Microcontroller

U1
ESP32-DEVKIT-V1

Air Quality Sensor

J2
MQ135
- 4 VCC
- 3 GND
- 2
- 1 AOUT

Ultrasonic Distance Sensor

J3
HC-SR04
- 4 VCC
- 3 TRIG
- 2 ECHO
- 1 GND

Single-Channel Relay Module

J5
HW-307B
- 3 IN
- 2 GND
- 1 VCC

12V DC Electric Pump

J6
PUMP
- 2 (+)
- 1 (−)

ESP32 pins:
- 30 VIN
- 16 EN
- 17 VP
- 18 VN
- 4 D2
- 5 D4
- 8 D5
- 27 D12
- 28 D13
- 26 D14
- 3 D15
- 9 D18
- 10 D19
- 11 D21
- 1 3V3
- 12 RX0
- 13 TX0
- 6 RX2
- 7 TX2
- 14 D22
- 15 D23
- 23 D25
- 24 D26
- 25 D27
- 21 D32
- 22 D33
- 20 D35
- 19 D34
- 29 GND

Nextion HMI LCD

J7
NX4832T035
- GND 1
- RX 2
- TX 3
- VCC 4

Temperature and Humidity Sensor

J1
DHT22
- GND 1
- OUT 2
- VCC 3

Litter-Racking Signal

J9
Output Signal
- OUT 1
- GND 2

Liquid Flow Rate Sensor

J4
YF-S201
- GND 1
- SIG 2
- VCC 3

Camera Module

J10
ESP32-CAM
- VCC 1
- GND 2

Buck Converter

J8
XL4016
- GND 1
- 5V 2

Poultry Bot: IoT Monitoring

FYP-19B-008-EE