RDL TECHNOLOGIES

RDL887 / DATASHEET

Motors, Sensor and Actuators interface Trainer Kit

25 Years Excellence in Educational Kits

RoHS 2011/65/EU

MOTORS, SENSOR AND ACTUATORS INTERFACE TRAINER KIT

Motors, Sensor and Actuators interface Trainer Kit, The plug-and-play design that makes it easy for connections and helps Students, hobbyists, enthusiasts, and professionals to build custom Motors, Sensors and Actuator application projects, Motors, Sensor and Actuators interface Trainer Kit equipped with onboard IO's, Relay, Motors, stepper motor, Servo, sensors and actuators interfaces & peripherals. It's used in many educational institutions and R&D labs across the world.

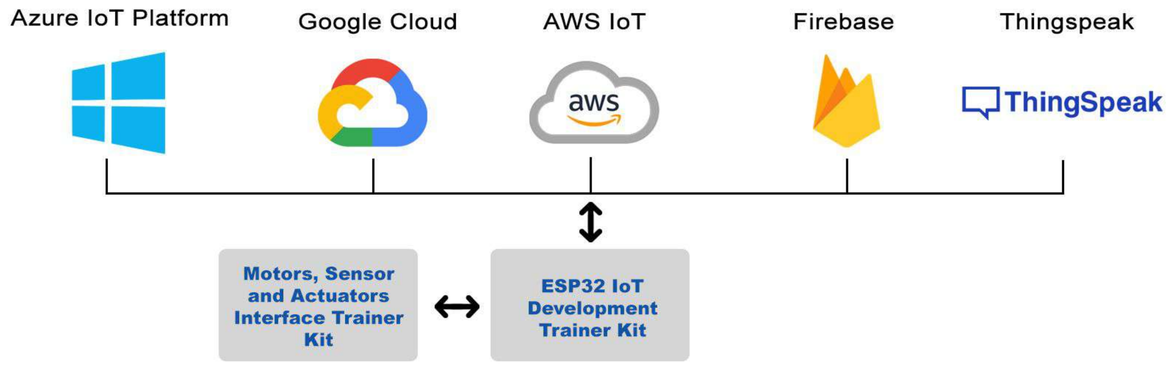
FEATURES

- Plug & Play Interface Connectivity.
- Professional EMI/RFI Complaint PCB Layout Design.
- Modular Block design makes Easy access & quick Prototyping.
- FRC connectivity features minimize the connection Error.
- ROHS Compliant High Quality Grade PCB.
- Supported DC 12V Power Supply.
- Wooden Enclosure - Go green initiative.
- This kit can easily interface with other RDL Development Training kits.
- 2 nos stepper motors with driver interface.
- 2 nos DC Motors with driver interface.
- 2 nos Servo motors.
- 4 channel 8 Amps Relay.
- 1 nos Electromagnetic actuators / EM Lock with Relay.
- 1 no Industrial IR Proximity Sensor.
- 1 channel ADC converter ADC08801.
- 1x Analog Test POT.
- Overcurrent protection Fuse.

APPLICATION

- Automation
- Robotics
- Exoskeleton
- Human Robotic Interface
- Valve Control
- Motion & Direction Control Application
- Access Control gate
- Humanoid

SUPPORT MOST OF THE POPULAR CLOUD PLATFORM



SCOPE OF LEARNING EXPERIMENTS

- Interface DC motor and control the speed and direction.
- Interface Stepper Motor and control the Step , speed and Direction.
- Interface Servo motor and control the direction.
- Interface Relay and control the appliance ON / OFF.
- Interface the Temperature sensor to ADC and control the relay.
- Sense the proximity object and control the Stepper motor.
- Sense the Proximity object and control the Electromagnetic lock.
- Sense proximity object and control the dc motor.
- Control the Servo motor using PWM technique.
- Sense the proximity object and controlling the servo motor angle.

SPECIFICATION

IR PROXIMITY SENSOR

- Power supply: 5V.
- Current: 3 - 4mA.
- Range: 3 – 80cm adjustable.

