<https://docs.google.com/forms/d/e/1FAIpQLSfynPSjSGUfx7pE6qgLt48KsdpeEnc54JtHWBv-36yGDkYvwg/formResponse>

1/30/2025

System(s)/Subsystem(s) You Are Working On:

I am working on the power subsystem of the VFD Motor Controller. I provide power to the motor and auxiliary power to the system. This consists of the input 3-phase power, rectifier, dc link, relay, power control, and motor output. This also consists of buck converters between my board and the microcontroller board to supply the auxiliary power. I am also working as the PM and managing our progress.

Tasks Completed This Week:

I completed the status update 1 presentation. I completed a full design review. I completed the execution plan. I worked on designing the power schematicv1. I worked on designing the power pcbv1 layout. I worked on routing the power pcbv1 layout.

Current Problems:

I have had problems getting Altium access this week. This has delayed the power PCBv1 order but is now resolved. I have had problems getting the iso5V to 3.3V converter to function. This will require a new part in parts order 4. I have had problems with a fried power control. This will require a new part in parts order 4.

Tasks To Be Achieved Until The Next Week:

I plan to complete the power PCBv1 order. I plan to complete the parts order 4. I plan to work on testing the iso5V to 3.3V converter. I plan to work on the auxiliary power integration. I plan to work on the validation plan. I plan to work on the FSR v1.

2/13/2025

System(s)/Subsystem(s) You Are Working On:

I am working on the power subsystem of the VFD Motor Controller. I provide power to the motor and auxiliary power to the system. This consists of the input 3-phase power, buck converters, rectifier, dc link, relay, power control, and motor output. I am also working on auxiliary power integration and PWM control integration. I am also working as the PM and managing our progress.

Tasks Completed This Week:

I completed the power pcbv1 routing. I completed the power pcbv1 order. I completed part order 4. I completed the status update 2 presentation. I worked on the power pcbv1 assembly. I worked on auxiliary power integration.

Current Problems:

I have had problems with getting sick, preventing me from working in the FEDC. I am having problems with a sprained thumb, limiting my ability to solder. I am having problems desoldering through hole components off of the power pcbv0.

Tasks To Be Achieved Until The Next Week:  
I plan to complete power pcbv1 assembly. I plan to complete auxiliary power integration with Drew. I plan to complete auxiliary power integration with Mackenzie. I plan to work on PWM control integration with the whole team. I plan to work on relay control integration with the whole team.

2/27/2025

System(s)/Subsystem(s) You Are Working On:

I am working on the power subsystem of the VFD Motor Controller. I provide power to the motor and auxiliary power to the system. This consists of the input 3-phase power, buck converters, rectifier, dc link, relay, power control, and motor output. I am also working on auxiliary power integration and PWM control integration. I am also working as the PM and managing our progress.

Tasks Completed This Week:

I completed parts order 5. I completed assembling pcbv1. I completed auxiliary power integration with microcontroller. I completed the status update 3 presentation. I worked on auxiliary power integration with optoelectronics. I worked on PWM control integration with optoelectronics and firmware.

Current Problems:

I am having problems integrating optoelectronics with auxiliary power. When connected there is a large voltage drop in the power. I am having problems with PWM integration with optoelectronics and firmware. When all three subsystems are connected, my power control chip did not seem to have the correct output and the firmware dev board had 1 pin did not seem to function to the correct voltage.

Tasks To Be Achieved Until The Next Week:

I plan to complete auxiliary power integration with Mackenzie. I plan to calculate the auxiliary power loads to resolve the voltage drop problem. I plan to complete PWM control integration with the whole team. I plan to refer to Lusher to resolve the power control chip problem. I plan to complete relay control integration with the whole team.

3/6/2025

System(s)/Subsystem(s) You Are Working On:

I am working on the power subsystem of the VFD Motor Controller. I provide power to the motor and auxiliary power to the system. This consists of the input 3-phase power, buck converters, rectifier, dc link, relay, power control, and motor output. I am also working on auxiliary power integration, PWM control integration, and relay control integration. I am also working as the PM and managing our progress.

Tasks Completed This Week:

I solved a number of current problems, but found new ones while integrating with new sections. I worked on auxiliary power integration with optoelectronics. I worked on PWM control integration with optoelectronics and firmware. I worked on relay control integration with optoelectronics.

Current Problems:

I am having problems with PWM control integration with optoelectronics and firmware. The firmware dev board does not appear to be functioning since the recent code update. I am having problems with relay integration from my subsystem. The relay is functioning, but the voltage it is switching, is not the correct magnitude. I am having problems with relay control integration with firmware. The firmware dev board does not appear to be functioning since the recent code update.

Tasks To Be Achieved Until The Next Week:

I plan to complete auxiliary power integration with Mackenzie. I plan to complete PWM control integration with the whole team. I plan to resolve my subsystems relay control problem. I plan to complete relay control integration with the whole team. I plan to work on the status update 4 presentation.

3/27/2025

Tasks Completed This Week:

Current Problems:

Tasks To Be Achieved Until The Next Week: