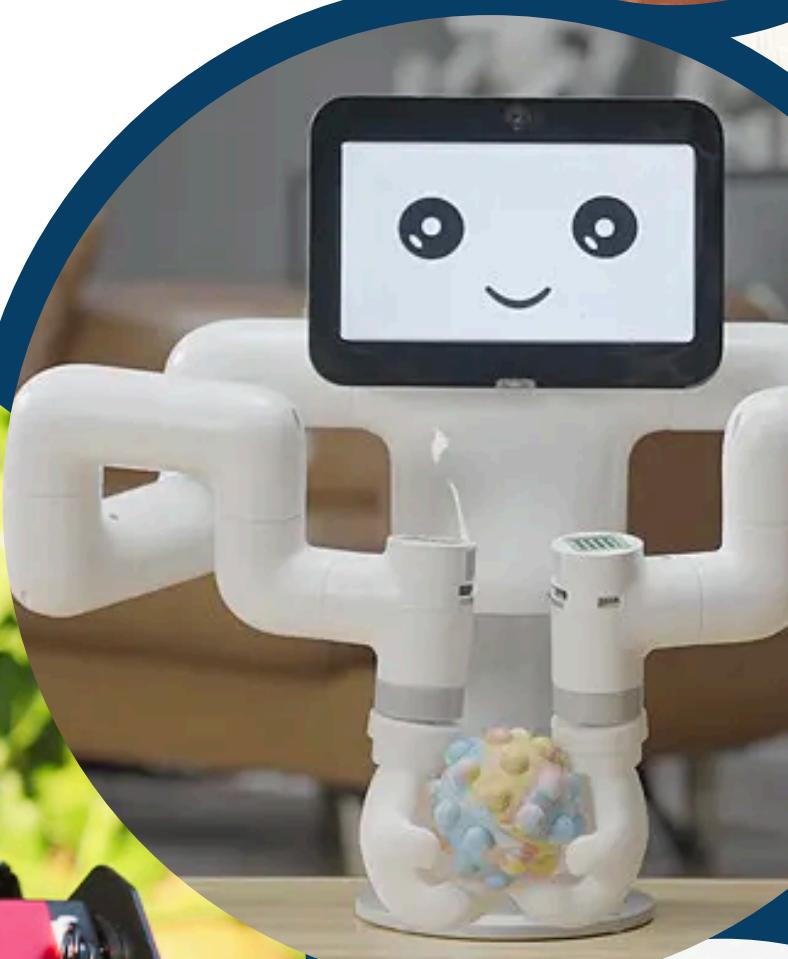


ROBOTICS LABORATORY SOLUTIONS





Introducing the IntelliVision Robotic Arm, specifically crafted for academic colleges to elevate student training and research endeavors. Designed to facilitate hands-on learning, the IntelliVision enables students to delve into the realms of machine vision, OpenCV, and inverse kinematics algorithms. From color block sorting to precise object tracking and stacking, students can explore a diverse range of applications, fostering a deeper understanding of robotics and artificial intelligence.

Features



Specifications

- Size: 277 × 177 × 428 mm
- Weight: 1200 g
- Material: Metal bracket
- Camera Resolution: 480P
- Robotic Arm (DOF): 6 DOF (5 DOF + gripper)
- Power Supply: 7.5V 6A DC adapter
- Hardware: Raspberry Pi 4B/5 + expansion board
- Software: PC software, iOS & Android App
- Payload (Grab Weight): > 500 g

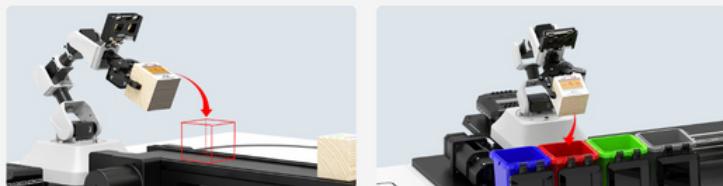
AUTONOMOUS AI SORTING PLATFORM

- AI Vision
- Autonomous Transportation
- Object Sorting
- Multi Robot Cooperation

AI transportation system is an educational demonstration robot kit integrating various AI elements. This system consists of multiple components, including an robot vision robot car, two vision robot arms, an electric conveyor belt, an electric sliding rail, a variety of sorting props, and a map. Leveraging AI vision capabilities, robot car and robot arms can effectively recognize different waste categories. Once waste category is identified, they collaborate with sliding rail and conveyor belt to transport and deposit objects into corresponding trash bins.

