



# EVSE Board

Reliable Next-Generation AC Slow Charger Control Board

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# Reliable Standards-Based Solution

The Pazzk EVSE board is a core control board for AC slow EV chargers, preloaded with commercial firmware. It integrates IEC 61851 charging control, ISO 15118 communication, metering, and networking functions in a single solution.

By supporting both global standards like OCPP and region-specific regulatory requirements (such as Korea’s fire-prevention charger certification), it ensures compliance worldwide.

The board is designed to detect and recover from critical failures—such as communication loss or system errors—that can directly affect revenue. All stored data is encrypted, and a Root of Trust (RoT)–based architecture combined with secure production processes ensures the level of security demanded by next-generation charging infrastructure.

Charger manufacturers, CPOs, and certification bodies can adopt the Pazzk EVSE board immediately for function verification, commercial charger development, and stable service operation.



## Fast Time-to-Market

Preloaded with commercial firmware and supporting IEC 61851, OCPP, and ISO 15118, the board enables immediate manufacturing and faster market entry.



## Stability & Security

Offline charging ensures continuity during communication failures, while Root of Trust, Secure Boot, and certificate-based authentication deliver industry-grade security.



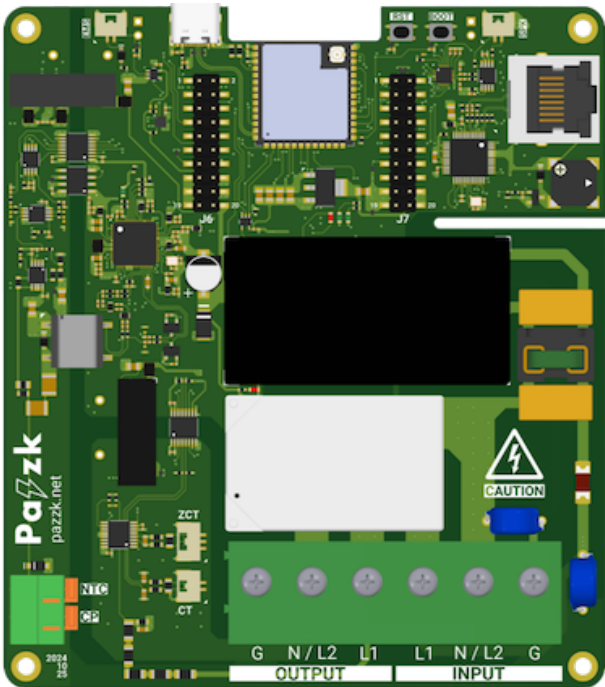
## Compliance & Future-Ready

Designed to meet both global standards and region-specific requirements, including next-generation demands such as V2G, the board adapts to evolving regulations and technologies.

# Solving Today’s Challenges, Preparing for Tomorrow

EV charger operations face multiple risks—communication failures, tightening regulations, and product defects from component aging—all of which directly impact revenue. The Pazzk EVSE board detects early signs of failure and enables remote response, minimizing downtime and financial loss.

As next-generation infrastructure such as Plug & Charge (PnC), load balancing, and V2G becomes mainstream, systems unable to adapt will quickly become obsolete. Pazzk ensures your infrastructure is ready to evolve with these changes.



### Fire-Safe Charger Support

Complies with Korea’s mandatory fire-prevention (smart control) certification.



### Offline Charging

Enables charging during network outages using cached user data, minimizing losses.



### Load Balancing

Supports power distribution and load control for next-gen grids.



### Remote Monitoring & Reports

Collects and reports metrics on charging, network, hardware, and metering in real time.



### Continuous Updates

Provides firmware updates for evolving standards and new features, extending product life.

## Notes

- Certain features may be limited depending on the customer’s system environment or selected options.
- Units are shipped with commercial firmware; unauthorized modification or redistribution is prohibited.
- Violation of contract terms may result in suspension of firmware licensing and update services.
- Customization requires separate consultation.

# Hardware Specifications

Type	Value	Unit
Charging Mode	AC Level 2 (Single-phase)	
Rated AC Power Output	7	kW
Nominal AC Frequency	50 / 60 (Auto-switching)	Hz
Input Voltage Range	100 - 300	VAC
Power Measurement Accuracy	±0.5	%
Operating Temperature	-30 to +55	°C
Storage Temperature	-40 to +85	°C
Dimensions (L x W x H)	110 x 125.58 x 54.53	mm
Weight	302	g
Communication Interfaces	Ethernet, Wi-Fi, BLE, PLC, USB	
Display & Indicators	Buzzer, Speaker, LED	
Input button	Reset, Emergency stop, Debug	

# Firmware Features

## 01 Flexible Operation Modes

Switch between development, manufacturing, installation, and production modes as needed.

## 02 Network Redundancy

Supports Ethernet alongside Wi-Fi/BLE for robust connectivity.

## 03 Offline Operation

- Allows charging even without CSMS boot messages.
- Uses local cache-based authentication to ensure service availability during outages.

## 04 Security

- Secure Boot, data encryption, and certificate-based authentication safeguard firmware integrity.
- Built-in motion sensors detect shocks or tampering in real time.

## 05 System Stability

An RTOS-based architecture ensures fast, predictable control response, combined with MCU-level reliability.

## 06 Safe Updates & Rollback

Dual-bank firmware updates automatically restore the previous version if failures occur.

## 07 Secure User Authentication

Supports safe contactless authentication and payment via Apple VAS and Android SmartTag, beyond legacy RFID/NFC or vulnerable AutoCharge-style methods.

# Safety & Protection Features

To protect both equipment and users from electrical, physical, and environmental risks, the board incorporates multiple layers of hardware and firmware safeguards. All functions operate continuously, shutting down charging and issuing alerts immediately when abnormal conditions are detected.

