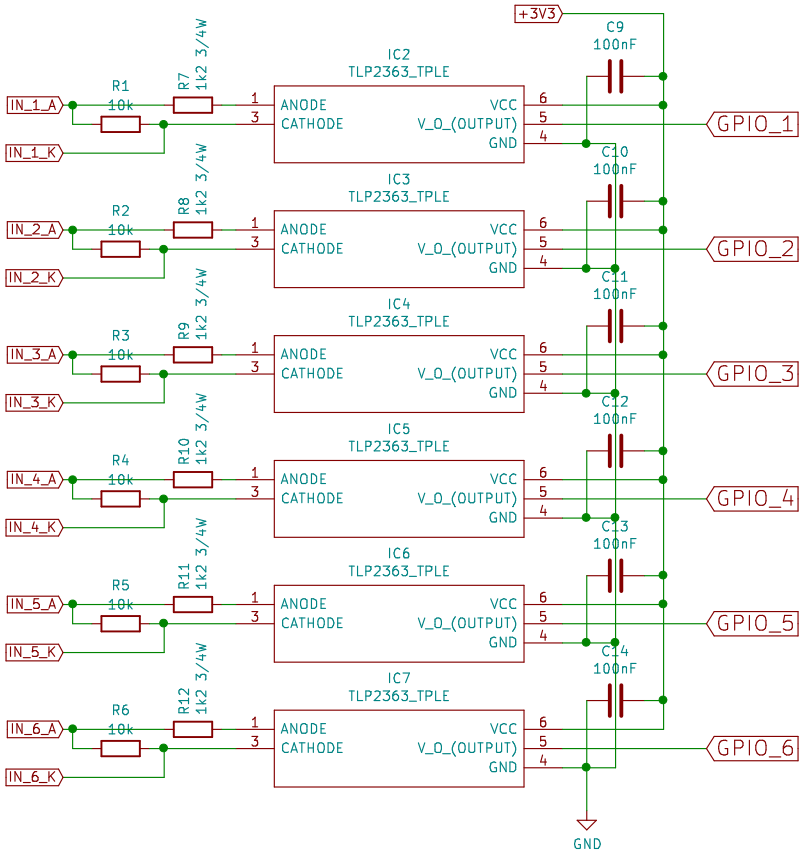
Electric meter 2

Electric meter 3

Electric meter 4

Electric meter 5

Electric meter 6



Hyperpanel Lab

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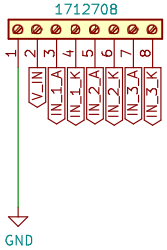
Title: hlora6ip-main – LoRaWAN 6-input metter transmitter

Size: A4	Date: 2024-02-07	**Rev: V2.08**
KiCad E.D.A. kicad 5.1.12-84ad8e8a8692ubuntu16.04.1		Id: 3/5

