Fact Sheet

EV CHARGING (MPU, Linux OS, Wi-Fi)

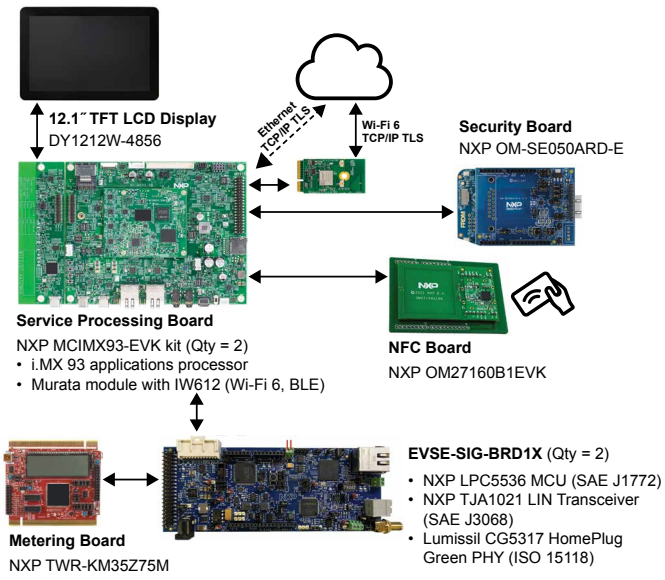
EasyEVSE EV Charging Development Platform

NXP **EasyEVSE EV Charging Station Development Platform** based on the i.MX 93 applications processor using Linux® operating system allows the rapid simulation of an electric vehicle supply equipment (EVSE) and a secure connection to an IoT central application.

The development platform consists of a selection of evaluation boards and the firmware, middleware and operating system software from NXP to allow customers to seamlessly implement the customer configurable application.

