# Teensy 4.1 Ride-On Pin Assignments

## Steering (J7)

|  |  |  |  |
| --- | --- | --- | --- |
| Teensy Pin | Label / Function | Board Header | Motor Controller Label |
| Pin 15 | Steer LPWM | J7-6 | Steer L\_PWM |
| Pin 16 | Steer RPWM | J7-5 | Steer R\_PWM |
| Pin 17 | Steer L\_EN | J7-4 | Steer L\_EN |
| Pin 18 | Steer R\_EN | J7-3 | Steer R\_EN |

## Front Motors (J2)

|  |  |  |  |
| --- | --- | --- | --- |
| Teensy Pin | Label / Function | Board Header | Motor Controller Label |
| Pin 19 | Front R\_EN | J2-3 | Front R\_EN |
| Pin 20 | Front L\_EN | J2-4 | Front L\_EN |
| Pin 21 | Front L\_PWM | J2-5 | Front L\_PWM |
| Pin 22 | Front R\_PWM | J2-6 | Front R\_PWM |

## Rear Motors (J1)

|  |  |  |  |
| --- | --- | --- | --- |
| Teensy Pin | Label / Function | Board Header | Motor Controller Label |
| Pin 23 | Rear R\_EN | J1-3 | Rear R\_EN |
| Pin 24 | Rear L\_EN | J1-4 | Rear L\_EN |
| Pin 25 | Rear L\_PWM | J1-5 | Rear L\_PWM |
| Pin 26 | Rear R\_PWM | J1-6 | Rear R\_PWM |

## Direction Switch (Shift Lever)

|  |  |  |  |
| --- | --- | --- | --- |
| Teensy Pin | Label / Function | Board Header | Motor Controller |
| Pin 10 | Forward |  |  |
| Pin 11 | Reverse |  |  |

## ESP32 Link (UART for OTA/Telnet)

|  |  |  |  |
| --- | --- | --- | --- |
| Teensy Pin | Label / Function | Board Header | Motor Controller |
| Pin 7 | RX2 (to ESP32 TX) |  |  |
| Pin 8 | TX2 (to ESP32 RX) |  |  |

## Pots (Child Controls)

|  |  |  |  |
| --- | --- | --- | --- |
| Teensy Pin | Label / Function | Board Header | Motor Controller |
| Pin 27 | Foot Pedal (Throttle1) |  |  |
| Pin 3 | Steering Wheel (Steering1) |  |  |

## Remote Override (RC Receiver)

|  |  |  |  |
| --- | --- | --- | --- |
| Teensy Pin | Label / Function | Board Header | Motor Controller |
| Pin 5 | Steering2 |  |  |
| Pin 4 | Throttle2 |  |  |

## Gearbox Encoder (AMT-102V)

|  |  |  |  |
| --- | --- | --- | --- |
| Teensy Pin | Label / Function | Board Header | Motor Controller |
| Pin 2 | Encoder X |  |  |
| Pin 1 | Encoder B |  |  |
| Pin 0 | Encoder A |  |  |