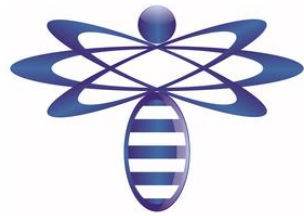


Solvaytech

www.solvaytech.com.tr





About Us

Our company is an innovative R&D firm developing electric vehicles, AI-based systems, and IoT technologies. Our eco-friendly projects include the L6e-class electric vehicle CERYAN, the Smart Bee Monitoring System, and the Smart Agriculture Drone, all of which are powered by solar panels. We shape the future by integrating technology with sustainable solutions.

Mission

Our company aims to develop innovative technologies to provide sustainable and efficient solutions. We focus on setting the future standards of mobility and production through electric vehicles, AI-powered systems, and engineering products. Our goal is to make a difference in the industry with quality, technology, and eco-friendly solutions.

VALUE



Innovation and Technology Focus

Our company is focused on developing **innovative technologies** in the industry through **electric vehicles, AI-powered systems, and IoT solutions**. With continuous research and development activities, we closely follow **cutting-edge technologies** in both local and global markets.



Sustainability and Environmental Awareness

In our projects, we adopt **eco-friendly approaches**, focusing on **reducing the carbon footprint** and contributing to the **circular economy**. By harnessing **solar energy**, we power our **electric vehicles** and **recycling-focused projects**, making them strong examples of our commitment to sustainability.



Solution-Oriented Approach and Collaboration

We provide **customized solutions** tailored to the needs of various sectors such as **agriculture, mobility, and energy management**. Our **TÜBİTAK-supported projects** and **industry-academia collaborations** demonstrate our **solution-oriented approach** and ability to collaborate effectively with diverse stakeholders.



Goals

01

Developing Sustainable
and Innovative Mobility
Solutions

02

Expanding Smart
Technologies in
Agriculture and Industry

03

Technology Export and
Global Collaborations



7 ERİŞİLEBİLİR VE
TEMİZ ENERJİ



9 SANAYİ, YENİLİKÇİLİK
VE ALTYAPI



11 SÜRDÜRÜLEBİLİR
ŞEHİRLER VE
TOPLULUKLAR



13 İKLİM
DEĞİŞİKLİĞİYLE
MÜCADELE





Our Industrial Projects

- 6 kW Onboard Multi-Port Integrated Converter (TÜBİTAK TEYDEB - 7220751)
- Keeping Beehives Healthy with Artificial Intelligence (TÜBİTAK TEYDEB - 7230967)

