



3D-ROBOTIC MAPPING PLATFORM

CAL STATE LONG BEACH - COMPUTER ENGINEERING

ENGINEER: LIAM GOGLEY

DRAWN BY: LIAM GOGLEY

VERIFIED BY: ROBERT DOMINICK

RELEASED BY:

3D-ROMAP Power Supply

SH1 - COVER

SH2 - DIGITAL POWER RAILS

SH3 - MOTOR POWER RAILS

TEAM MEMBERS :

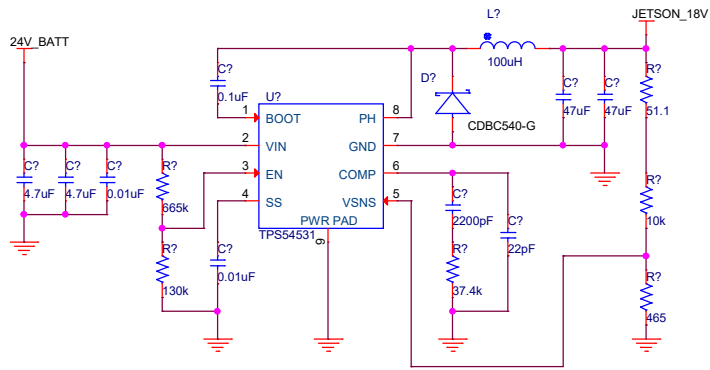
LIAM GOGLEY

ROBERT DOMINICK

MARK MUNOZ

DANIEL TRAN

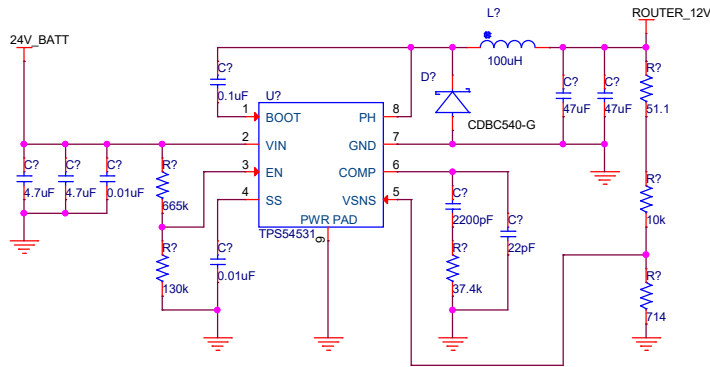
Title		
3D-ROMAP Power Supply		
Size B	Document Number 490-PSU	Rev C
Date:	Saturday, July 07, 2018	Sheet 1 of 3



18V Power to Jetson TX1

$$465 = (10k * 0v8) / (18v - 0v8)$$

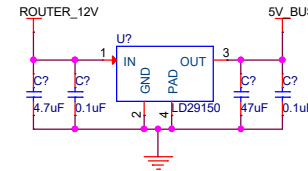
$$79uH = (18V * (24V - 18V)) / (24V * 0.2 * 0.5A * 570KHz)$$



12V Power to WiFi Router

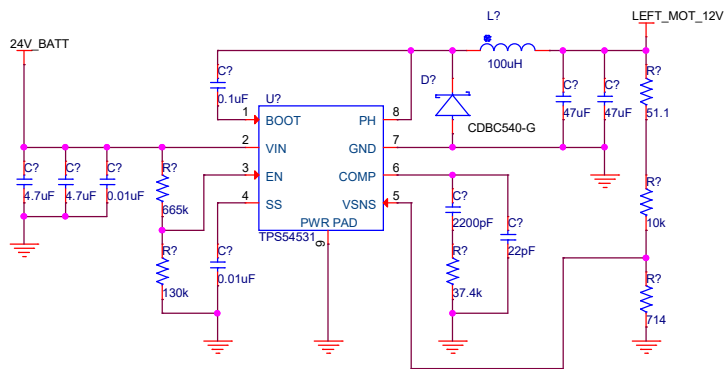
$$714 = (10k * 0v8) / (12v - 0v8)$$

$$88uH = (12V * (24V - 12V)) / (24V * 0.2 * 0.4A * 570KHz)$$

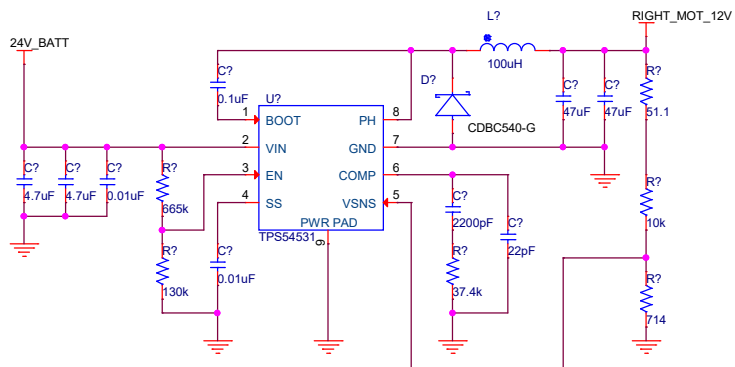


5V Power to Tiva C Launchpad VBUS & LiDAR

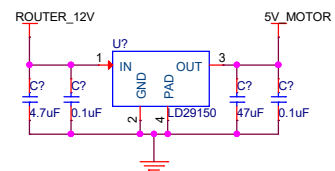
Title		
3D-ROMAP Power Supply		
Size	Document Number	Rev
B	490-PSU	C
Date:	Sunday, July 08, 2018	Sheet 2 of 3



12V Power to Back Left Drive Motor



12V Power to Back Right Drive Motor



5V Power to LiDAR Stepper Motor

Title		
3D-ROMAP Power Supply		
Size	Document Number	Rev
B	490-PSU	C
Date:	Sunday, July 08, 2018	Sheet 3 of 3