(Photos are indicative only)

Programmable Electronic Modules

Features

- Comprehensive STEM education kit designed for learning **electronics, circuitry, automation, and programming** through hands-on experiments and project-based activities

- Modular, solderless design supporting **graphical and text-based programming**, multiple sensors and actuators, autonomous smart-device creation, and repeated assembly/disassembly for long-term educational use

Technical Specifications

Category	Specification
Controller Unit	Microcontroller / microcomputer compatible with Arduino / MicroBit / Raspberry Pi or similar platform (controller processor type to be specified); minimum 1 unit
Sensor Connectivity	Ability to connect minimum 4 sensors simultaneously, directly or via expansion board

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.

Follow Tescaglobal

worlddidac MEMBER   CE   ISO   ESC

Category	Specification
Programming Support	Graphical and/or text-based environments (Arduino IDE, Scratch, Python or equivalent)
Connection Method	Solderless connections using wires and breadboards
Power Supply	Rechargeable battery with charger; sufficient to operate controller + 4 actuators + 4 sensors simultaneously

Peripheral Modules

Module Type	Quantity
Bluetooth Module	≥ 1
Real-Time Clock (RTC) Module	≥ 1

Sensors – Temperature

Sensor	Quantity
Temperature Sensor Module	≥ 1
Temperature & Humidity Sensor Module	≥ 2

Sensors – Illumination

Sensor	Quantity
Photoresistor Module	≥ 1
Illumination Sensor Module	≥ 1

Sensors – Motion

Sensor	Quantity
Ball Tilt Sensor	≥ 1
Ball Tilt Sensor Module	≥ 1
Tilt Sensor Module with LED	≥ 2
IR Motion Sensor Module	≥ 2
3-Axis Acceleration Sensor Module	≥ 2
Line Tracking Sensor Module	≥ 1
Obstacle Avoidance Sensor Module	≥ 1

Sensors – Distance

Sensor	Quantity
Ultrasonic Distance Sensor	≥ 1

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.

Sensors – Gases & Environment

Sensor	Quantity
Analogue Gas Sensor	≥ 1
Soil Moisture Sensor	≥ 1
Vapour Sensor Module	≥ 1
Ultraviolet Sensor Module	≥ 1

Special Sensors

Sensor	Quantity
Flame Sensor Module	≥ 1
Impact Sensor Module	≥ 1
Detonation Sensor Module	≥ 1
Photo Interrupt Sensor Module	≥ 1
Reed Switch Sensor Module	≥ 1
Hall Magnetic Sensor Module	≥ 1

Actuators

Actuator	Specification	Quantity
Servo Drive	Rotation ≥ 180°, position control	Included
Power Servo Drive	Rotation ≥ 180°, torque ≥ 2 kg·cm	≥ 2
DC Motor	≤ 6 V supply	≥ 2
Motor Connection	Via motor drivers or expansion board	Mandatory

Input / Output Elements

Element	Quantity
Relay Module	≥ 2
Active Buzzer	≥ 1
Passive Buzzer	≥ 1
LED Modules (White, RGB, Traffic Light)	≥ 1 each
LEDs (Red, Green, Yellow, Blue)	≥ 5 each colour
7-Segment Display (1 digit)	≥ 1
7-Segment Display (4 digit)	≥ 1
8×8 LED Matrix	≥ 1
LCD Display (2×16)	≥ 1
Switch Buttons	≥ 4
Button Switch Module	≥ 1
Joystick Module	≥ 2

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.

Export Sales: +91-9829132777
India Sales: +91-9588842361

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension, Jaipur-302022, India.

info@tesca.in
www.**tescaglobal**.com

CIN: U29309RJ2011PTC035213
GSTIN: 08AADCT8576E1ZZ

Follow Tescaglobal

worlddidac MEMBER   CE   ISO   ESC

Element	Quantity
Potentiometer Module	≥ 1
IR Remote with Receiver	≥ 1
IR Transmitter Module	≥ 1
IR Receiver Module	≥ 1

Structural & Educational Requirements

Parameter	Specification
Structural Design	Enables creation of **autonomous smart devices** and complete project assemblies
Reusability	Supports repeated assembly and disassembly
Teaching Materials	Operating instructions for teachers and students included
Educational Content	List of **minimum 30 laboratory works** and **minimum 5 projects**
Documentation	Scanned copies of **at least 3 works/projects** provided
Project Coverage	Kit composition support **typical educational STEM projects**

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.

Follow Tescaglobal 🅕 🅞 🆃 🆔 🅟

worlddidac M E M B E R CE ISO ESC