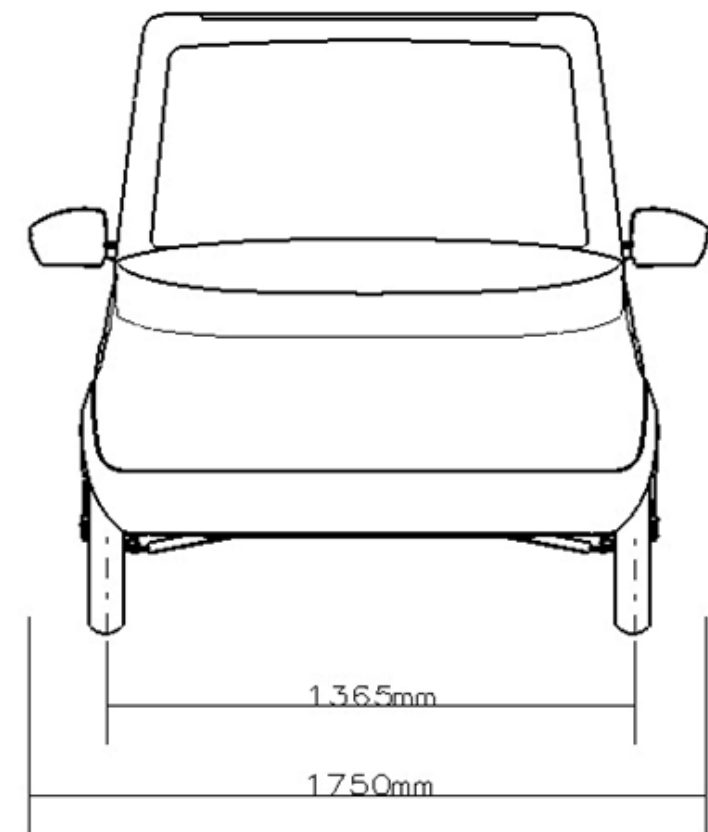
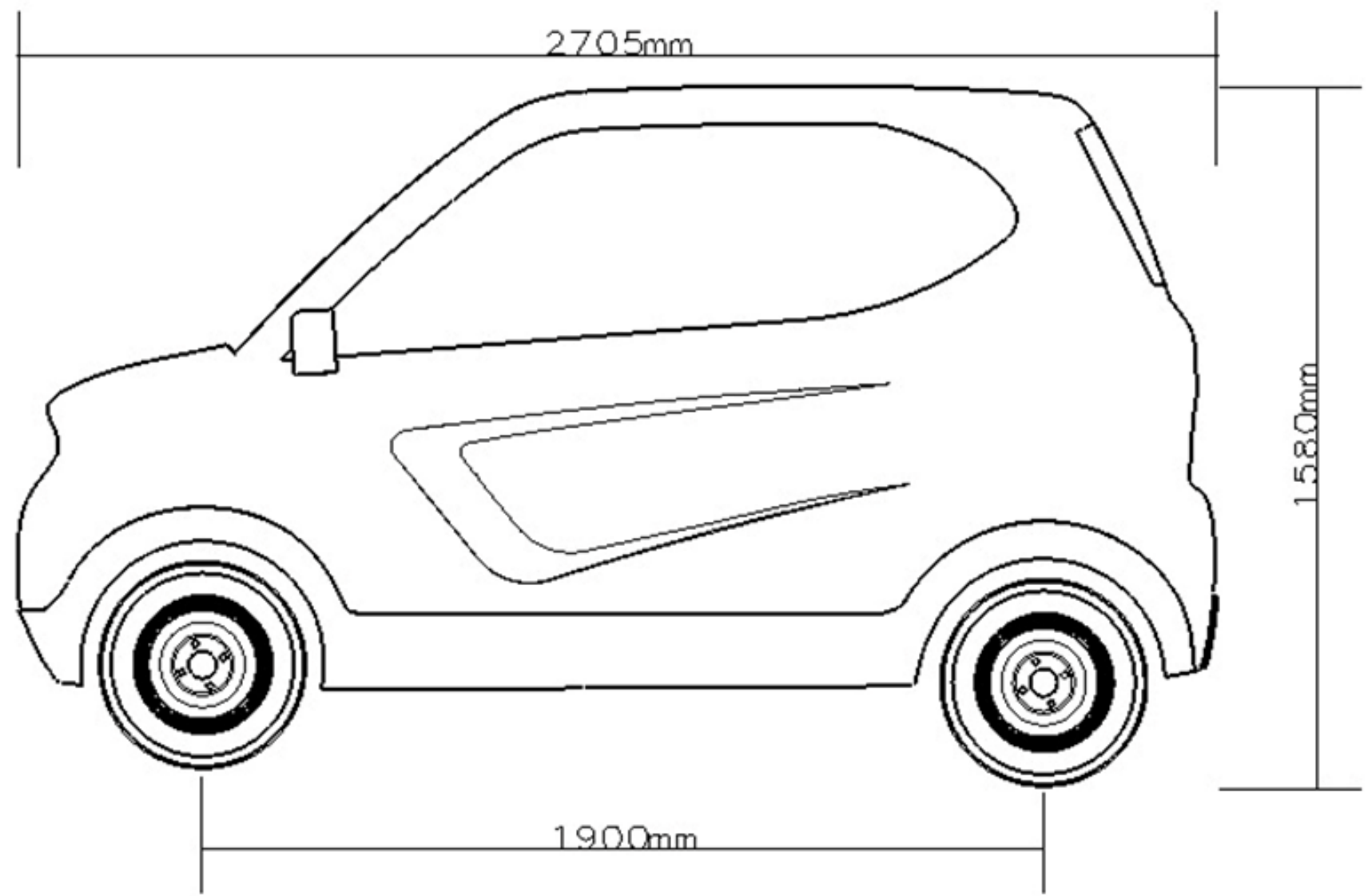
Our Academic Projects

- AI-Based PMSM Motor Driver Design (TÜBİTAK BİDEB)