100 RPM BO MOTOR

- Operating Voltage(VDC): 3~12
- Shaft Length (mm): 8.5
- Shaft Diameter (mm): 5.5 (Double D-type)
- No Load Current: 40-180mA.
- Rated Speed(After Reduction): 100 RPM
- Rated Torque: 1 Kg Cm

ADC0804 IC

- 0-V to 5-V Analog Input Voltage Range With Single 5-V Supply.
- No Zero Adjust Required.
- Resolution: 8 Bits.
- Total Error: ±1/4 LSB, ±1/2 LSB and ±1 LSB.
- Conversion Time: 100 µs.

L293D DC MOTOR DRIVER:

- Motor Supply Voltage selection: 5 V or 12 V.
- Separate Input-Logic Supply.
- Output Current 600mA Per Channel.
- Output Clamp Diodes for Inductive Transient Suppression.
- Internal ESD Protection.

STEPPER MOTOR

- Rated voltage: 5V DC.
- Reduction Ratio: 64:1.
- Step Angle: 5.625° /64.
- Frequency: 100Hz.
- Self-positioning Torque: >34.3mN.m.
- Friction torque: 600-1200 gf.cm.
- Pull in torque: 300 gf.cm.

STEPPER MOTOR DRIVER

- Using ULN2803 2 Stepper motors can be driven.

POWER SUPPLY

- 12VDC input with Fuse & Fuse blown LED indicator.
- On board Buck Convertor.

RELAYS

- 4X 12VDC relays with 6A 230VAC

DC 12V ELECTRIC DOOR LOCK

- Holding force: 0.25 kg
- Energized forms: intermittent
- Unlocking time: 1s

SUPPLY VOLTAGE

- Supply Input Voltage DC 12V / 24V
- Permissible Range, Lower Limit (DC) 9V

DIMENSION

- Wooden Box : 247mm X 170mm X 60mm

QUICK IDEA TO PROOF OF CONCEPT (POC)

Idea

Development Kit
Single board IoT edge computing hardware platform.

Solution
Use familiar open source IDE to build custom solution.

PACKAGE INCLUDES

- Development board with wooden enclosure.
- 12V 2A Adapter.
- FRC Cable.

