Murata_LoRa_Module

File: Murata_LoRa_Module.kicad_sch

Power Management

File: Power Management.kicad_sch

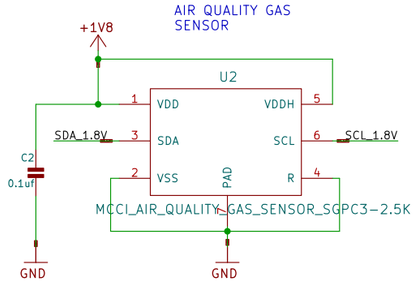
Rev A : Initial Release
Rev B : Swaped the RX & TX connections;
Added the GND connection between C16 & C19
Added the 5V Booster Enable switch,
Rev C : Added Dual Voltge Regulator, Level Shifter
Changed the Reverse Current protection IC
Rev D : Added P-CH Mosfet, 4.7K Pull-up resistor on 1.8V I2C lines
Changed the Humidity/Temperature Sensor to SHT35
Rev E : Replaced the Reverse current, Battery Charger, Current limiting circuit with BQ24230 (TI) IC which has above features.
Rev F : Removed SWD Connector and added FPC connector

Drawing number : 234001168
MCCI Corporation
Sheet: /
File: Catena-4630.kicad_sch

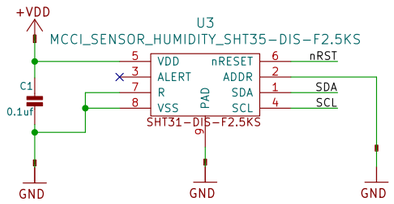
Title: Catena 4630 Schematic

Size: A4	Date: 2022-12-16	**Rev: F**
KiCad E.D.A. kicad (6.0.4)		Id: 1/3

AIR QUALITY GAS SENSOR

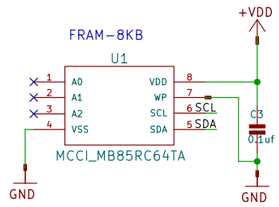


DEVICE ADDRESS : (0X58)

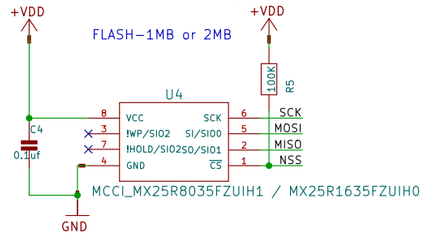


DEVICE ADDRESS : "1000100" (0X44)