CERYAN

- CERYAN: Urban Mobility Solution (L6e Class)
- Designed to meet the need for sustainable, zero-emission mobility, reducing the carbon footprint.
- A new mobility concept that requires less parking space and provides more room for people in urban areas.
- Specifications:
 - Speed: 45 km/h
 - Range: 60 km - 100 km (Removable 4-Pack Battery System)
 - Solar Panel: 150W
 - Weight: Approximately 450 kg
 - Consumption: 4 kWh/100 km



CERYAN



CERYAN

EQUIPMENT / FUNCTION

- Multi-Media: MP3 + Bluetooth
- USB charger / 3 USB ports for mobile charging
- Foot pedals
- LED headlights and turn signals
- Smartphone holder and USB
- Heating and ventilation
- Manual handbrake
- Driving mode selection D/N/R
- Driver seat adjustment lever
- Storage compartments in side doors
- Rear lighting: LED for position, stop, turn, and reverse lights
- Brake lights
- Reading light
- Sun visor2 driving modes: ECO – SPORT
- High seating position
- Front headlights with 3 functions FULL LED / Rear lights FULL LED
- LED daytime running lights
- Energy recovery electric braking system
- Digital total trip and partial trip odometer
- Reverse lights (2)Grab handles (two)
- Cup holder and coin holder in glove compartment



CERYAN

DASHBOARD

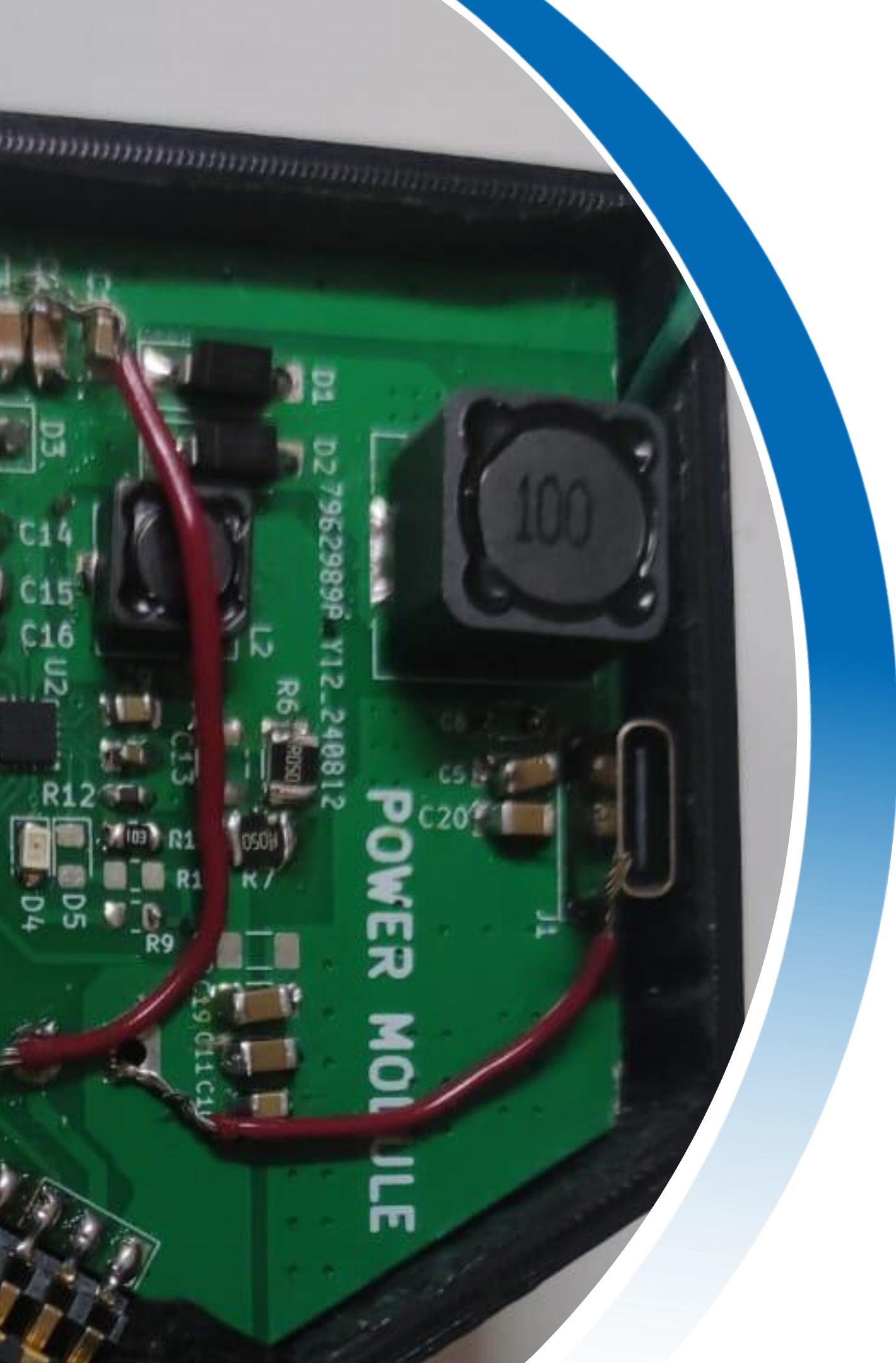
- 7-inch screen
- 7-inch screen with Bluetooth feature for music and phone connectivity
- Adjustable backlighting for the dashboard panel
- Touchscreen
- View energy consumption
- View solar energy gain
- Switch between screens
- Smart Dashboard Panel / Current speed indicator / Vehicle mileage display / Battery capacity indicator
- AI-Based Battery Health and Remaining Lifetime Estimator