Hyperpanel – hlora6ip – main – Connectors

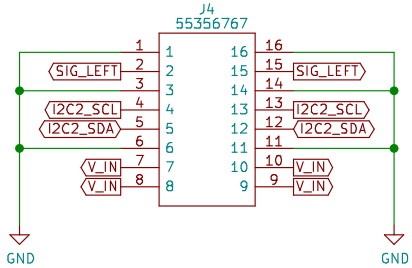
Up connector

External power

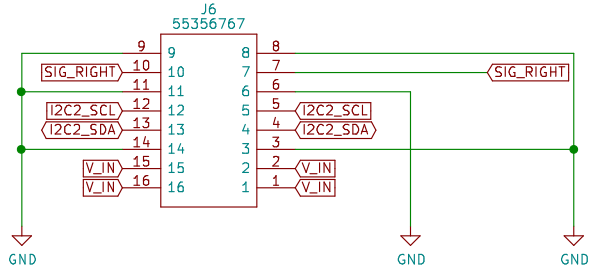


Electric meters 1/2/3

Link left connector



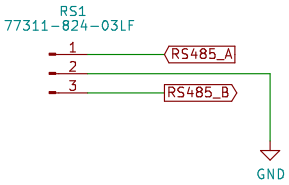
Link right connector



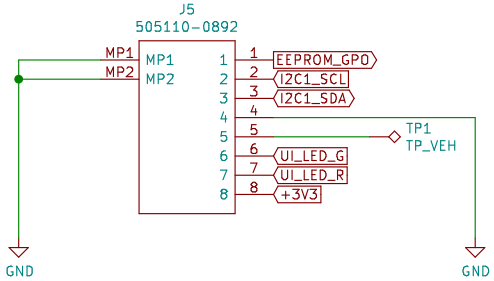
Down connector

Electric meters 4/5/6

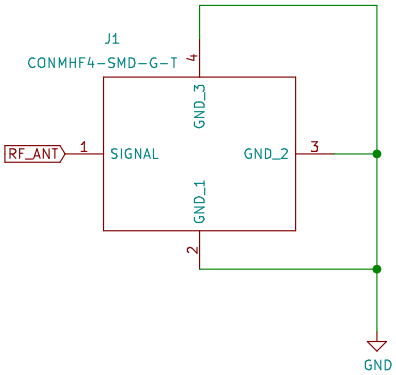
RS485



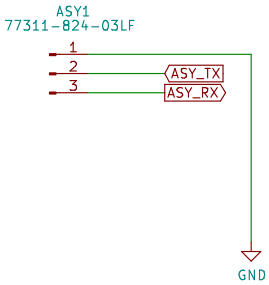
RFID card connector



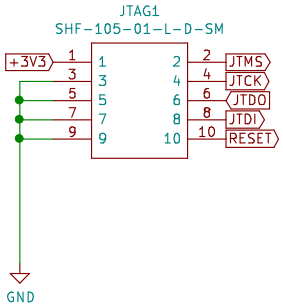
RF Antenna connector



ASY trace



JTAG connector



Hyperpanel Lab

Sheet: /hlora6ip-main-connectors/
File: hlora6ip-main-connectors.sch

Title: hlora6ip-main – LoRaWAN 6-input metter transmitter

Size: A4	Date: 2024-02-07	**Rev: V2.08**
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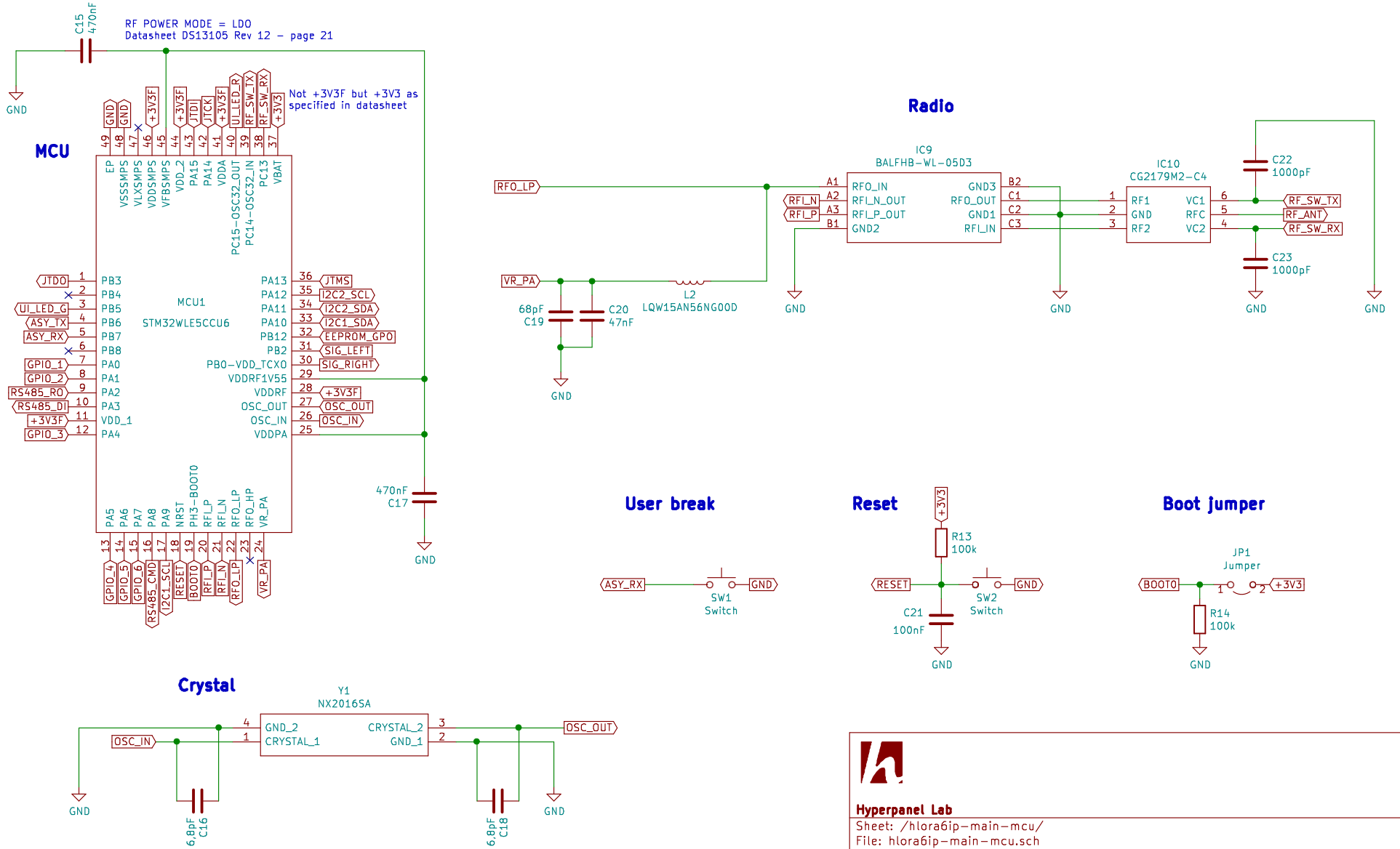
Hyperpanel – hlora6ip – main – MCU / Radio



Hyperpanel Lab

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File: hlora6ip-main-mcu.sch

Title: hlora6ip-main – LoRaWAN 6-input metter transmitter

Size: A4	Date: 2024-02-07	**Rev: V2.08**
KiCad E.D.A. kicad 5.1.12-84ad8e8a8692ubuntu16.04.1		Id: 5/5