

Manager: Magnus Feuer  
Advisor: Rudolf Steif  
Designer: Jesse Banks  
**Jaguar Land Rover OSTC**

Sheet: /V2X OBD Sub/

File: V2X\_OBD.sch

**Title: V2X – Open source RVI over SMS daughter card**

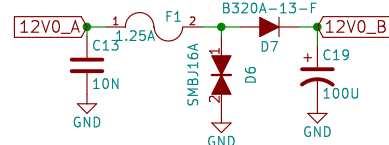
Size: A4 Date: 2015-07-17

Rev: 1.2

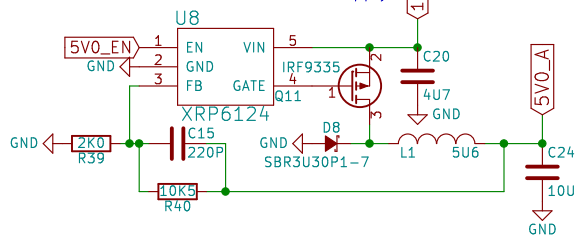
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Id: 2/6

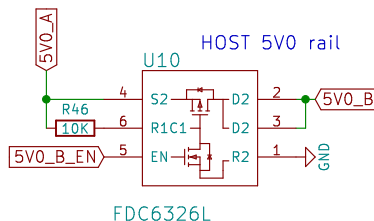
# Vehicle Power Input Filtering and ESD Spike Suppression



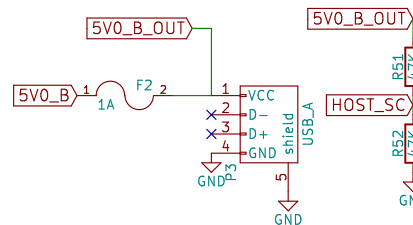
## 5V @ 1A DC-DC Power Supply



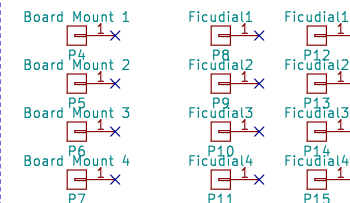
## HOST 5V0 rail



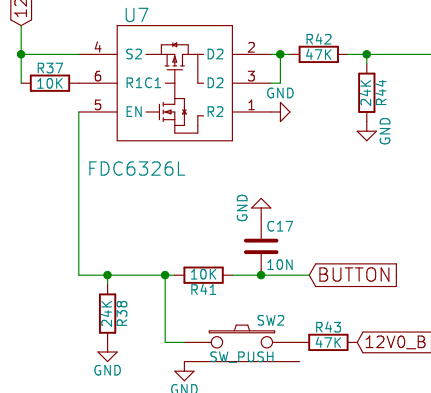
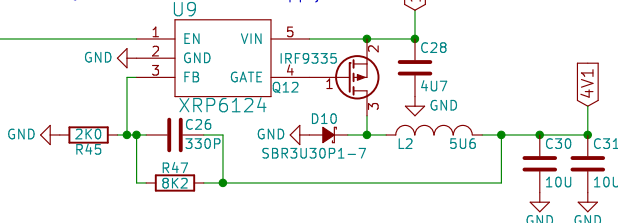
## HOST Power Connection



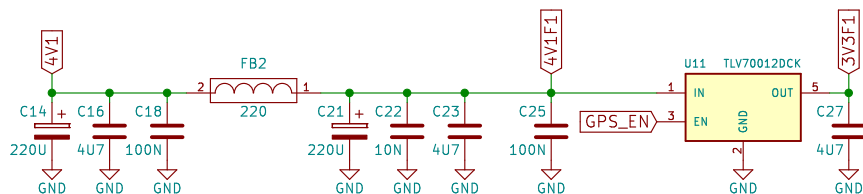
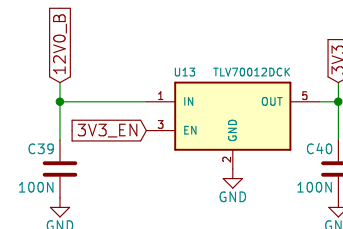
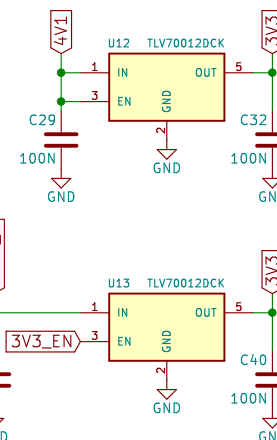
Short Circuit Detection  
5V0\_B\_OUT is post poly fuse  
Sample using logic level (maybe A2D)  
Logic '0' signal (<1.5V) indicates poly  
fuse is set, host output is in protect.  
Logic '1' signal (approx 2.4V) indicates  
poly fuse is clear, normal operation.  
An A2D value that is too high might  
indicate the Host is not attached.



