

Hardware Development

QUICKGEN
TECHNOLOGIES



Our Philosophy

Quickgen Technologies is a full-stack software and product development firm established in 2019. Focused on speed, scalability, intelligent automation, and seamless user experience, the team delivers digital products that are powerful, intuitive, and built for the future.

Combining UX/UI Design, AI & Machine Learning, Cloud Engineering, and Software Development, QuickGen takes ideas from concept all the way through to deployment — and can step in at any stage in between.

Clients range from startups to enterprises across healthcare, fintech, SaaS, and consumer technology. This breadth of expertise shortens lead times, reduces costs, and drives innovation at every scale.

Product Services

Concept Generation & Sketching
Prototype & Model Making
Colours, Materials & Finishes
Manufacturing Sourcing
Supply & Logistics
Part Manufacturing Analysis
Full Production Assistance
Regulatory & Standards Compliance
Quality Management
Field Testing
Industrial Design

Hardware Services

Mechanical Design
PCB Design
Electrical Design
Embedded & Firmware Systems
Medical Device Design
Mechatronics
Vision Systems
Sensor Processing
Kinematic & Dynamic Modeling
Advanced Control Systems Robotics
C/C++ / Matlab

Software Services

UX/UI Design

Cloud Infrastructure

Design Research

API Development

Competitive Analysis

Mobile App Development

Brand Strategy

Web App Development

Prototyping & Wireframing

DevOps & CI/CD

Database Architecture

Design Systems

Security & Compliance

Motion & Interaction

Python / JavaScript / C++

Graphic Design

Data Pipelines & Analytics

AI and Machine Learning

Systems Architecture

User Testing



May
2026

150+

CLIENTS

300+

PROJECTS

08+

YEARS

Hardware **Portfolio**



Health Tech & Wearables

Wearable Golf GPS & MEMS Tracker

A sports performance enhancement device for tracking ball movements and optimizing play with real-time data insights.

Precise Ball Tracking

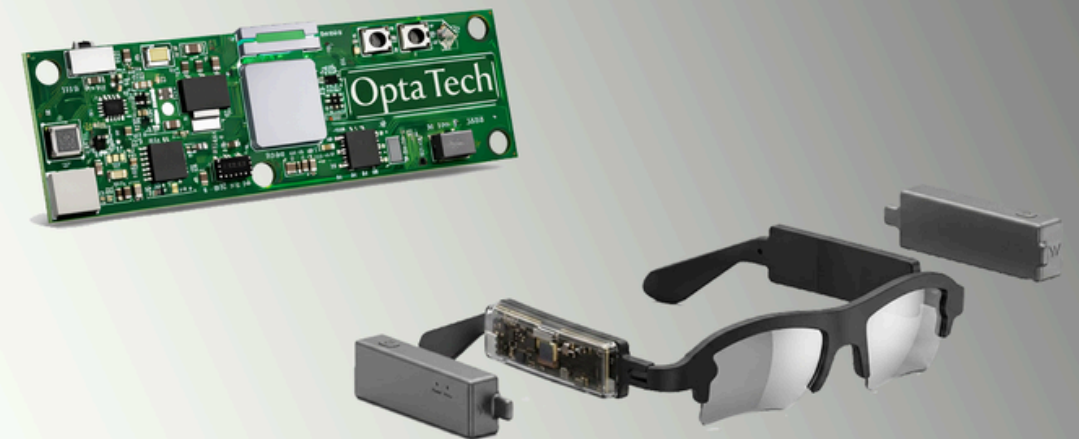
Monitors ball movement using advanced sensors.

Real-Time Feedback

Provides immediate insights during sports activities.

Data Integration

Syncs with mobile devices for performance analysis.



Wearable Golf GPS & MEMS Tracker

PRECISION, RIGHT WHERE YOU NEED IT:
Designed to track, guide, and enhance every moment on the course.

MicroClimate Communication System

A smart communication system designed for use with microclimate helmets, enabling clear communication in high-risk environments

Multi-User Connectivity

Supports communication across multiple users in one environment.

Enhanced Audio

High-quality audio even in noisy settings.

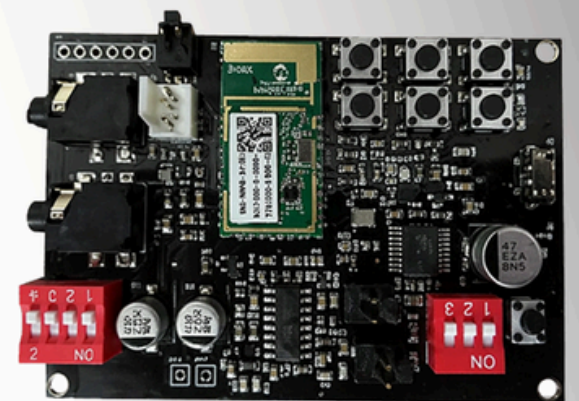
Smart Integration

Integrates seamlessly with existing systems for operational efficiency.

MicroClimate Communications System

CONNECTION, IN EVERY ENVIRONMENT:

Designed to communicate, enhance, and deliver hands-free, seamless audio for dynamic settings.



