

AIUDA WIRING ARCHITECTURE

The diagram illustrates the wiring architecture for a 7 inch LED Touch Screen Display system, organized into three main sections: Power Management, Control/Processing, and Output/Display.

Power Management Section:

- Batteries:** Includes a 12-60V Battery Level Indicator, two 12V/40Ah Lead Acid Batteries, a 12V/40Ah Lithium Ion Battery, and a 24/12V/10A Car Battery Charger.
- Power Regulation:** Features a 12V 16mm/s Linear Actuator, a 3A 300Watts DC to DC Step Down Module, and a Prepaid Wifi Router.
- Control/Processing Section:**
 - Microcontrollers:** Arduino Mega ATmega2560, JETSON Xavier NX Developer Board, and Gizduino V5 Atmega328.
 - Relays:** 2 Channel 5V Relay Module SPDT, 16 Channel 5V Relay Module SPDT, and a 2 Channel 5V Relay Module SPDT.
 - Sensors/Modules:** KY-024 Linear Magnetic Hall Sensor Module, MPU6050 Module, Etrike Drive / Reverse Switch, Etrike Throttle Hall Sensor, and Etrike Control Circuit.
 - Communication:** GPRS GSM GPS BDG A9G Module Development Board, USB to TLL Serial CH340 Module, and a Prepaid Wifi Router.
- Output/Display Section:**
 - Cameras:** Raspberry pi Camera Module V2 (two units).
 - Display:** 7 inch LED Touch Screen Display.
 - Connectors:** 15 Pins Female VGA port, 15 Pins Male VGA, and various other connectors for sensors and modules.

Legend:

- Wire Colors:**
 - 24V (Red)
 - 12V (Yellow)
 - 5V (Brown)
 - 3.3V (Pink)
 - GND (Black)
- Component Colors:**
 - Module / Device (Grey)
 - MCU / Development Board (Blue)
 - Connector / Cable (Green)
 - External Component (Orange)