Features

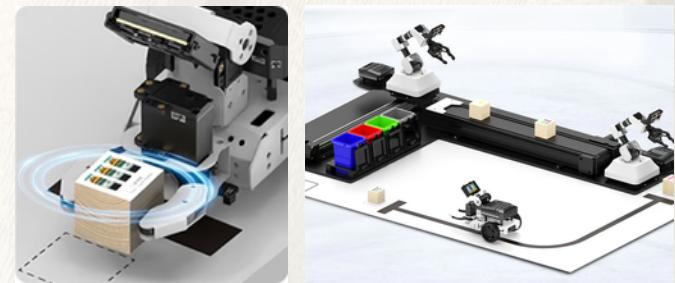
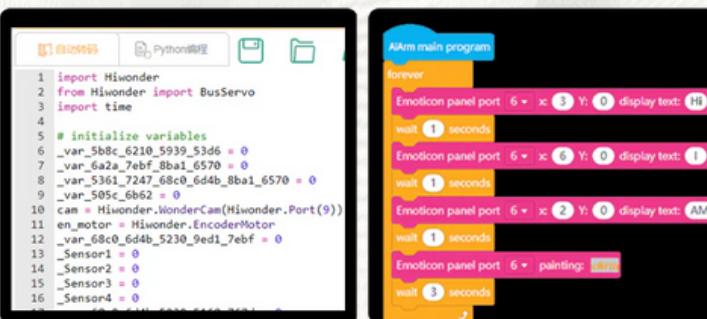
Cooperative Sorting



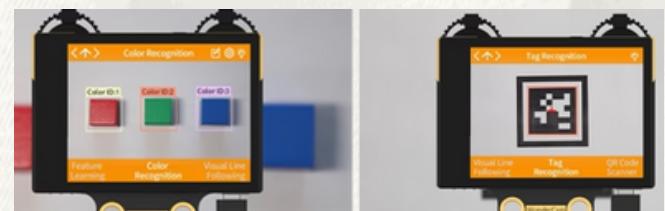
AI Intelligent Vision Module



Python & Scratch Programming



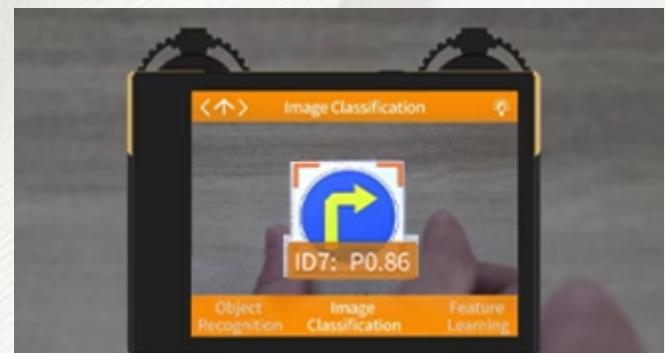
Color & Tag Recognition



Face Recognition



Road Sign Detection



Specifications

- Size: 285 × 162 × 440 mm
- Weight: 1.7 kg
- Material: Aluminium alloy + PC plastic
- Camera: WonderCam vision module
- Display: 2" IPS, 320 × 240 px (41 × 31 mm)
- DOF: 5 + 1
- Servos: LX-15D, HTD-20L, HX-06L (serial bus)
- Controller: CoreX Controller
- Software: PC Software(Scratch & Python)
- Control: PC-based

SELF BALANCING AI QUADRUPED ROBOT

The AI vision quadruped robot is driven by Raspberry Pi and built on the Robot Operating System (ROS). It is equipped with 8 stainless steel coreless servos, delivering high-precision performance, rapid rotation speed, and a robust torque of 8KG.cm. With an IMU sensor, the robot can detect its posture in real-time, enabling self-balancing capabilities.