Smart Boxing Trainer

A wearable fitness tracking system designed to analyze body movements and punch force, ideal for fitness training and performance analysis.

Real-Time Tracking

Monitors punch force and body movements.

Cloud-Based Analytics

Provides performance insights for training.

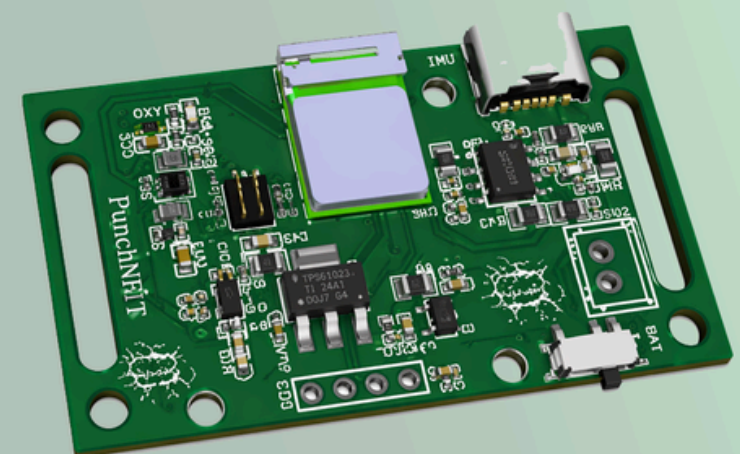
Wearable Design

Comfortable and unobtrusive during workouts.

Smart Boxing Trainer

POWER YOUR PUNCH, OPTIMIZE YOUR PERFORMANCE:

Track, analyze, and improve every move with real-time feedback and insights.



Veterinary Diagnostic Illumination

A high-intensity, portable light designed for medical and veterinary procedures, ensuring visibility during exams.

Focused Illumination

Provides precise lighting for medical procedures.

Portable and Battery-Powered

Ideal for field use and clinical environments.

Rugged Design

Sterilizable for safe, repeated use.

Veterinary Diagnostic Illumination

CLEAR VISIBILITY, PRECISE CARE:

Enhancing equine dental procedures with focused, portable, and durable lighting.



Smart Thermal Sensor

A contactless temperature sensor designed to detect changes in temperature, ideal for healthcare and safety monitoring.

Real-Time Monitoring

Tracks temperature fluctuations in real time.

Cloud Integration

Syncs data for easy analysis and tracking.

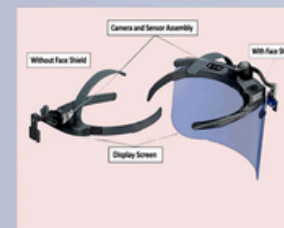
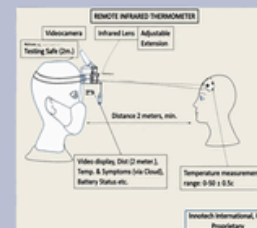
Non-Invasive

No physical contact required for temperature measurement.

Smart Thermal Sensor

CONTACTLESS HEALTH MONITOR:

Ensuring safety with real-time temperature detection and cloud integration—helping you monitor health at a safe distance.





IoT, Smart Devices & Consumer Electronics

AI Powered Coffee Brewer

An AI-powered coffee brewer that adjusts to your preferences for perfect coffee every time, with dual power compatibility.

AI Brewing

brewing methods for optimal flavor.

Dual Power Compatibility

Works on both 110V and 220V sources.

Efficient Brewing

Provides quick, consistent coffee without compromise.

AI-Powered Coffee Brewer

BREW, PERFECTED WITH INTELLIGENCE:
Engineered to customize, brew, and deliver a rich coffee experience at the touch of a button.



AI Powered Chat GPT-4 Speaker

speaker with integrated GPT-4 AI, offering natural conversation and speech recognition for intelligent home or office use.

Real-Time Speech Recognition

Accurately processes spoken language for responses.

GPT-4 AI Integration

Provides deep learning capabilities for conversations.

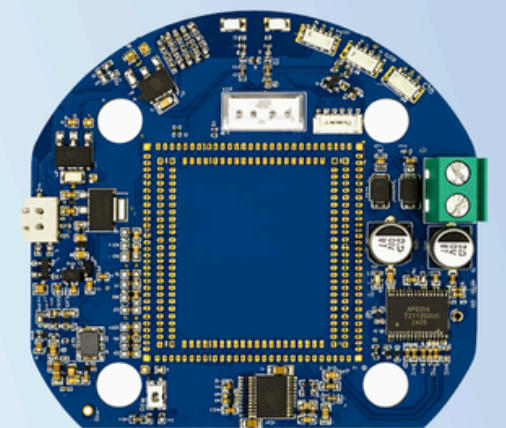
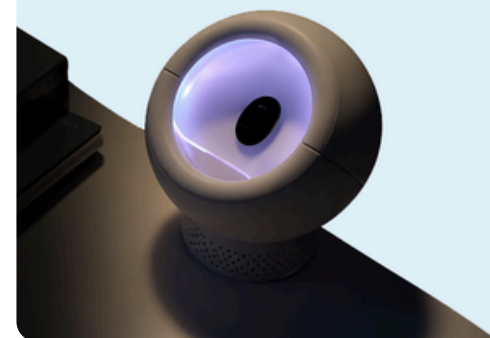
Cloud-Connected

Offers updates and enhanced functionality through cloud services.

