Dark Passenger Wiring Interconnect MCU Motor Base Shield GPS GY-NEO6MV2 BATTERY INPUT RIGHT WHEEL ASSEMBLY GPIO6 (RIGHT WHEEL ENC) 4 GND 5 3.3VDC 6 GPIO5 (RIGHT WHEEL ENC) 7 GPIO4 MOTOR TERMINAL B Quick Disconnect Dark Passenger Power Distro PCB (Needs pullup resistor) WHEEL DROP SW 5 20W 2AH Dewalt Battery **MPU9250 IMU** 3 4 5 6 8 8 9 11 12 DC-DC Converter 20V to 12V (DC MOTORS) LEFT WHEEL ASSEMBLY 20W 2AH Dewalt Battery MOTOR TERMINAL A 6 GPIO40 (LEFT WHEEL SW) MOTOR TERMINAL B 3.3V or 5V Logic (Needs pullup resistor) WHEEL DROP SW 2-Channel Motor Driver Toggle Switches GPIO13 (DIR1) M2A RIGHT MOTOR RED M2B RIGHT MOTOR BLK YEL: PWM1 4 GPIO14 3.3V or 5V Logic 7 GPIO21 (PWM2) 3 GPIO20 9 GPIO19 (DIR2) DC-DC Converter 20V to 5V (SBC) 3.3V or 5V Logic **COB LED Yellow** 3.3V Logic **USB Speaker LIDAR Sensor** COB LED Red 5V, 0.6A, 3W **AFT LED Relay** <u>Usage</u> 2x SCL/SDA 28x GPIO **RPLIDAR** AUDIO AUX **Chamelon Camera** CM3-U3-13S2C-CS Teledyne NEOPIXEL POWER **Depth Camera MPU9250 IMU** USB 3.0 IN Stereo Labs HUB1 USB POWER 3.3V or 5V Logic Motor Base MCU ESP32 **USB HUB2 Turret MCU** ESP32 USB 3.0 IN **Turret LED Relay** 3.3V or 5V Logic TMC2209 Stepper Driver 1 **Cooling Fan Relay** (INDEX) GPIO7 5V or 12V, TBD (MS1) Jumper (MS2) Jumper (PDN) GPIO18 1 (CLK) GPIO11 (STEP) GPIO12 1 NEMA 17 Stepper 1 2A, 12V, 59N-cm YAW Stepper 1 Stepper 1 Stepper 1 A+ 1 BLK, A, C1 GRN, C, C1 2 RED, B, C2 3 BLU, D, C2 4 B- 4 BLU, D, C2 3.3V or 5V Logic **2A, 12V, 59N-cm**PITCH BLK, A, C1 GRN, C, C1 RED, B, C2 BLU, D, C2 BLK, A, C1 1 A+ 1 BLK, A, C1 2 GRN, C, C1 2 B+ 3 RED, B, C2 BLU, D, C2 TMC2209 Stepper Driver 2 1 BLK, A, C1 2 GRN, C, C1 3 RED, B, C2 4 BLU, D, C2 (PDN) GPIO40RX, GPIO41TX (CLK) GPIO38 11 (STEP) GPIO37 1 1 BLK, A, C1 2 GRN, C, C1 3 RED, B, C2 4 BLU, D, C2 (DIR) GPIO36 9 **Turret Gearbox** 3.3V or 5V Logic 2x SCL/SDA 8 5VDC 9 3.3VDC 29x GPIO (4x PWM)