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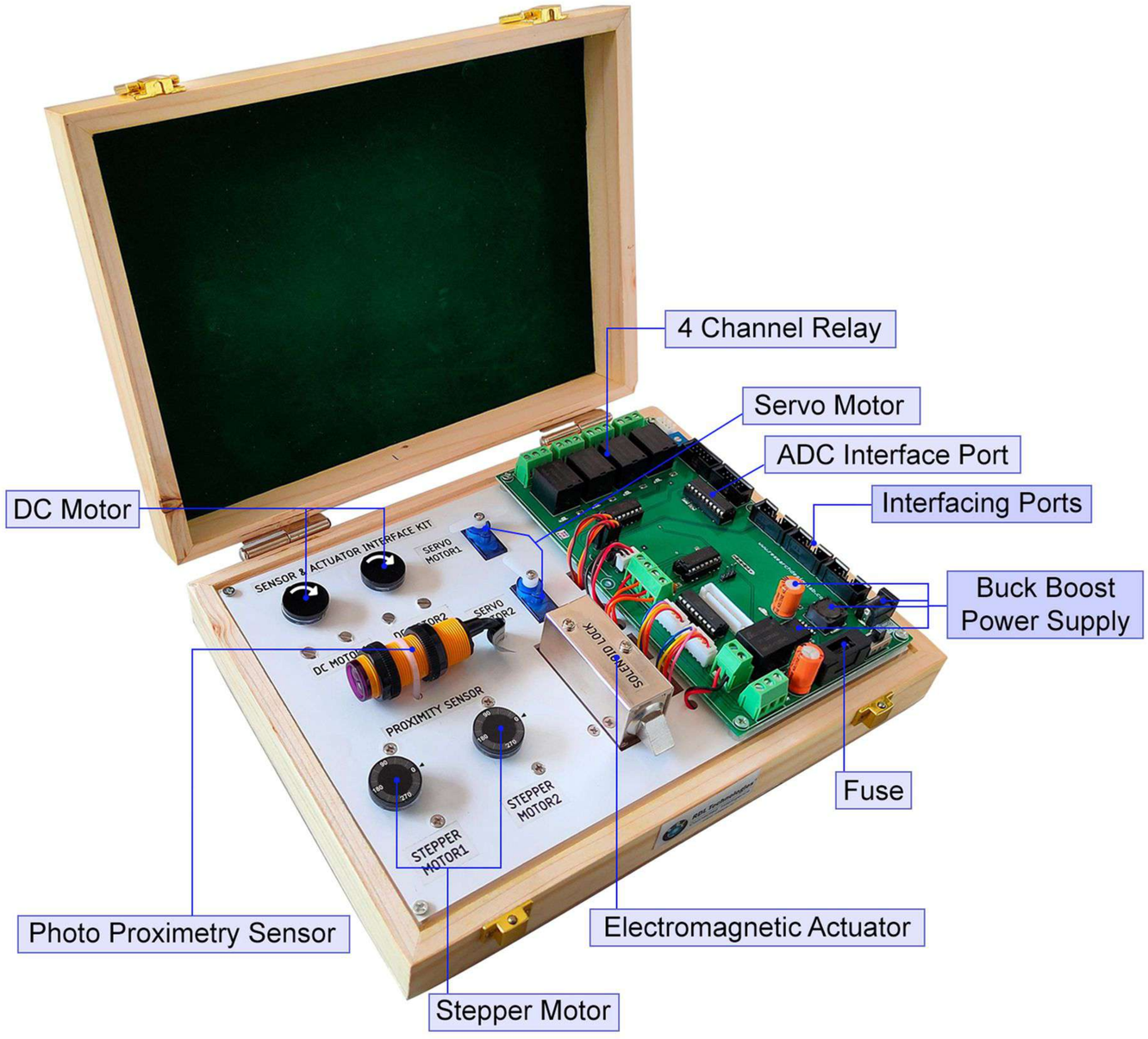
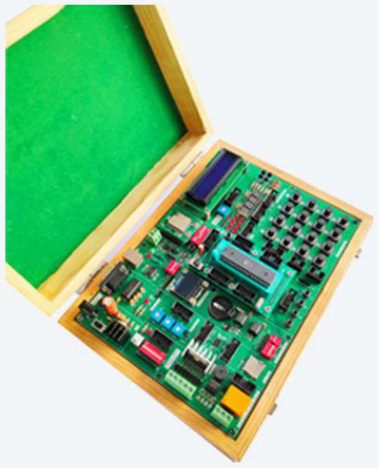
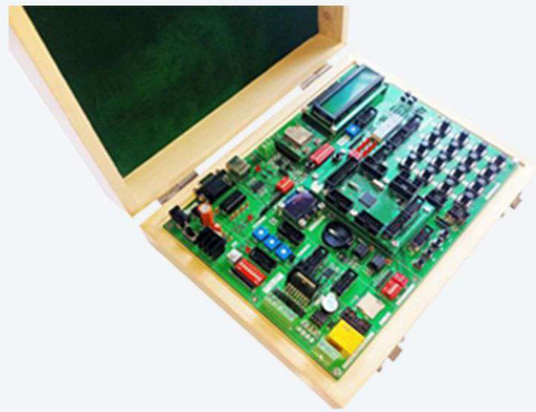


FREQUENTLY BROUGHT TOGETHER



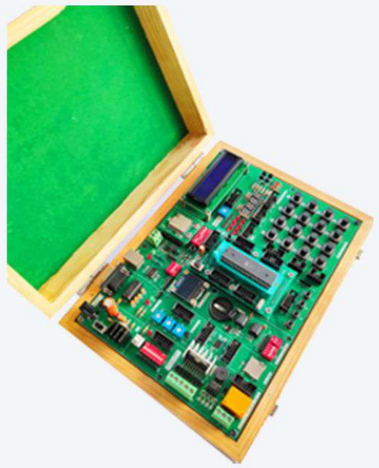
8051 Development Board - Trainer Kit
Model No. : RDL847

PIC Development Board- Trainer Kit
Model No. : RDL740



ARM Development Board - Trainer Kit
Model No. : RDL742

ESP32 IoT Development Trainer Kit
Model No. : RDL814



ATMEGA 16, 32, 64 Development Board-Trainer Kit
Model No. : RDL741

Biomedical Sensor Interface Trainer Kit
Model No. : RDL886

Note:

1. Unless otherwise specified, all parameters in this datasheet were measured at 25°C and 75% humidity.
2. All index testing procedures in this datasheet are based on our company's corporate standards.
3. We can offer product customization; please contact the sales team directly for more information.
4. Specifications are subject to change without prior notice:
5. For additional information on Product please refer to www.rdltech.in
5. Buy online @ www.researchdesignlab.com

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