## Electrical Protection

- Leakage Detection (GFCI)
  - IEC 62752/62955 compliant. Type-A RCD supported by default; external Type-B RCD optional.
- Overvoltage / Undervoltage Protection
  - Stops charging when input voltage goes out of safe range.
- Overcurrent Protection
  - Shuts down charging if current exceeds safe limits.
- Vehicle Diode Fault Detection

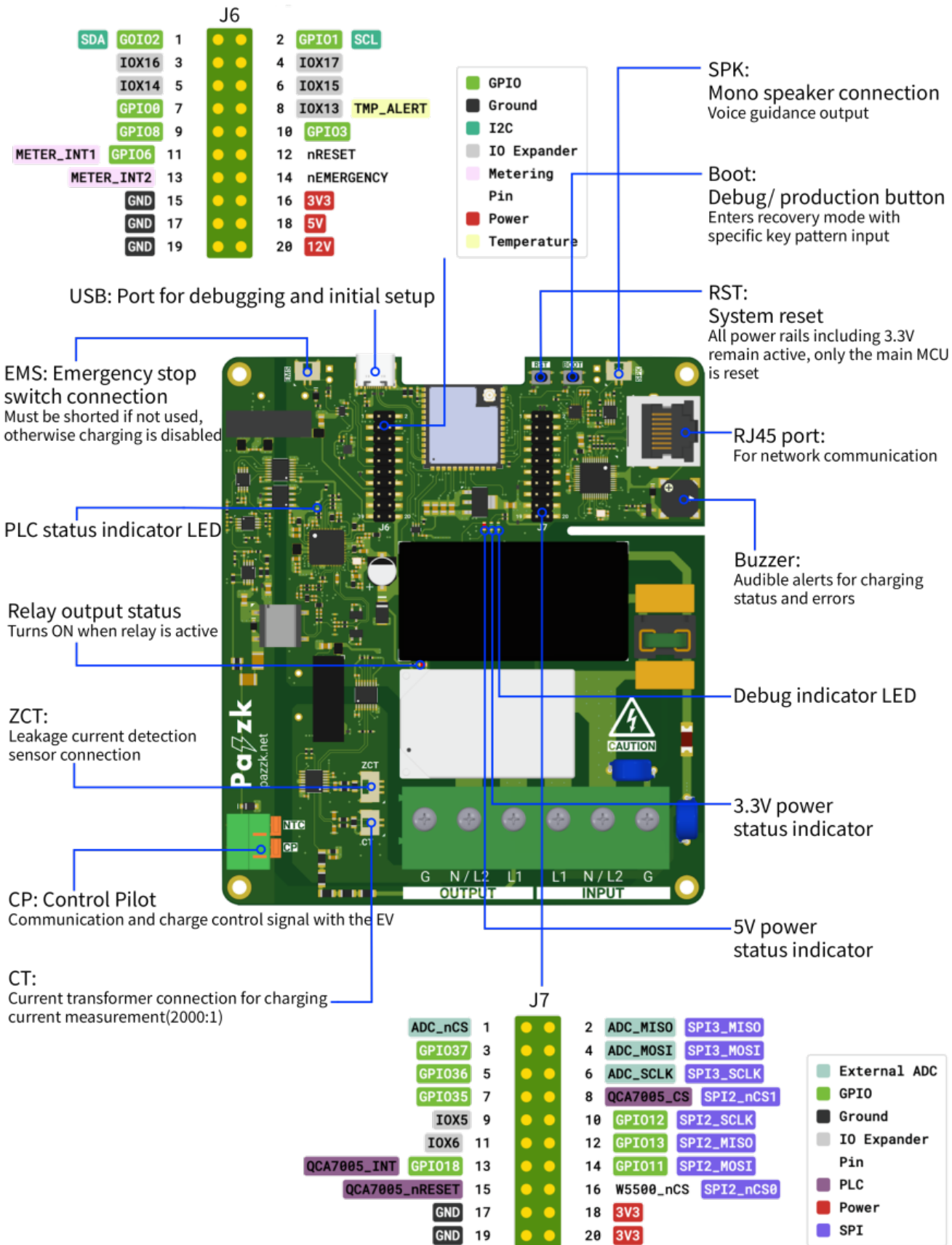
## Physical Protection

- Shock & Tilt Detection
  - Accelerometer detects vibration, impact, or tilt for early detection of theft, damage, or poor installation.
- Ground Fault Detection
  - Identifies grounding issues, stops charging, and prevents electric shock.
- Overheat Detection
  - Monitors relay and power component temperatures; halts charging if limits are exceeded.
- Emergency Stop Button
  - Physical button for immediate shutdown in emergencies.

## Environmental & Operational Protection

- Real-Time Status Monitoring
  - Continuously collects sensor and system data, stored locally and remotely.
- Event Alerts
  - Provides warnings via LED, buzzer, or voice; notifies operators when connected to server.
- Automatic Recovery
  - Restarts automatically once temporary faults or outages are resolved safely.
- Self-Diagnostics
  - Runs checks at startup; blocks boot if anomalies are found.

# Board Components





# Pazzk is with you.

For inquiries and purchases, please contact us below.



Website

<https://pazzk.net/>



Email

[sales@pazzk.net](mailto:sales@pazzk.net)



Developer Documentation

<https://docs.pazzk.net/>

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Pazzk is committed to sustainable products and relationships.

We strive to build products that last. Longevity is not just about physical durability—it's about delivering the right features in the right way, minimizing technical debt for stable maintenance, and operating efficiently without wasted energy. For us, a truly lasting product inspires confidence through sustainability and reliability.