Features

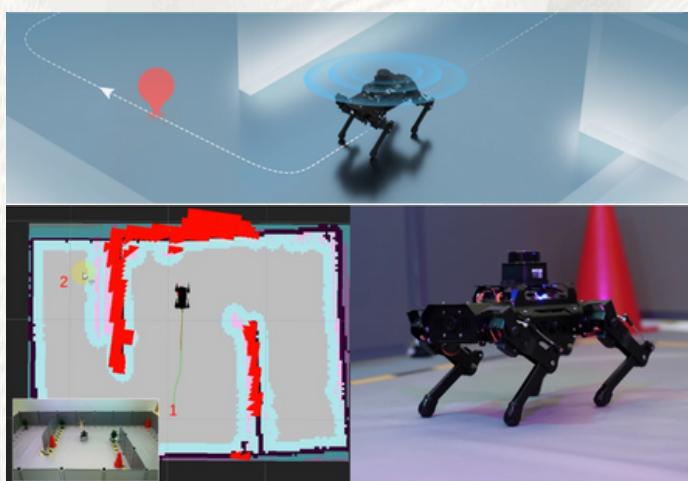
AI Vision Recognition



PID Control



TOF Lidar Function



Intelligent Self-balancing



Face & Tag Recognition



Inverse kinematics control



Specifications

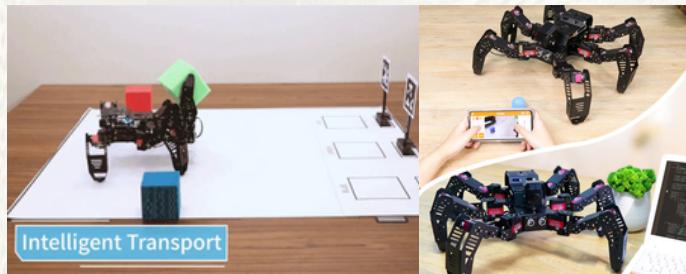
- Size: 226 × 149 × 190 mm
- Weight: 720 g
- Material: Aluminium alloy
- Resolution: 480P
- DOF: 8 DOF
- Power: 7.4 V 2200 mAh LiPo battery
- Hardware: Raspberry Pi 4B/5 + Expansion Board
- Software: PC, iOS & Android App
- Servo: HPS-0618SG Coreless Servo
- Control: PC, App, Wireless Handle

AI VISION HEXAPOD ROBOT

Meet Hexapod, a next-generation robotic platform powered by a 2.4 GHz quad-core Cortex-A76 CPU and programmed in Python. With its agile 6-legged bionic gait and intelligent 2DOF HD camera, Hexapod brings advanced robotics and AI vision to life. From facial recognition to intelligent transport simulations, it's designed for hands-on exploration of cutting-edge technology. Perfect for students, researchers, and innovators, Hexapod is more than just a robot — it's your gateway to mastering AI, robotics, and computer vision.

Features

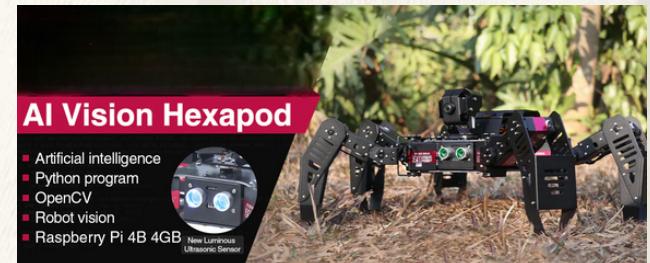
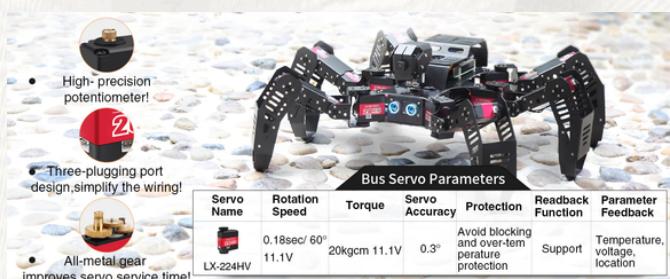
AI Vision Recognition



Inverse Kinematics & Gait Planning



Wireless control



Color Recognition & Tracking



Face Recognition



Obstacle Avoidance



Specifications

- Weight: 2.4 kg (body), 3.8 kg (shipping)
- Material: Metal + fiberglass
- Camera: 480P | Ultrasonic: 2-400 cm
- Rotation: 2 DOF | Legs: 6 × 3 DOF
- Battery: 11.1 V 2500 mAh, ~60 min runtime
- Control: Raspberry Pi 4B (4GB) + extension board, APP + PC software
- Comms: Wi-Fi & Ethernet
- Servos: LX-224HV HV, LFD-01M, anti-blocking type
- Control method: PC software & smartphone APP