AI-Powered ChatGPT 4 Speaker

CONVERSATIONS WITH INTELLIGENCE:

Designed to understand, respond, and engage with cutting-edge AI at the core.



Raspberry Pi Hat Design for Smart Vending Machine

A smart Raspberry Pi HAT designed to monitor and manage vending machines, enabling remote tracking of stock and payments.

Real-Time Monitoring

Tracks inventory, payments, and machine status.

IoT Connectivity

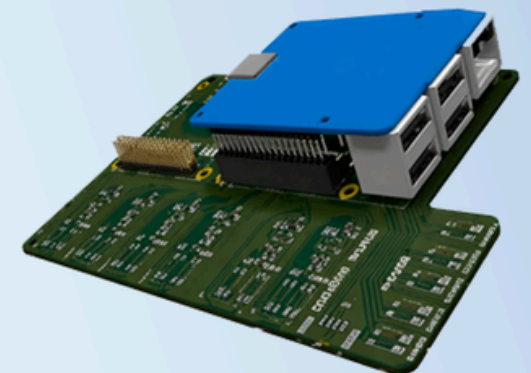
Syncs data with cloud platforms for seamless management.

Compact and Customizable

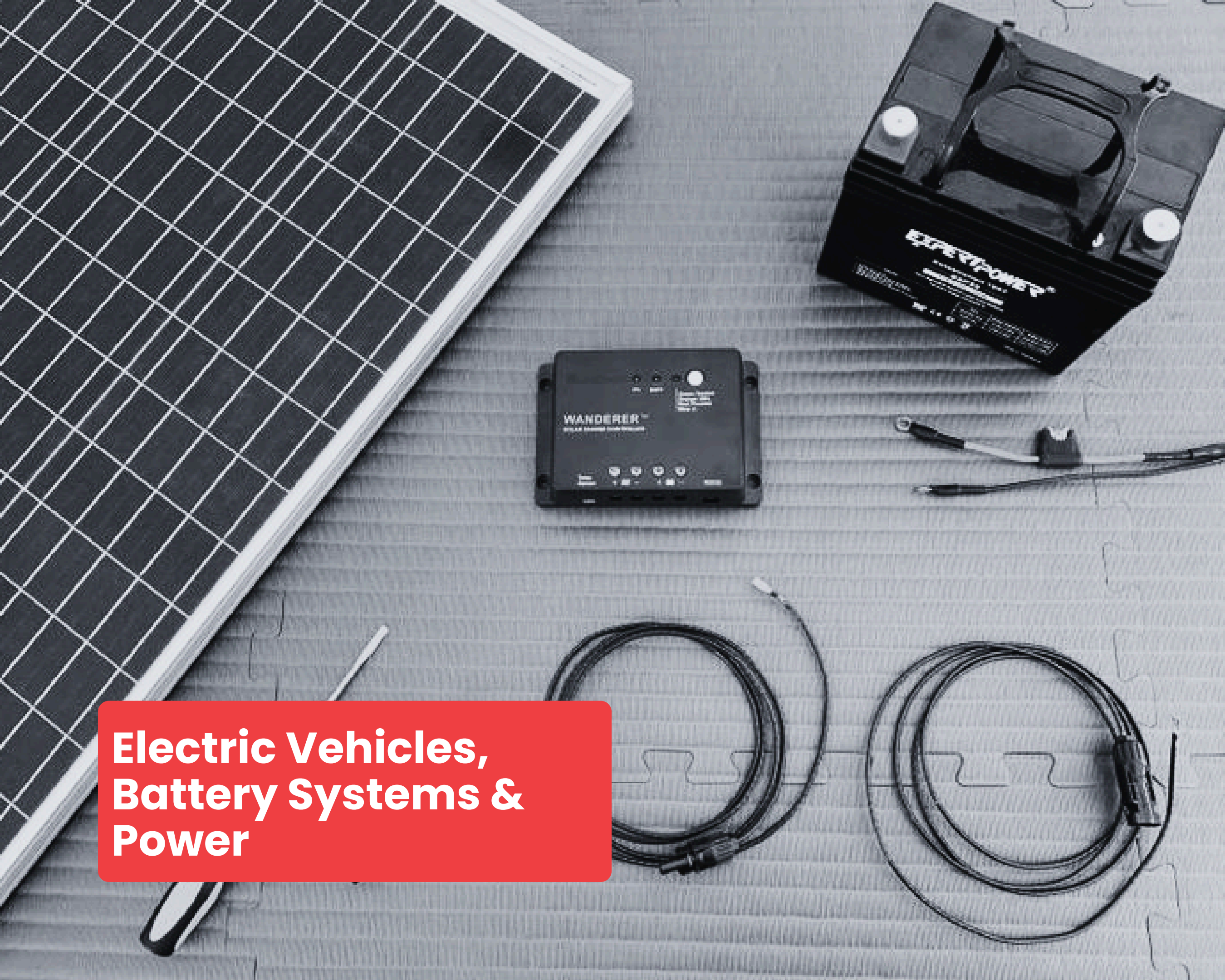
Easy to integrate with existing vending setups.

