

| Owner | Module | Original Source Files | Responsibility & Key Logic |
|-------|----------------------------|------------------------------|---|
| Zhang | Yaw PID Controller | yawDC.cpp / .h | Implement the PID loop in Python. Use current_angle (from He) to calculate motor speed/direction. |
| Zhang | Elevator Control | elevator.cpp / .h | Logic for deploy() and stow(). Sequence the stepper motor movements based on system state. |
| Zhang | Safety & Limits | limswitch.cpp / elevator.cpp | Critical Safety: Monitor limit switches during PID or Elevator movement and trigger immediate stops. |
| Zhang | Aero Lookup Table | OptimalFinAngle.cpp / .h | Port getAeroFinAngle (NACA0009 polynomial). Convert Wind Speed to a target_angle. |
| He | Encoder (SPI) | encoder.cpp / .h | Handle spidev communication with AMT22. Provide a clean current_angle variable. |
| He | Pin Mapping | pinmap.cpp / .h | Map STM32 pins to Raspberry Pi 40-pin header. Initialize GPIO, SPI, and PWM modes. |
| He | CAN Communication | fin.cpp / hal_it.cpp | Use python-can to receive wind data and transmit system status packets. |
| He | Motor Driver I/O | stepper.cpp / yawDC.cpp | Interface with the DRV8835/Stepper hardware. Provide "SetSpeed" or "Step" functions for Zhang. |