DEXTEROUS ROBOTIC HAND

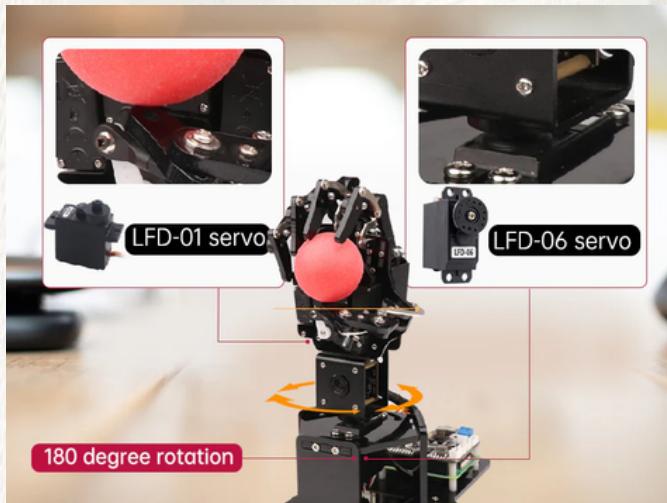
The Dextorous Robotic Arm, powered by Raspberry Pi 4B, is an AI smart vision robotic hand with an HD camera for color recognition, face detection, and more via OpenCV. It supports machine learning and model training using TensorFlow + Keras, and offers real-time image viewing through a mobile app or VNC remote desktop. Features include color sorting, face detection with HOG + SVM, and advanced image processing strategies for seamless AI-powered control.

Features

Various Control Methods



Anti-blocking Servo



Color Tracking



Face Detection



Python Programming



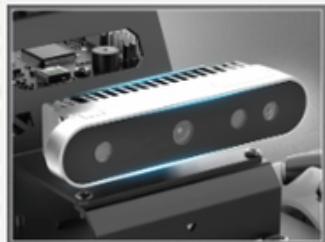
Specifications

- Size: 205 × 120 × 293 mm
- Weight: 0.56 kg
- Material: Metal + acrylic
- Camera: 480P, 180° pan-tilt
- Power: 6V 5A adaptor
- Hardware: Raspberry Pi 4B/5 + expansion board
- Software: PC software + mobile app
- Servos: 1.8 kg·cm & 6 kg·cm
- Control: PC / Mobile app

AI SELF DRIVING ROBOT CAR

A smart robot car powered by Raspberry Pi 5 and supports ROS2. It offers two chassis options: Mecanum-wheel and Ackermann-wheel. Equipped with high-speed closed-loop encoder motors, Lidar, a 3D depth camera, and large-torque servos, it delivers high-performance capabilities. These include SLAM mapping, path planning, vision recognition, and autonomous driving. With YOLOv5 model training,

Features



3D Depth Camera



Raspberry Pi 5 Controller



Color Recognition and Tracking



Target Tracking



QR Code Recognition



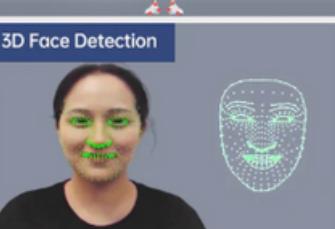
Vision Line Tracking



3D Detection



3D Face Detection



Autonomous Driving



Specifications

- Size: 212 × 171 × 147 mm (Depth Camera Version)
- Weight: 1.2 kg
- Chassis: Mecanum wheel chassis
- Motor: 310 metal gear motor
- Encoder: AB-phase high-accuracy quadrature encoder
- Material: Full-metal aluminum alloy chassis, anodized
- ROS Controller: RRC Lite + Raspberry Pi 5
- Control: App, wireless handle, PC
- Camera: Angstrong binocular 3D depth camera
- Lidar: Irobot STL-19P
- Battery: 7.4V 2200 mAh 20C LiPo
- OS: Raspberry Pi OS + Ubuntu 22.04 LTS + ROS2 Humble (Docker)
- Software: iOS / Android app
- Communication: WiFi / Ethernet
- Programming: Python, C, C++, JavaScript
- Storage: 64 GB TF card