PI HAT For Vending Machine

VENDING, REDEFINED FOR CONVENIENCE:
Engineered to connect, deliver, and adapt with seamless, modern user experience.



**Electric Vehicles,
Battery Systems &
Power**



3-Phase 8KW Hybrid Inverter

A hybrid inverter that efficiently manages power distribution for residential or commercial use, optimizing energy from multiple sources. Ideal for chronic disease management and mental health monitoring.

High-Efficiency Conversion

Converts energy from solar, battery, and grid.

Smart Control

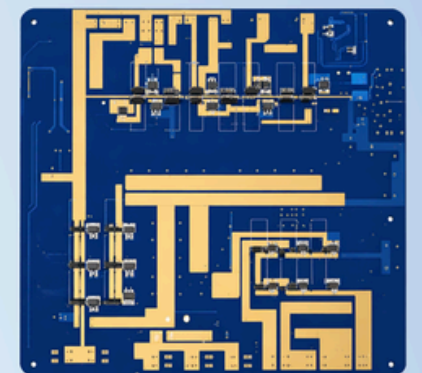
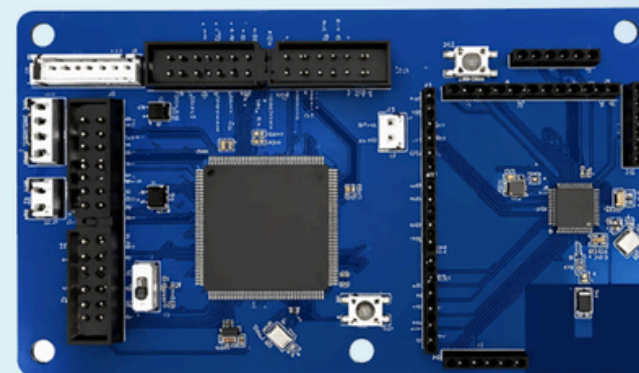
Real-time energy management via cloud connectivity.

MPPT Technology

Maximizes energy capture and storage efficiency.

3-Phase 8kW Hybrid Inverter

POWER, SEAMLESSLY DISTRIBUTED:
Designed to balance, manage, and deliver reliable energy for uninterrupted performance.



Design and Dev

OSmart BMS for EV

An advanced battery management system (BMS) designed for electric vehicles, ensuring efficient energy use and system performance.

Smart Monitoring

Tracks battery performance and provides real-time alerts.

Cloud Connectivity

Syncs with cloud platforms for better energy management.

Cell Balancing

Optimizes cell performance for long-term battery life.

Smart EV Battery Control Module

POWER. INTELLIGENTLY MANAGED:

Designed to monitor, protect, and optimize battery performance at every level.



Cell Balancing Circuit for EV Battery

A cost-effective cell balancing circuit designed to optimize battery performance for electric vehicles.

Cell Balancing

Ensures voltage consistency across all cells for better battery efficiency.

Cost-Effective

Provides an affordable solution for EV battery management.

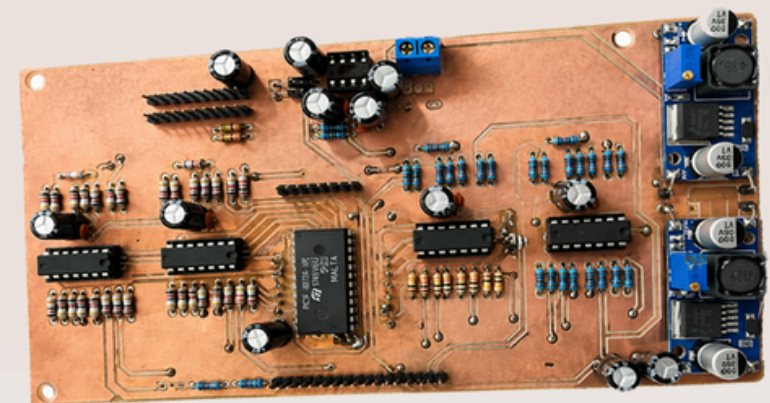
Compact Design

Easily integrates with existing EV systems.

Multi-Cell Battery Balancer

STABILITY, CELL BY CELL:

Designed to measure, equalize, and protect for efficient and reliable energy systems.



LiFePO Battery Charger with Flashlight Control

A multi-function LiFePO battery charger with an integrated flashlight, designed for outdoor and emergency use.

Dual Functionality

Charges batteries and provides light in one device.

Portable

Compact design for use in various environments.