Microinverter

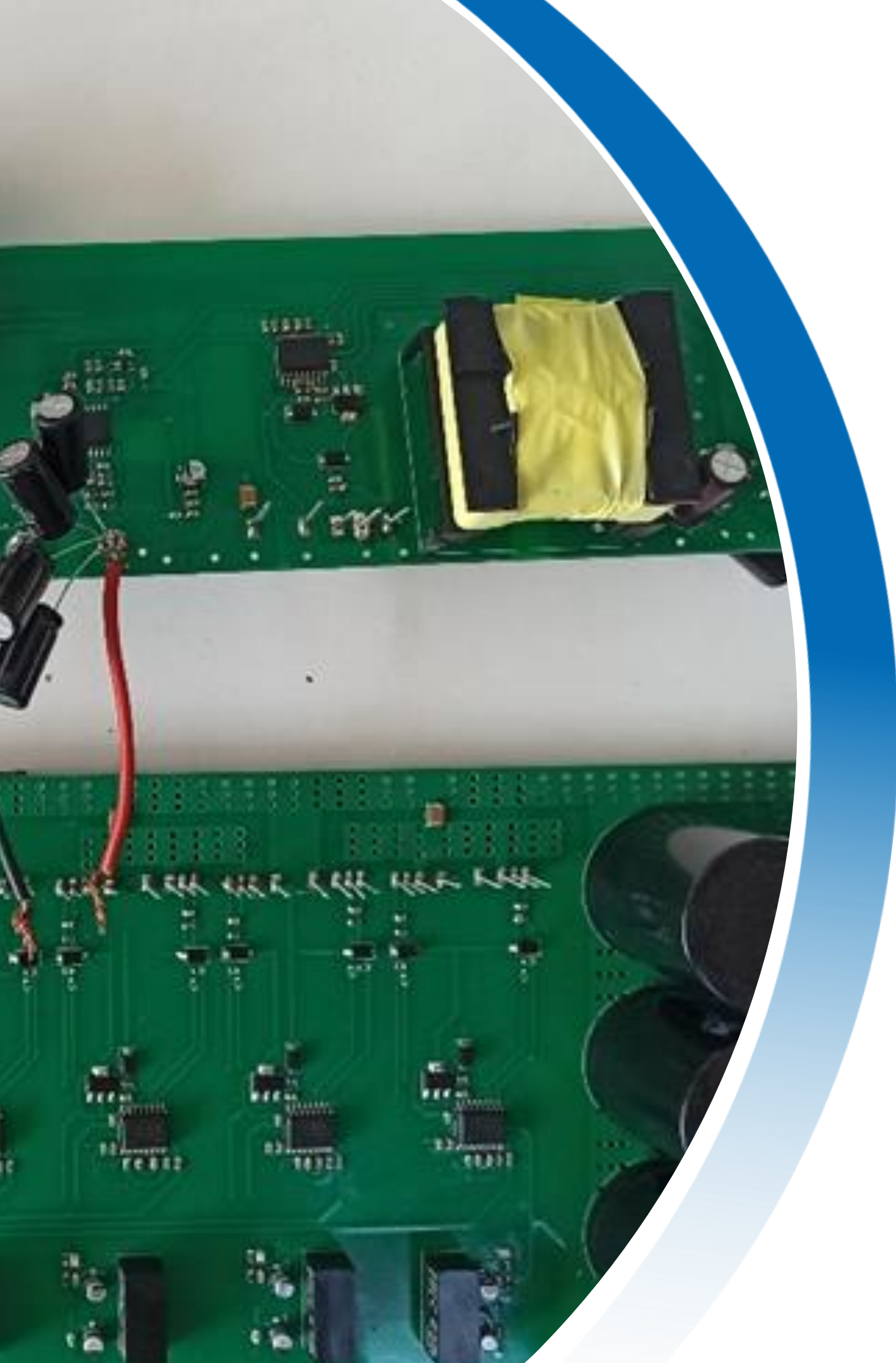
Power and Electrical Specifications

- **40-60V PV Voltage Range**
- **MPPT Algorithm** optimized for **shade sensitivity**
- **Low EMI/EMC** for minimal electromagnetic interference
- **24V Nominal Battery Voltage**
- **220V AC, 600VA Output**
- **Overcurrent Protection** for system safety
- **Operating Temperature: -10°C to 90°C**



Mobile Power Module

- **Independent Power Supply:** Ensures continuous operation of bee monitoring IoT devices, making it an ideal solution for remote monitoring where uninterrupted power is required.
- **Renewable Energy Utilization:** Solar panel and lithium battery integration provide an eco-friendly and sustainable energy source, reducing the carbon footprint and promoting environmental awareness.
- **Easy Installation & Portability:** As a mobile and independent power module, it allows for easy transport and deployment in different locations, offering a significant advantage for beekeeping and other agricultural applications.



ENERGY MANAGEMENT UNIT FOR LIGHT ELECTRICAL VEHICLES

The **multi-port integrated converter** houses multiple **DC-DC converters**, providing **reliable energy conversion** with a **wide voltage range** and **high power capacity**. It is ideal for systems that integrate multiple energy sources such as **solar panels**, **hydrogen fuel cells**, **lithium battery systems**, and **regenerative electric motors**.

Specifications:

- **Output Power:** 6 kW
- **Efficiency:** Over 90%
- **Operating Temperature Range:** -40°C to +85°C, designed for industrial environments



ARTIFICIAL INTELLIGENCE BASED BEE MONITORING SYSTEM