## 4.1V @ 1.5A DC-DC Power Supply



Button starts the 4V1 -> 3V3 supplies  
Must hold 4V1\_EN high to stay on  
BUTTON is input signal once running



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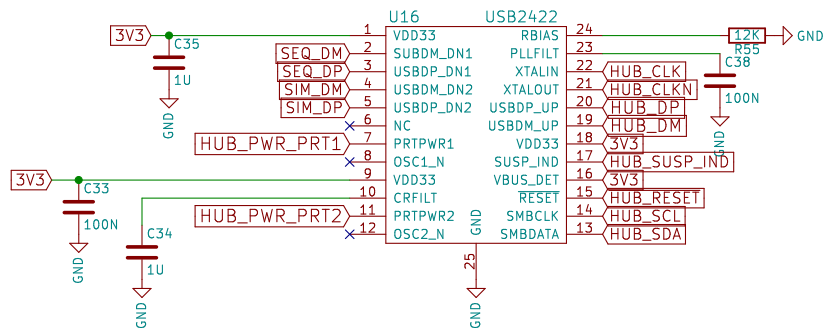
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Size: USLetter Date: 2015-07-17

Rev: 1.2

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Id: 3/6



## Bootstrapping Options

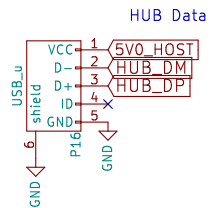
GND ← **47K** **HUB\_SCL** 0: Default configuration: Strap options enabled, hub as "self-powered"

GND  HUB\_PWR\_PRT1 0: Battery charging feature is not supported for port 1

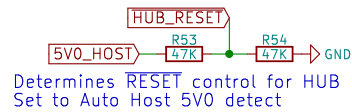
GND  $\triangleleft$  47K HUB\_SUSP\_IND (NON\_REMO)  
P58

3V3-47K-HUB\_SDA (NON\_REM1)

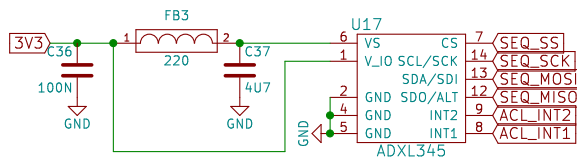
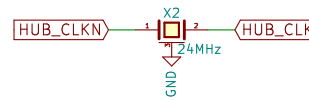
NON\_REM[1:0] = 10: ports 1 and 2 are non-removable