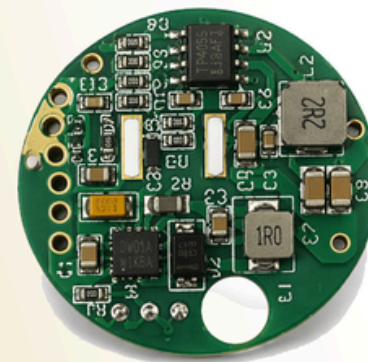
Quick Charging

Fast battery charging with additional flashlight control.

Smart Charge Module

POWER, BEYOND CHARGING:

Designed to charge, control, and illuminate in one compact, efficient system.



Vehicle ECU Board

An ECU board designed to optimize power management for electric vehicles, ensuring efficient energy distribution and system operation.

Power Distribution

Manages power flow across EV systems for maximum efficiency.

Advanced Monitoring

Tracks and monitors energy use in real time.

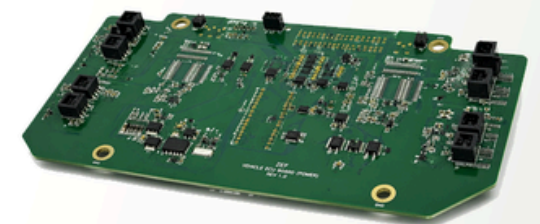
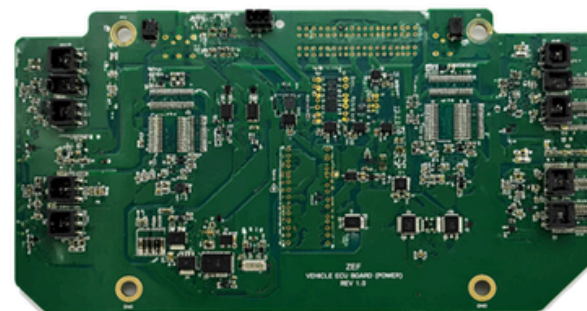
Flexible Integration

Easily integrates with various EV architectures.

Vehicle Power ECU Board

SMART POWER DISTRIBUTION:

Designed to monitor, distribute, and control energy with precision for electric vehicles.



Motion Tracker

A Bluetooth-based tracking device that provides real-time location updates for personnel and assets in large facilities.

Precise Location Tracking

Tracks personnel and assets via Bluetooth.

Low Power Consumption

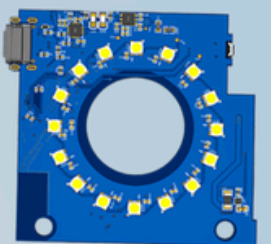
Designed for full-shift use with minimal power draw.

Instant Notifications

Alerts for missed items or personnel tasks.

Motion Monitor

MOTION, UNDERSTOOD IN REAL TIME:
Engineered to sense, analyze, and respond with intelligent visual feedback.



E PAPER

A portable Wi-Fi-enabled event display device powered by ESP32-S3, featuring a low-energy e-paper display for real-time event tracking.

Wireless Communication

Uses ESP32-S3 for Wi-Fi connectivity to send event-triggered HTTP requests and retrieve data.

Event Display System

Shows real-time event updates on a low-power e-paper display, ensuring high visibility with minimal energy consumption.

Custom PCB & Enclosure Design

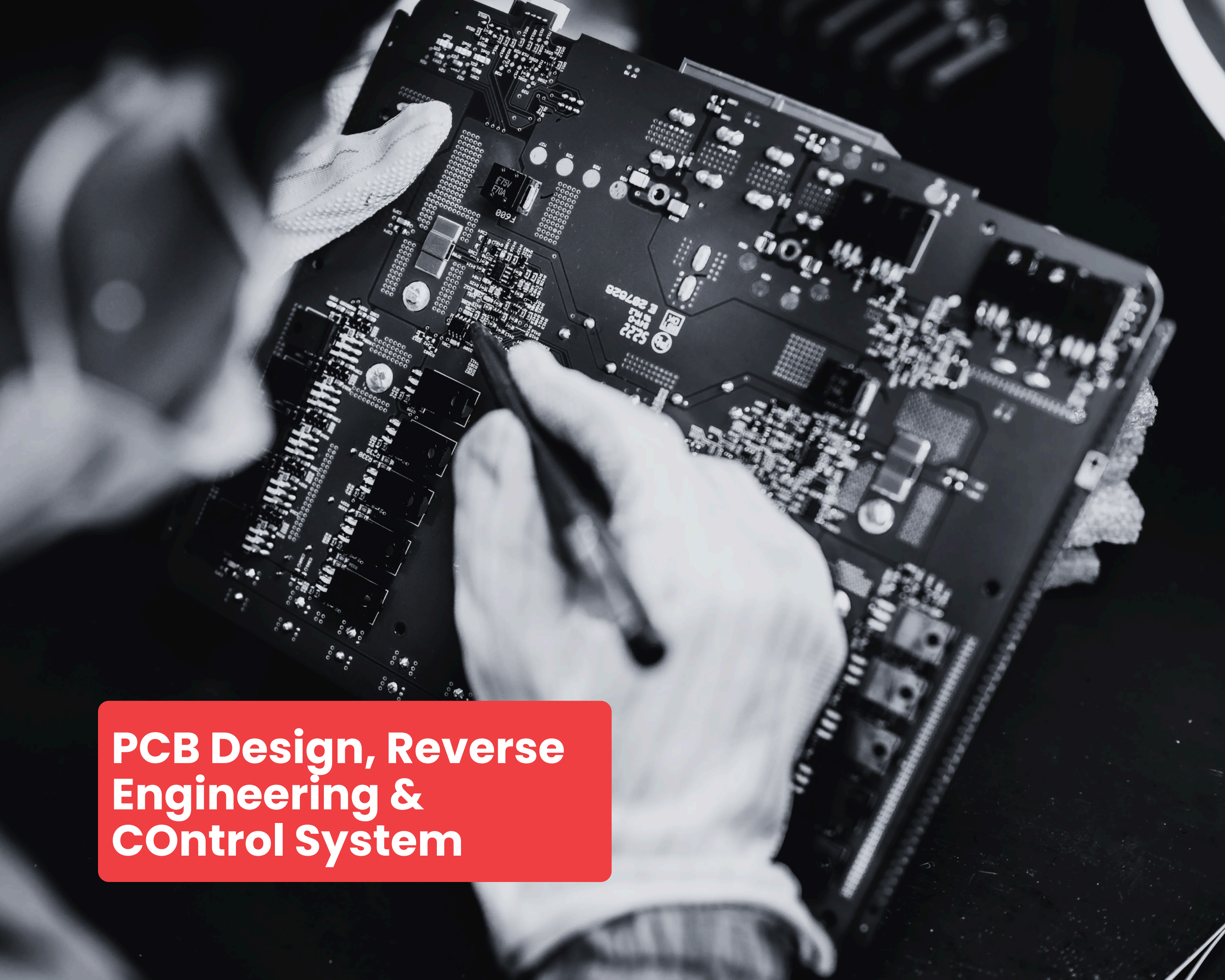
Features a compact PCB and a 3D-printable enclosure for durability and portability.

