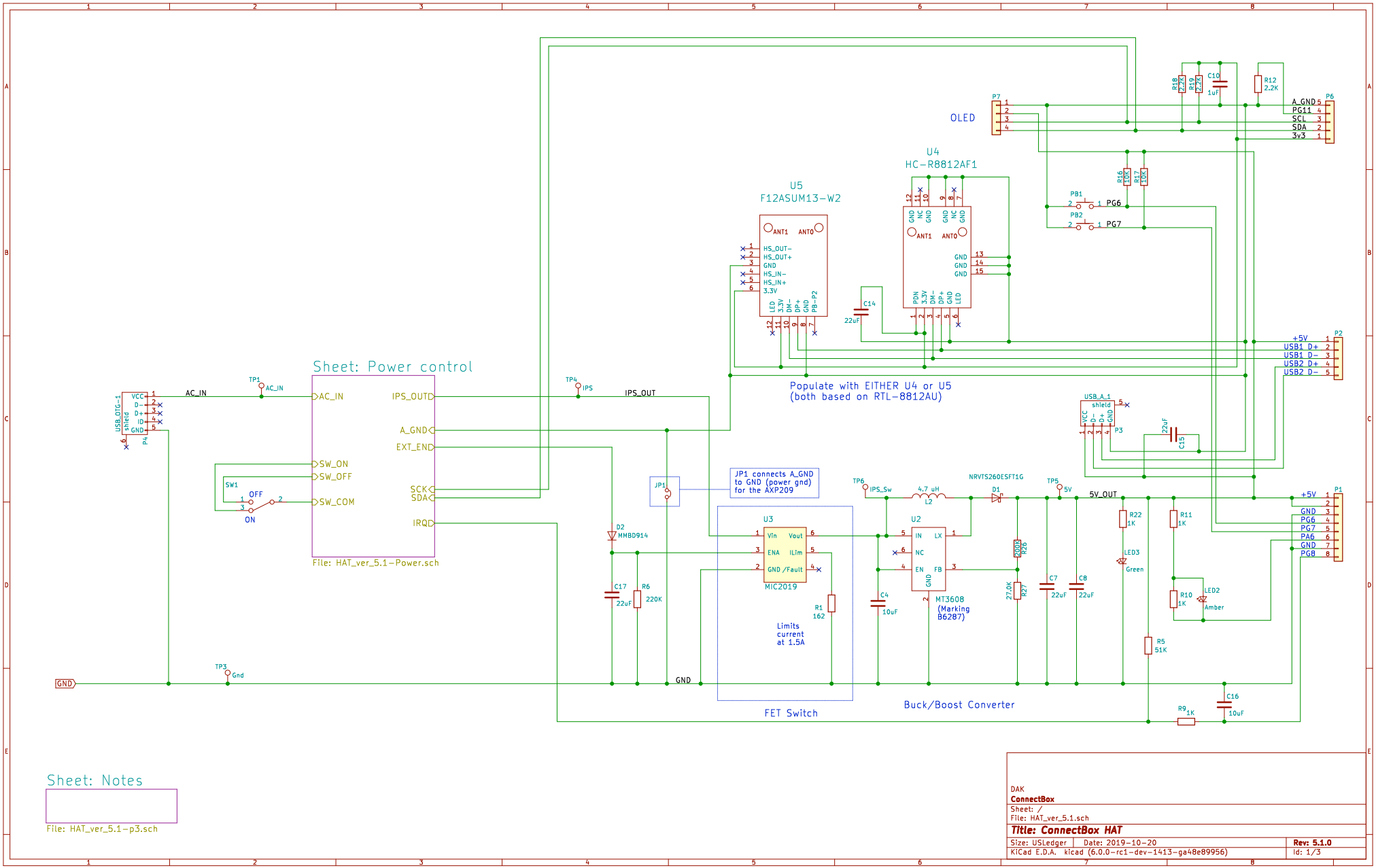
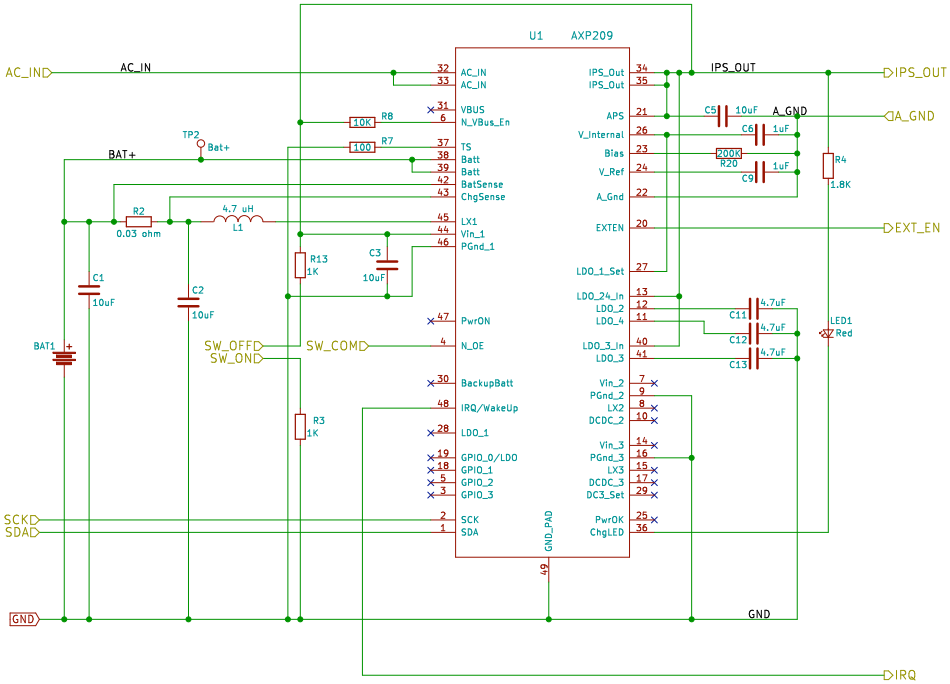
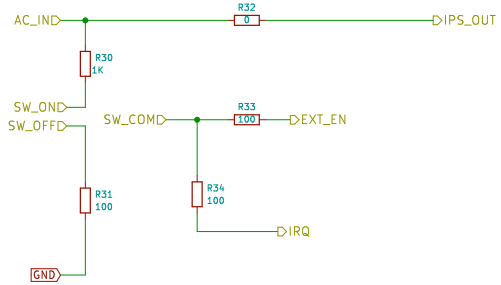