DUAL ARM 13-AXIS COLLABORATIVE ROBOT

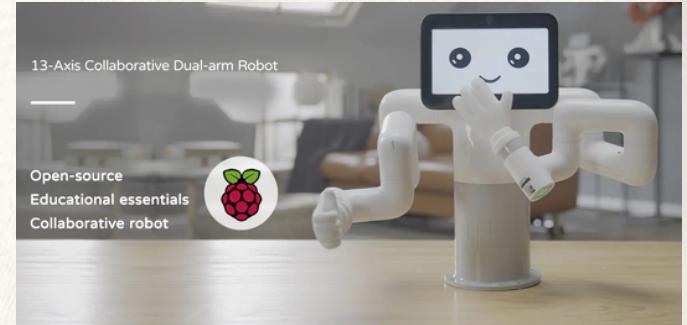
The Dual Arm Cobot is the first dual-arm robot powered by Raspberry Pi and designed as a 13-axis humanoid collaborative service robot. Each arm has a working radius of 280 mm with a maximum payload capacity of 250 g. It features a 7-inch interactive display, dual 2-megapixel HD cameras, and provides 3.3V I/O ports as well as Lego-compatible ports. The Dual Arm Cobot supports a range of accessories including suction pumps, grippers, and more, making it adaptable to diverse application needs.

Features

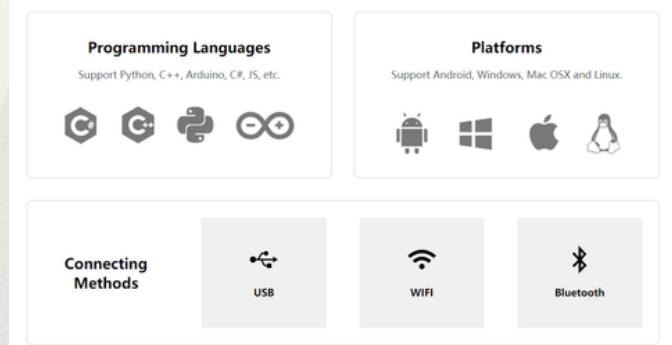
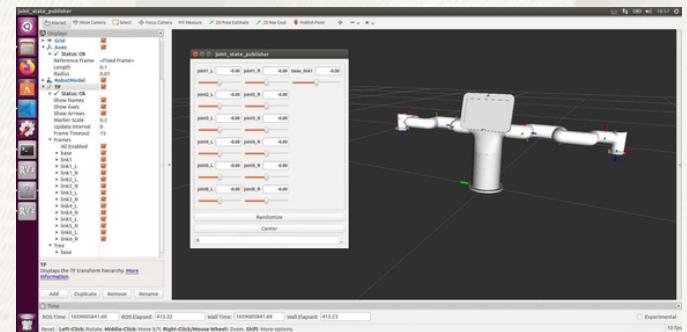
Creative Learning Journey



Dual Hand Collaboration



ROS Learning application



Specifications

- DOF: 13
- Payload (per arm): 250 g
- Working Radius: 280 mm
- Accuracy: ± 0.5 mm
- Weight: 2.75 kg
- Temp Range: $-5^{\circ}\text{C} \sim 45^{\circ}\text{C}$
- Power: 24 V DC
- Joint Range: J1-5: $\pm 165^{\circ}$, J6: $\pm 175^{\circ}$, Waist: $\pm 120^{\circ}$
- Max Speed: $160^{\circ}/\text{s}$
- Raspberry Pi 4B (BCM2711, 1.5 GHz, 2 GB RAM, WiFi, BT)
- ESP32 (240 MHz, 520 KB SRAM, 4 MB Flash)
- OS: Windows, Linux, macOS
- Programming: Python, ROS

INTUITIVE-X AI VISION FPV DRONE

The Intuitive-X AI Vision FPV Drone Kit is a programmable drone designed for enthusiasts, students, and hobbyists to learn robotics, coding, and electronics through hands-on assembly and programming. It features a modular hardware for easy upgrades, and support for multiple sensors, enabling advanced experimentation including camera integration. With open-source software support (ROS, Python), rich educational resources, and an intuitive smartphone control app, this kit provides a powerful platform to explore drone technology while fostering creativity and innovation.