E Paper

EVENTS, DISPLAYED WITH CLARITY:

Designed to capture, update, and present real-time data with minimal power.





**PCB Design, Reverse
Engineering &
Control System**

HeatControl SCR Board

A high-efficiency SCR board designed to regulate heat management in electronics, ensuring stable performance under varying conditions.

Stable Temperature Control

Manages heat regulation for optimal system performance.

Real-Time Monitoring

Tracks temperature fluctuations to prevent overheating.

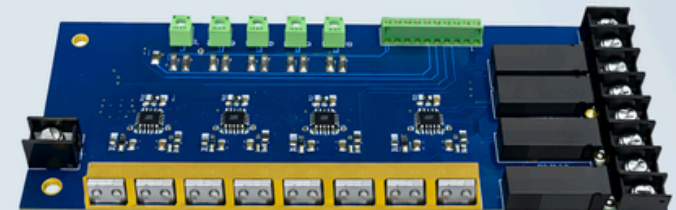
High-Power Applications

Suitable for use in demanding electronics and systems.

HeatControl SCR Board

POWER, PRECISELY CONTROLLED:

Engineered to regulate, monitor, and deliver reliable thermal performance at scale.



Muscle and Heart Rate Tracker

A wearable biometric monitoring device designed to collect real-time photoplethysmogram (PPG) data for continuous health analysis.

Real-Time Biometric Data

Monitors heart rate, oxygen levels, and other key metrics.

Non-Invasive Design

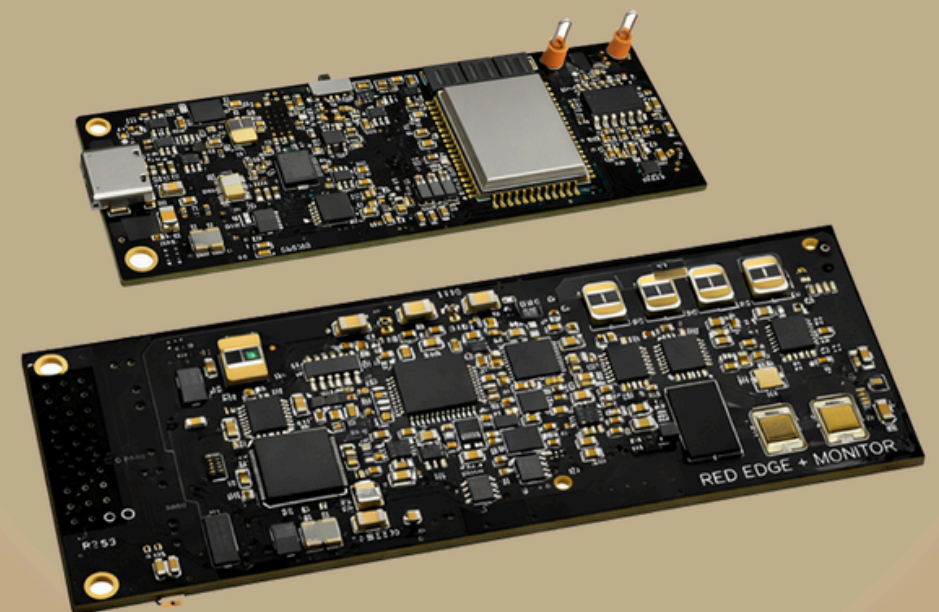
Comfortable, wearable for continuous monitoring.

