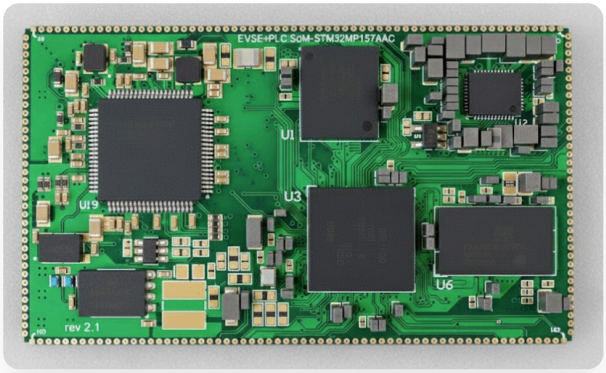
TECHNICAL BRIEF

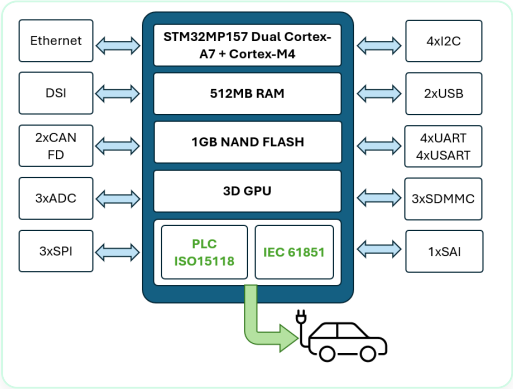
EVSE-PLC-MP157-SOM

gnrgyCore

The ultimate System on Module for next-generation EV charging stations with integrated ISO 15118 support.

Designed for scalability and performance, the **EVSE-PLC-MP157-SOM** combines the power of the **STM32MP157** (Dual Cortex-A7) with integrated **GreenPHY** technology (**Lumissil IS32CG5317**). It enables full compliance with **ISO 15118 Plug & Charge** and **V2G** standards, making it the ideal core for smart EV charging infrastructure.





Key Capabilities

- **High Performance:** Dual-core Arm Cortex-A7 @ 650 MHz + Cortex-M4 coprocessor for handling complex applications and real-time control.
- **Integrated PLC:** Built-in GreenPHY (IS32CG5317) support for seamless ISO 15118(also included CP PWM IEC61851 components).
- **Enhanced Peripheral Architecture for Design Flexibility:** The module offers a rich peripheral set—including GPU, high-speed I/O, industrial buses, security, and display control—to enable flexible and robust system designs.

Technical Specifications

CPU	STMicroelectronics STM32MP157 (Dual Cortex-A7 @ 650 MHz)
Co-Processor	Arm Cortex-M4 @ 209 MHz (Real-Time OS)
GreenPHY	Integrated Lumissil IS32CG5317
CP/PP	IEC 61851 components integrated
RAM	512MB DDR3L
Storage	1GB NAND FLASH (Optional 4GB/8GB eMMC)
Ethernet	10/100M Ethernet
USB	2x USB 2.0
Interfaces	8x UART, 4x I2C, 3x SPI, 2x CAN FD, 3x SDMMC
Display	MIPI-DSI
ADC / Timers	3x ADC converters / 5x Timer Output
Security	Secure Boot, TrustZone®, RNG
Temperature	–40 to +85°C (Industrial Grade)
Dimensions	64mm x 37mm

Software & Support

- The module includes a preconfigured OpenSTLinux (Yocto) system for the Cortex-A7 cores and FreeRTOS on the Cortex-M4. Customers receive a ready-to-use Yocto meta-layer tailored for this SOM, providing:
    - BSP integration for STM32MP157 and the GreenPHY subsystem
    - Pre-set kernel, U-Boot, and device-tree configuration for EVSE peripherals
    - Built-in support for CP/PP, CAN-FD, PLC, ADC/Timers, and related interfaces
    - Example services and reference code for EVSE communication workflows
    - OpenAMP/RPMsg enabled for A7↔M4 interaction

  This layer gives developers a rich, EVSE-focused starting point, reducing bring-up time and accelerating application development.

Other Services

- Beyond the base platform, we provide turnkey development services, including ISO 15118-20 implementation, integration support, and custom hardware and software engineering for tailored EV charging solutions.