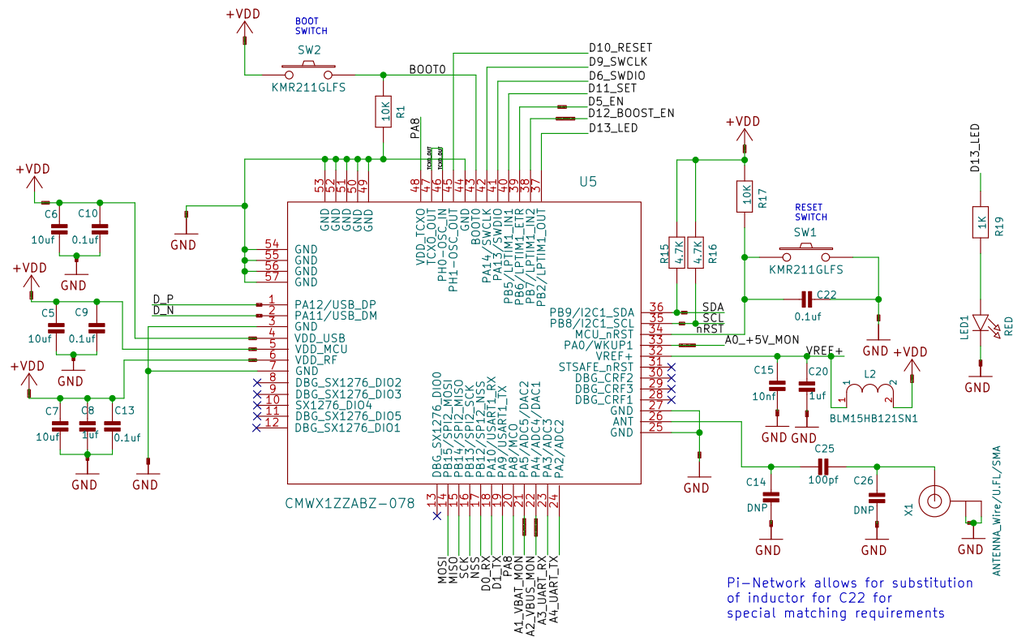
FRAM-8KB



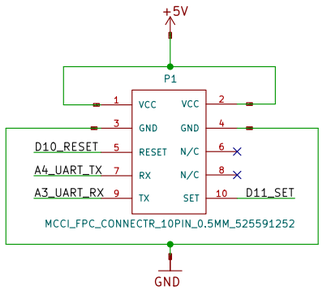
DEVICE ADDRESS : "1010000" (0X50)



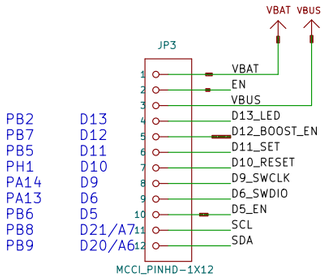
MURATA LORA MODULE



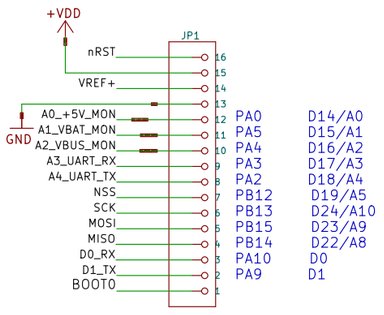
PMS7003 PARTICLE CONCENTRATION SENSOR CONNECTOR



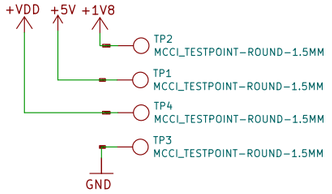
HEADER CONNECTORS



PB2	D13
PB7	D12
PB5	D11
PH1	D10
PA14	D9
PA13	D6
PB6	D5
PB8	D21/A7
PB9	D20/A6



PA0	D14/A0
PA5	D15/A1
PA4	D16/A2
PA3	D17/A3
PA2	D18/A4
PB12	D19/A5
PB13	D24/A10
PB15	D23/A9
PB14	D22/A8
PA10	D0
PA9	D1



Drawing number : 234001168

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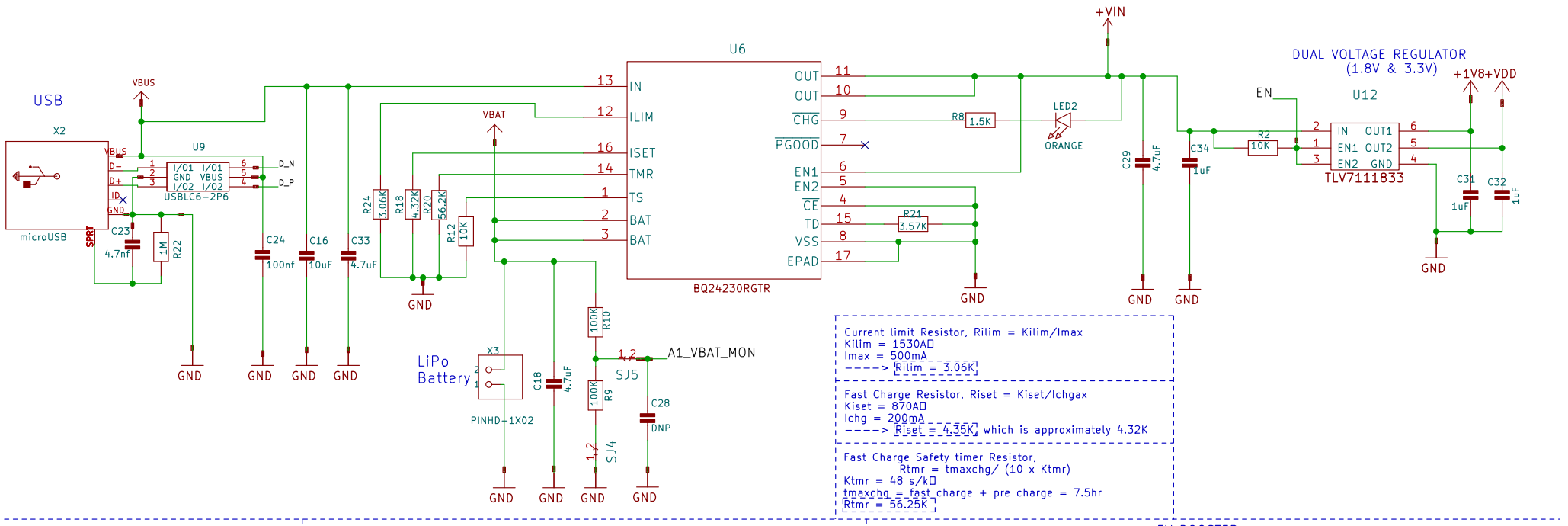
Sheet: /Murata_LoRa_Module/