OLED
U4
HC-R8812AF1
U5
F12ASUM13-W2
Populate with EITHER U4 or U5
(both based on RTL-8812AU)
Sheet: Power control
File: HAT_ver_5.1-Power.sch
JP1 connects A_GND
to GND (power gnd)
for the AXP209
MIC2019
Limits
current
at 1.5A
FET Switch
MT3608
(Marking
B6287)
Buck/Boost Converter
Sheet: Notes
File: HAT_ver_5.1-p3.sch
DAK
ConnectBox
Sheet: /
File: HAT_ver_5.1.sch
Title: ConnectBox HAT
Size: USLedger
Date: 2019-10-20
Rev: 5.1.0
KiCad E.D.A. kicad (6.0.0-rc1-dev-1413-ga48e89956)
Id: 1/3



Populate for Installed Battery Option



Populate for No Battery Option

Sheet: /Power control/	
File: HAT_ver_5.1-Power.sch	
Title: HAT Power Options	
Size: USLedger | Date: 2019-10-20	**Rev: 5.1.0**
KiCad E.D.A. kicad (6.0.0-rc1-dev-1413-ga48e89956)	Id: 2/3

Revision History

Rev 5.0.1 – Remove PG8 control of U4; swap pins of Bat1 footprint
Rev 5.0.2 – Add physical connection to unused pins of U5
Rev 5.0.4 – Add connection from AXP209 (pin 48) to P1-8 (IRQ to NEO)
Rev 5.0.5 – Add C16 (noise filter for IRQ)
Rev 5.0.6 – Add time delay from AXP209 to FET Switch; add test points
Rev 5.0.7 – Add R12 pull down on PG11 to set pedigree
Rev 5.08 – Mounting holes went missing in 5.0.7, added back in 5.0.8
Rev 5.0.9 – Change P4 to TH mount, SMD electrical; changes layout only

Orders

5.0.0 – Boards ordered from PCBWay – 11/03/18
5.0.2 – Boards ordered from PCBWay – 12/06/18
5.0.4 – Order boards from PCBWay for 100 unit build

TO DETERMINE BOARD PEDIGREE (from cli.py):
– Is PA6 HIGH?
  Y => HAT connected; L => no HAT
– Is AXP209 present (via i2c)?
  Y => Q3Y2018 or later;
    Is PA1 HIGH (with NEO soft pull low on PA1)?
      Y => Q3Y2018, N => Q4Y2018
  N => (test for display)
    Is OLED present (via i2c)?
      Y => Q4Y2019; N => Q1Y2018

Sheet: /Notes/ File: HAT_ver_5.1-p3.sch		
Title: ConnectBox HAT		
Size: USLetter	Date: 2019-10-19	**Rev: 6.0.1**
KiCad E.D.A. kicad (6.0.0-rc1-dev-1413-ga48e89956)		Id: 3/3