## HUB Data



Determines RESET control for HUB  
Set to Auto Host 5V0 detect



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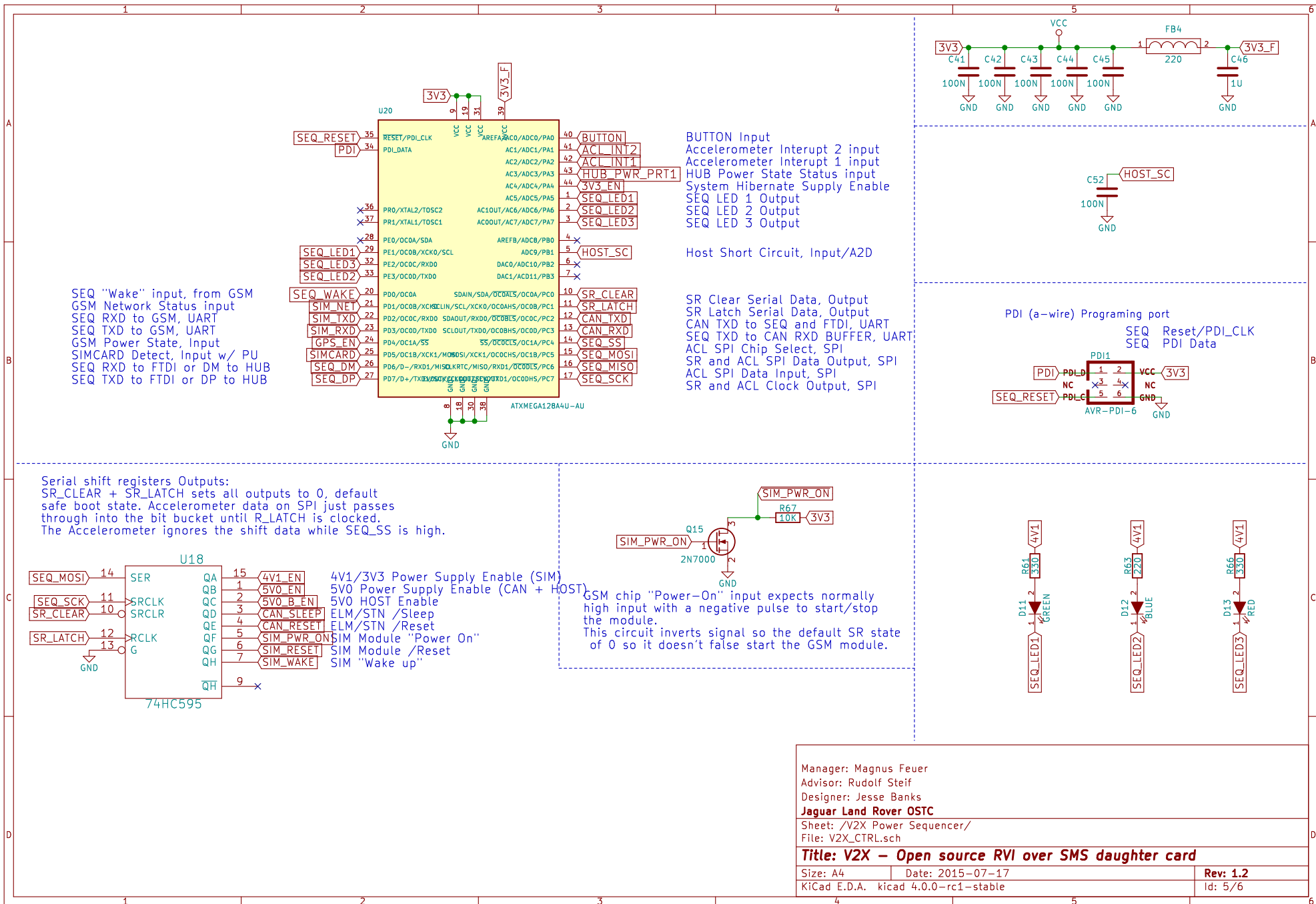
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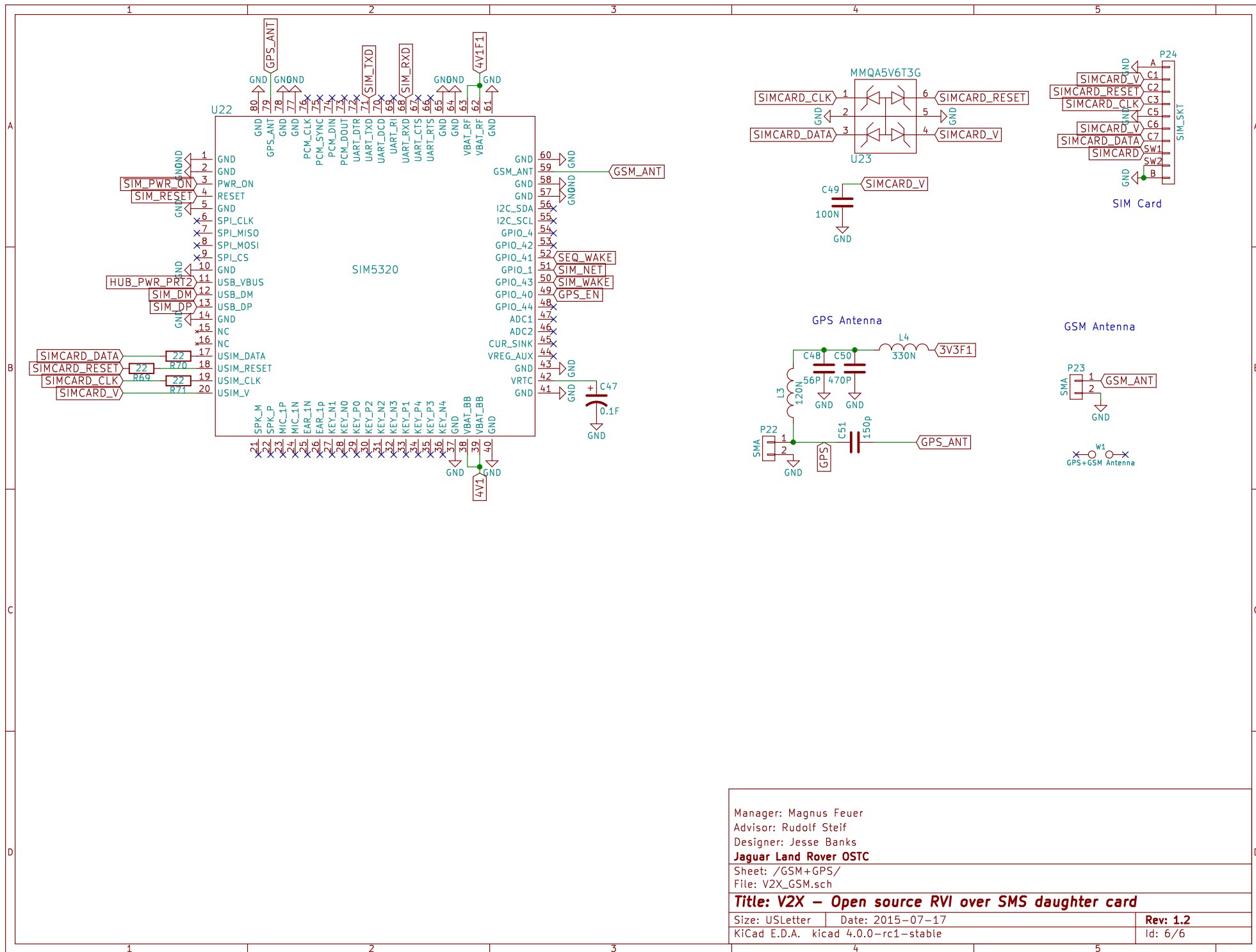
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Rev: 1.2

Size: 41	Date: 2015-07-17
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Id: 4/6





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Sheet: /GSM+GPS/  
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**Rev: 1.2**  
 Id: 6/6