Comprehensive Performance Analysis

Provides detailed health metrics for personal health management.

Muscle and Heart Rate Tracker

PERFORMANCE, MEASURED IN REAL TIME:
Engineered to track, analyze, and elevate every movement with precision.



Safestep Motor Control HAT

A motor control HAT designed to safely control stepper and servo motors with built-in safety features for smooth and reliable operation.

Dual Motor Control

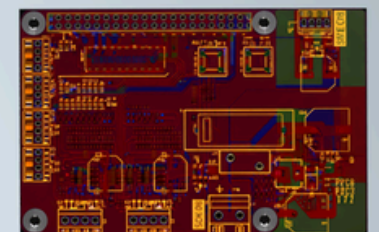
Supports both stepper and servo motors.

Built-in Safety Protections

Includes features for fault detection and error prevention.

Compact Design

Easy integration into custom robotics projects.



SafeStep Motor Control HAT

CONTROL WITH CONFIDENCE:

Engineered to drive, protect, and perform with precision and reliability.

Dual Layer BLC PCB

A dual-layer PCB designed for robotics control systems, providing enhanced functionality for stepper and servo motor controls.

Efficient Power Distribution

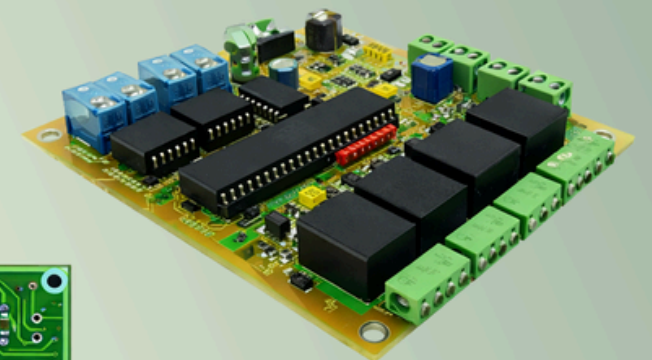
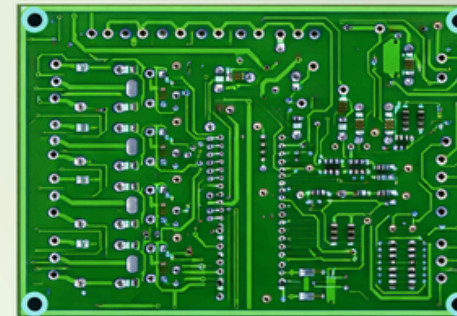
Optimized for robotics applications.

Enhanced Control

Provides stable motor control for robotics systems.

Compact Design

Space-efficient, dual-layer PCB for intricate designs.



Dual-Layer BLC PCB

CONTROL, ENGINEERED WITH PRECISION:
Designed to process, switch, and respond with reliability in every operation.

Smart Sensor Athletic Insoles

An advanced athletic performance device designed to enhance training through sand-based exercises, integrating multiple sensors for real-time data analysis.

Comprehensive Movement Tracking

Uses flexible PCBs integrated with IMUs, flex sensors, and piezoelectric sensors for detailed movement and impact tracking.

Robust Core System

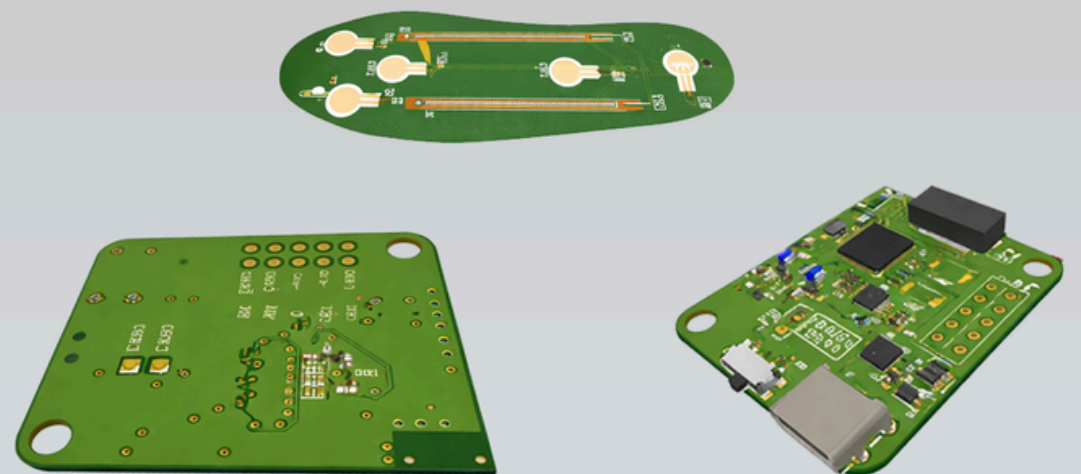
Built with a rigid PCB featuring an STM32 microcontroller, USB-C power supply, and RF antenna for seamless data transmission.

