

Product Number: 05

Product Name: IoT Wire and Wireless Networks Trainer

Brand: ZerOne
Model: ZT-IOT-7072
Origin: China (Assembly by BD)



(Sample Picture)

Technical Specifications:

Module One: Network Interface Circuits

Experiment 1: Wire Network Interface Circuit, Using Device: PC, Hardware Requirements: Support USB, Operating System: Microsoft Windows

Experiment 2: Wireless Network Interface Circuit, Using Device: Cellular Phone, Hardware Requirements: Support Bluetooth, Operating System: Android

Module Two: 2 Photo and Switch Sensor Network Circuits

Experiment 1: CdS Sensor Network Circuit, Operating Wavelength: 500 nm ~ 580 nm, Resistance Range: 10 kΩ ~ 5 MΩ.

Experiment 2: Phototransistor Network Circuit, Operating Wavelength: 430 nm ~ 670 nm

Experiment 3: Tilt Switch Network Circuit, On Angle: 55° ~ 125°

Experiment 4: Reed Switch Network Circuit, Contact Resistance: 150 mΩ (Max.), Insulation Resistance: 1010 Ω (Min.)

Module Three: Environment Sensor Network Circuits

Experiment 1: Red Color Sensor Network Circuit, Operating Wavelength: 590 nm ~ 720 nm (λ_p : 660 nm)

Experiment 2: TC74 Temperature Sensor Network Circuit, Measurement Range: -40 °C ~

+125 °C, Accuracy Error (max): ± 3 °C for 0 °C ~ 125 °C

Experiment 3: DHT11 Humidity Sensor Network Circuit, Measurement Range: 20 ~ 90% RH, Accuracy Error: $\pm 5\%$ RH @ 25 °C

Module Four: 4 Infrared and Gas Sensor Network Circuits

Experiment 1: Infrared Sensor Network Circuit, Frequency Response: ± 10 dB for 0.3 Hz to

3 Hz, Field of View: 21° ~ 159° (X-axis) and 27.5° ~ 152.5° (Y-axis)

Experiment 2: Alcohol Sensor Network Circuit., Sensing Body Resistance: 100 kΩ ~ 500 kΩ. (100 ppm Alcohol), Operating Humidity: < 95 %RH

Experiment 3: Nature Gas Sensor Network Circuit, Sensing Body Resistance: 2 kΩ ~ 20 kΩ. (5000 ppm Methane), Operating Humidity: < 95 %RH

Module Five: Interactive Network Circuits for Smart Homes (I)

Experiment 1: Interactive Network Circuit for Home Light ; When the light is dark, network will automatically turn on the LED

Experiment 2: Interactive Network Circuit for Home PM2.5 ; When the air pollution is severe, network will automatically turn on the fan

Module Six: Interactive Network Circuits for Smart Homes (II)

Experiment 1: Interactive Network Circuit for Home Temperature ; When the temperature is high, network will automatically turn on the fan ; Fan's Speed: 1. Fan no operation (temperature < 21 °C); 2. Fan at low speed (22 °C < temperature < 27 °C);

Experiment 2: Interactive Network Circuit for Heart Rate When the heart rate is low, network will automatically turn on the alarm (2) Alarm level: 1. Continuous alarm (heart rate < 40); 2. No alarm (50 < heart rate < 90); 3. Intermittent alarm

Function Generator and DC Power Supply: Waveforms: Sine, Triangle, Square, TTL Pulse ; Amplitude: >10 Vpp ; Impedance: 50Ω $\pm 10\%$; Duty Control: 30% ~ 60% ; Display: 6-Digit LED Display

Warranty: 1 (One) year with services

[N.B: Product specifications are not fixed, product specifications may be changed as per brand models and others things.]