File: Murata_LoRa_Module.kicad_sch

Title: Catena 4630 Schematic

Size: A3	Date: 2022-12-16	**Rev: F**
KiCad E.D.A. kicad (6.0.4)		Id: 2/3

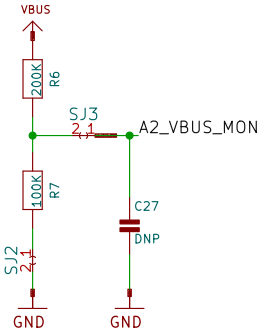
BATTERY CHARGING & POWER REGULATOR SECTION

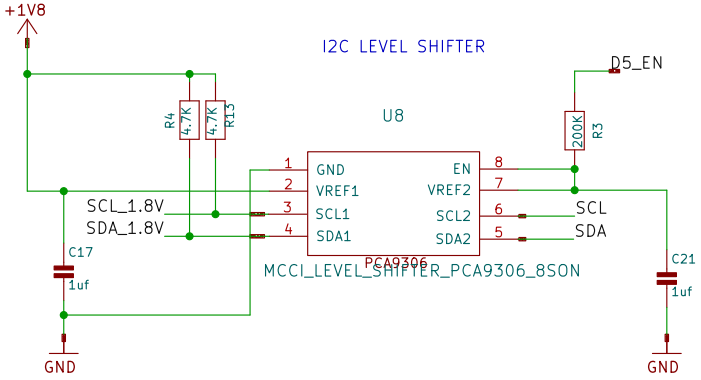


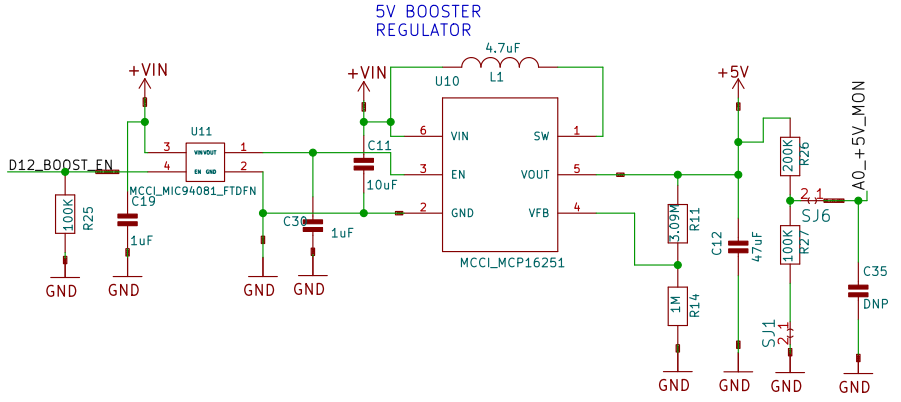
Current limit Resistor, Rilim = Kilim/Imax
Kilim = 1530A
Imax = 500mA
----> Rilim = 3.06K

Fast Charge Resistor, Riset = Kiset/Ichgax
Kiset = 870A
Ichg = 200mA
----> Riset = 4.35K which is approximately 4.32K

Fast Charge Safety timer Resistor,
Rtmr = tmaxchg/ (10 x Ktmr)
Ktmr = 48 s/k
tmaxchg = fast charge + pre charge = 7.5hr
Rtmr = 56.25K







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Drawing number : 234001168
MCCI Corporation
Sheet: /Power Management/
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Title: Catena 4630 Schematic

Size: A4	Date: 2022-12-16	**Rev: F**
KiCad E.D.A. kicad (6.0.4)		Id: 3/3