ESP32-Based IoT Device for Beehive Monitoring

Our **ESP32-based IoT device** monitors **critical parameters in beehives**, enabling **remote data collection** for **beekeeping and environmental monitoring projects**. The collected data is sent to the **cloud**, where an **AI model** analyzes it and provides **real-time hive health updates** to the end user via a **mobile application**.

Technical Specifications:

- **Hardware:** ESP32 chip with **integrated sensors**
- **Measured Data:** **Temperature, humidity, and sound**
- **Connectivity:** **Wi-Fi/Bluetooth** for wireless data transmission
- **Battery Life:** **Low power consumption** for extended operation
- **Data Storage:** Cloud-based **long-term data storage**

Advantages:

- **Data Analytics:** Real-time tracking and analysis for **bee health monitoring**
- **Flexibility:** Can be adapted for various **monitoring applications**
- **Low Power Consumption:** **Solar panel-powered** for sustainable operation

Application Areas:

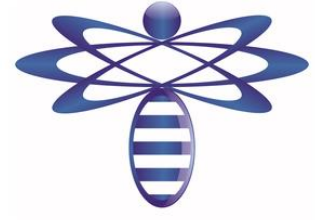
- **Agricultural monitoring**
- **Environmental sciences**
- **Smart farming projects**
- **Livestock applications**

Our Vision

To become a **leading company** in **mobility and advanced technology** both in **Turkey and worldwide**, developing **innovative solutions** that drive the industry through **smart and eco-friendly production processes**.

By combining **sustainability and high performance** across a wide spectrum—from **electric vehicle technologies to AI-based applications**—we aim to establish a **strong global brand** in the market.





Solvaytech

You're very welcome!

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