Actionable Insights

Provides performance-driven analytics to optimize training and improve athletic performance.

Smart Sensor Athletic Insoles

EVERY STEP, INTELLIGENTLY MEASURED:
Built to track, analyze, and enhance performance from the ground up.



Environmental Control Unit

A custom-built environmental control unit designed to maintain optimal growing conditions for mushroom harvesting.

Temperature & Humidity Control

Provides precise regulation of growing conditions.

Customizable Environment

Adjusts to different types of mushrooms and growth phases.

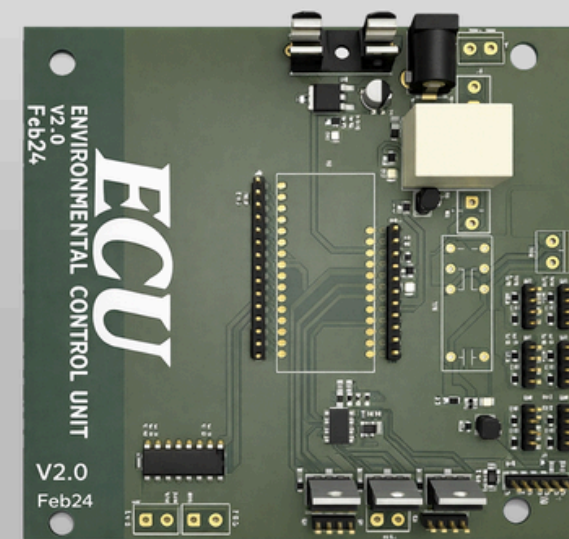
Integrated System

Manages all aspects of environmental control for consistent results.

Environmental Controller Unit

PRECISION CONTROL, PERFECTED:

The intelligent system that regulates, stabilizes, and optimizes growth environments.



USB C 4 Layer PCB

A high-performance USB C PCB designed for compact, high-speed data transmission with four layers for superior signal integrity.

High-Component Density

Maximizes space for high-performance components.

Precision PCB Design

Ensures accuracy in signal routing for optimal functionality.

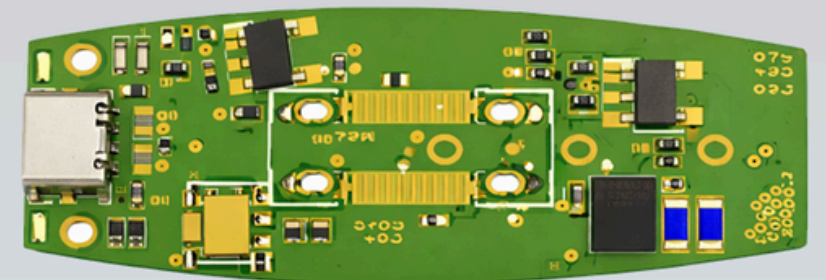
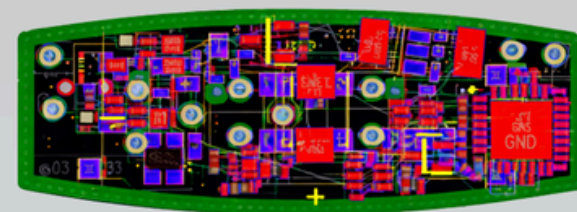
Rapid Development

Designed for fast prototyping and custom applications.

USB-C 4 LAYER PCB

PRECISION AT EVERY LAYER:

Engineered to place, route, and deliver high-density performance at speed.





**Robotics, Drones &
Autonomous Systems**

Autonomous Terrain Rover

An autonomous vehicle system designed for navigation and movement in complex environments, capable of waypoints navigation.

Autonomous Navigation

Uses GPS and IMU sensors for self-guided movement.

Versatile Design

Ideal for a variety of terrain and environments.

Actionable Insights

Provides real-time data on the vehicle's location and path.



Autonomous Terrain Rover

NAVIGATION BEYOND LIMITS:

Engineered to move, adapt, and execute autonomous missions in any terrain.

Surveillance Quadcopters

A quadcopter designed for surveillance applications, with high-performance flight capabilities and real-time video feed.

Advanced Camera

Equipped with high-definition cameras for surveillance.

Stable Flight Performance

Ensures steady and controlled flights during operations.

Extended Battery Life

Allows prolonged use for continuous surveillance.



Surveillance Quadcopters

VISION THAT STAYS AHEAD:

Built to capture, monitor, and respond with precision in every mission.

ESP Palm Sized Drone

A compact spy drone designed for real-time video streaming and surveillance, offering both portability and advanced features.

Real-Time Video Streaming

Provides live feeds for surveillance purposes.

Stable Flight

Offers stable and smooth flight performance with enhanced battery life.

Palm-Sized

Ultra-compact for easy portability and discreet operation.



ESP Palm Sized Drone

INTELLIGENCE IN THE PALM OF YOUR HAND:

Designed to capture, stream, and control with precision anytime, anywhere.

Got Questions ? Connect Now



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