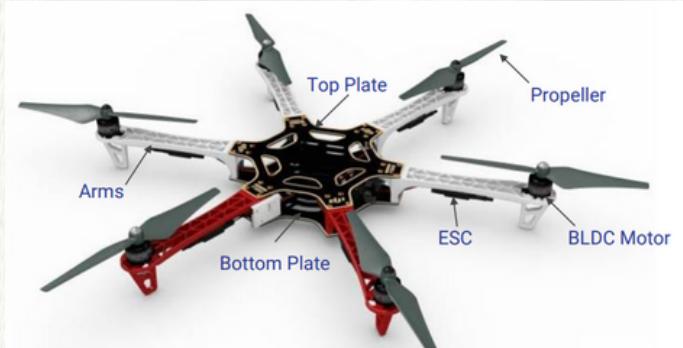
Features

- AI vision & FPV experimentation
- Programmable flight controller
- Navigation Planner
- Total Takeoff Weight 1.2Kg to 2.4 Kg
- Open-source (Python)
- Hands-on robotics & coding learning

AI Vision Capabilities



Modular Hardware Design



DJI F550 Heavy Duty Frame



Specifications

Model: Flame Wheel 550 (X550)

Frame Weight: 478g

Diagonal Wheelbase: 550mm

Takeoff Weight: 1200g ~ 2400g Recommended

Propeller: 10 x 3.8in Recommended Battery: 3S~4S

LiPo Recommended Motor: 22 x 12mm

Recommended ESC: 15A OPTO

Payload ~ 2000 g

Onboard Edge AI Controller : Arm Cortex

Landing Gear Height: 200 mm

Landing Gear Weight: 75 g

ESC Max Allowable Voltage: 17.4 V

ESC Max Allowable Current: 20 A

IntuitiveIoT™

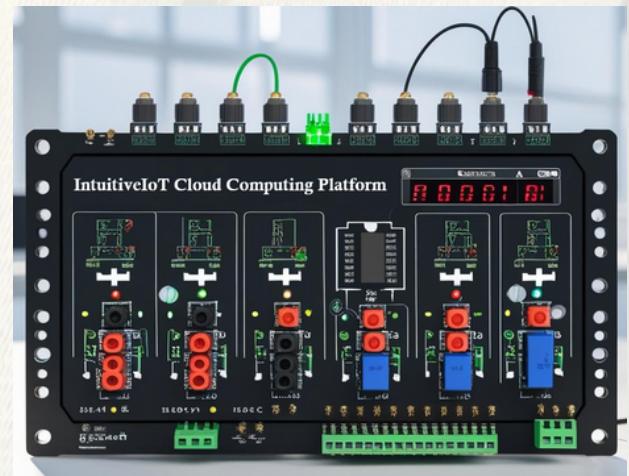
Comprehensive AI & IoT Powered Cloud Computing Platform

India's Most Advanced AI & IoT Powered Comprehensive Educational Cloud Computing Platform!!

Designed to bridge Academia-Industry 4.0, combining sensors, actuators, Raspberry Pi, Arduino, ESP32, and a secure IoT-AI cloud in one integrated solution it enables real-time IoT interfacing, cloud monitoring, actuator control, and AI-driven applications on AWS. With a sleek 21.5" FHD display, rich sensor-actuator suite, and \$200 AWS credits, it equips students with job-ready skills while empowering faculty with a cutting-edge teaching tool. A true must-have platform for every engineering college shaping future tech leaders.

Features

- All-in-One Learning Ecosystem** – sensors, actuators, Raspberry Pi, Arduino & ESP32 in one platform.
- Industry 4.0 Ready** – real-time IoT interfacing, monitoring, and actuator control via AWS Cloud.
- AI-Powered Applications** – build and deploy machine learning models with cloud integration.
- Full-Scale Displays** – 21.5" FHD screen + multiple onboard displays for immersive learning.
- Rich Sensor & Actuator Suite** – hands-on experimentation with real-world hardware.
- AWS Cloud Integration** – \$200 AWS credits for AI/IoT development.



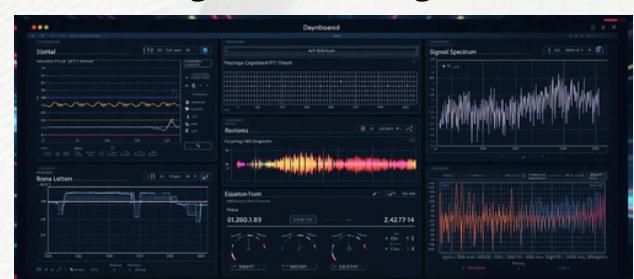
Versatile set of sensors, actuators, controllers



Interactive Dashboard



Powerful Signal Processing Suite



Industry Oriented AI & Cloud Platform



