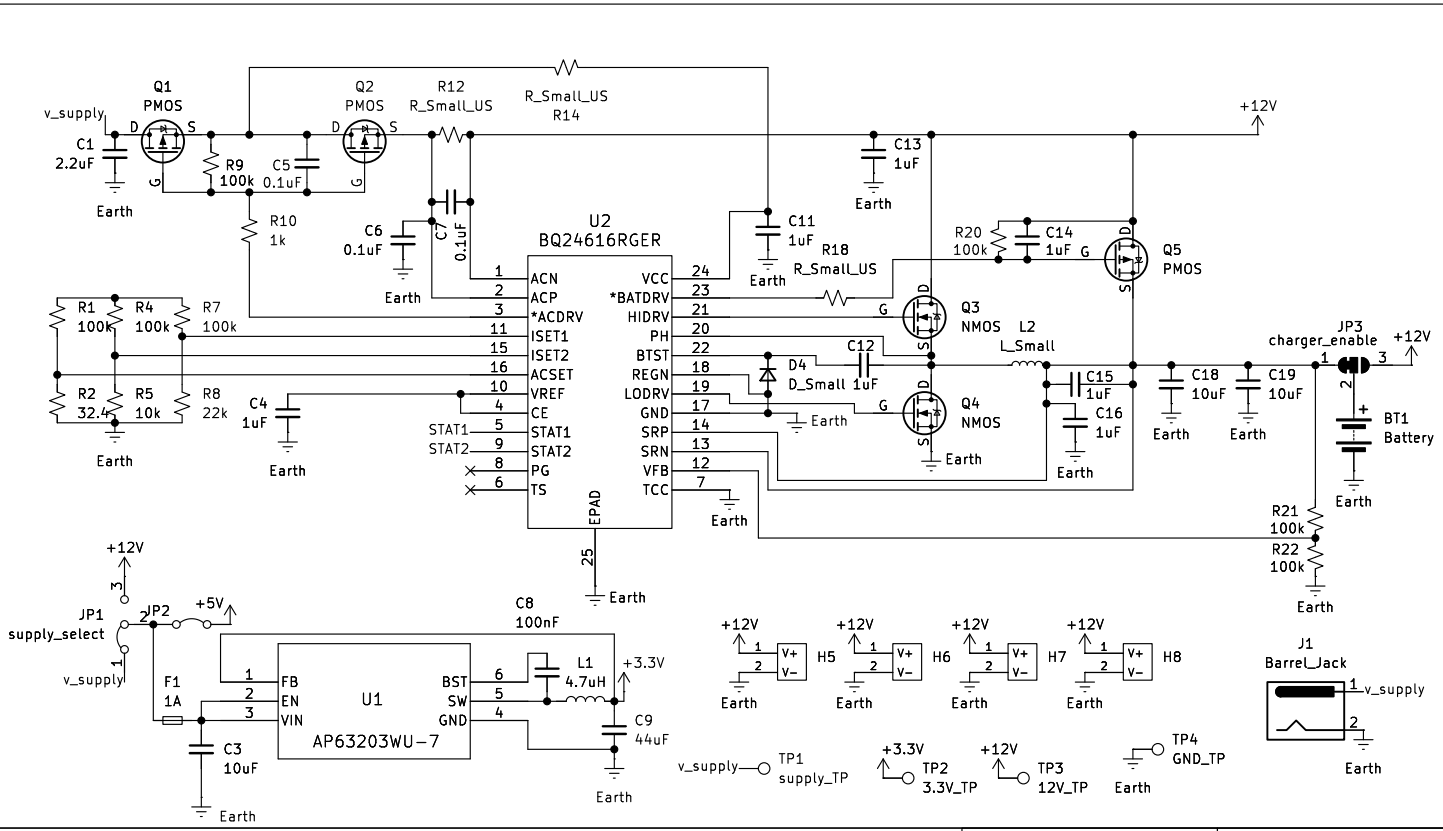
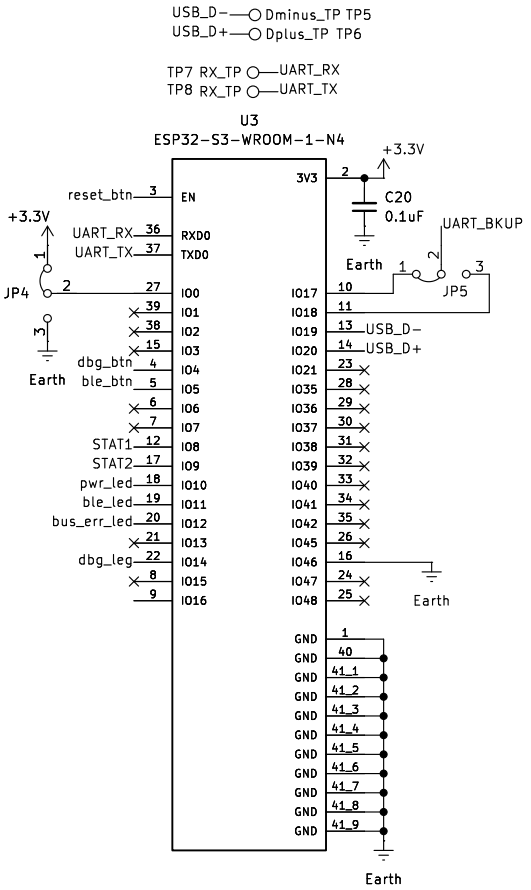
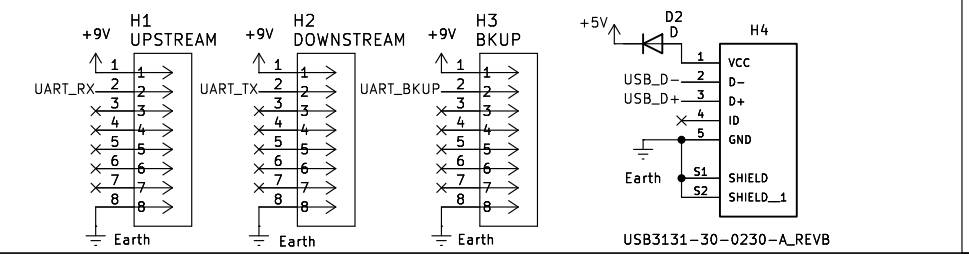
Power Supply: This system can operate off a micro-USB, 9-12V battery pack, or a 12-32V external DC supply. A battery charging IC is used to charge and discharge the battery pack if a multi-cell or rechargable pack is used. If this is not needed, the charger_enable solder bridge can be used to bypass the IC. A 3.3V switching regulator is used to regulate a stable voltage for on-board usage. Low-current (3A) power is shared through the 8-pin headers to be used in a daisy-chain. For higher current power distribution, 4 JST VH connectors are provided for direct connections.



ESP32 Module:
This microcontroller includes the bluetooth controller and antenna.

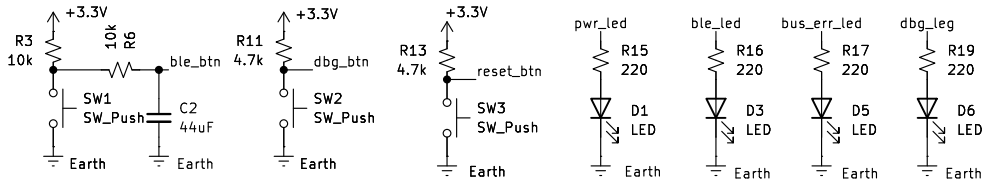




UART Bus Headers:
Unregulated power from the battery, common ground, and UART communication is relayed through these headers.

Micro-USB Connector:
This header can be used to communicate with an external device for programming. When jumper 1 is used to pull GPIO0 low, files can be written directly to flash or SRAM.

Status Lights and Control Buttons: Reset, debug and bluetooth buttons are used for operation and testing. Power-on, bluetooth (flashes for pairing), debug and bus error indicator lights are used for debugging.



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