

ContinuO Centaur Robot

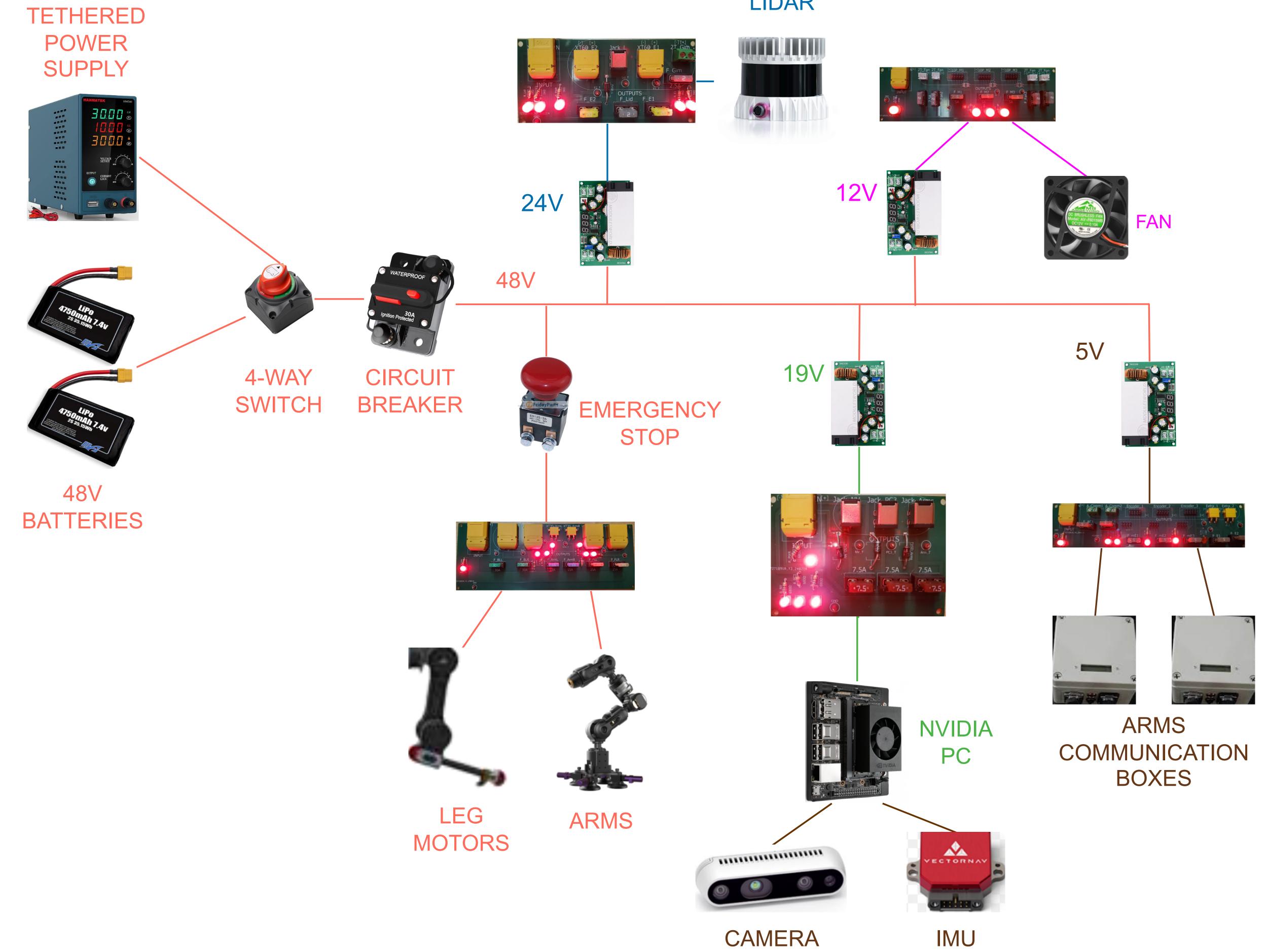
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Power Requirements:

- Peak Potential: Up to 3.5kW at full motor utilization across 48V, 24V, 19V, 12V, and 5V supplies.
- **Operational Limit:** System draw capped at 30A to align with battery cable capacity.



LIDAR

Safety Features:

- Surge Protection: TVS Diodes safeguard critical components like the NVIDIA computer.
- Overcurrent Defense: Fuses on all circuit boards for additional safety.
- Emergency Response: E-stop halts motor function while keeping core systems active.

• Wiring Safety: Circuit breaker designed to trip at 30A to protect against current overdraw. • **Connector Design:** Keyed interfaces prevent from reverse polarity.

Design Hurdles and Solutions:

• Current Management: PCB designs refined to handle high current scenarios.

• Component Selection: Sourced safety elements compatible with system's demands in a compact form factor.

- Spatial Efficiency: Components and layouts crafted to optimize the limited space within the robot.

• Energy Efficiency: Achieved a high power efficiency rating of 93%.