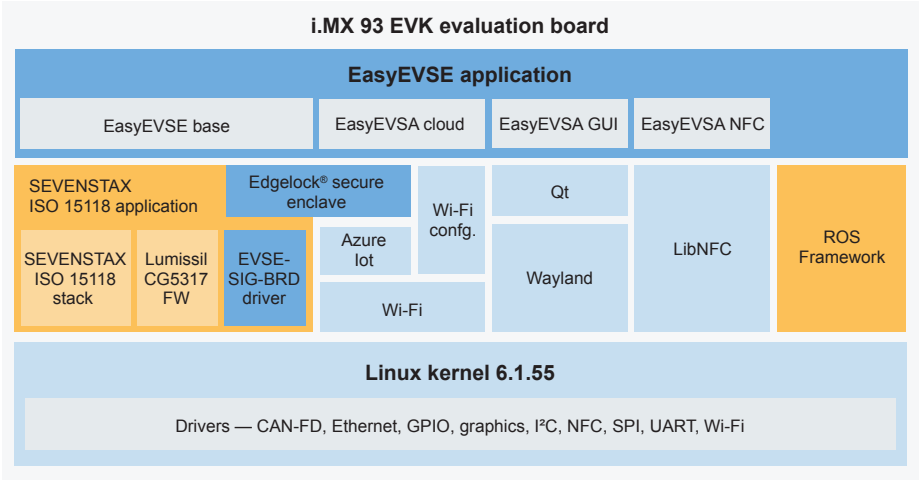
Features for your design

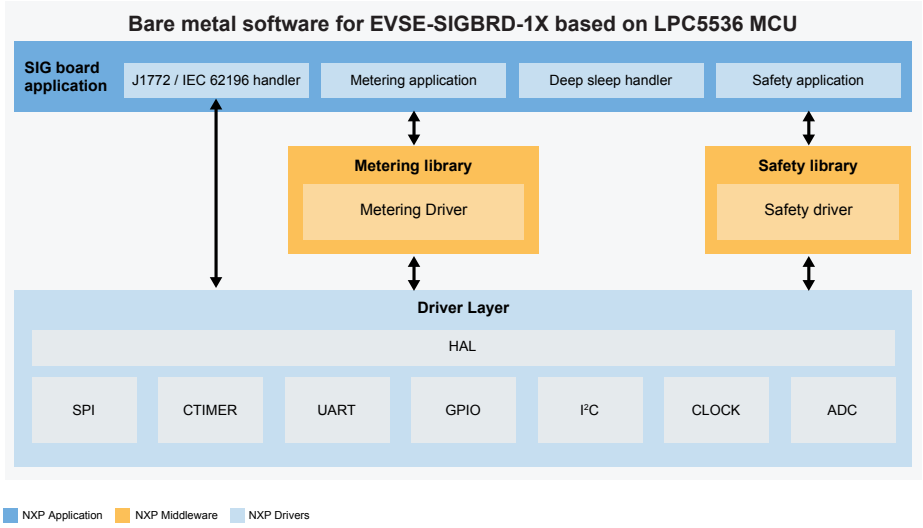
- Integrate ISO 15118-2 standard charging communications between the EV and EVSE (ISO 15118-20 bi-directional, coming in a later release)
- Connect EVSE to cloud over Ethernet, or Wi-Fi™ via Murata module built with NXP IW612 Wi-Fi 6 + Bluetooth LE SoC
- Authenticate cloud services such as Microsoft Azure IoT Central service by leveraging resilient EdgeLock™ SE050 secure element and validated software
- Enable accurate billing, and monitor/respond to power line faults by using modifiable pre-certified metrology software
- Tap to authenticate with the NFC PN7160 Plug and Play controller



Product Longevity

Software architecture





Other enablement

- Getting Started User Guide
- User Manual
- Complementary Development Software

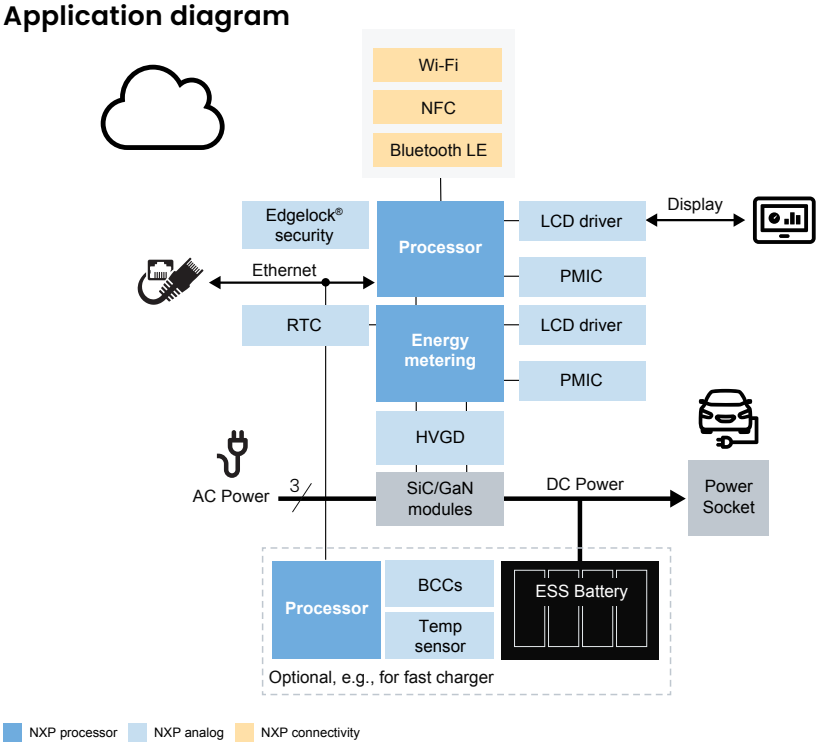
Hardware offering

Order full kit by EVSE-iMX93 includes EVKs, cable harness, software, documentation		
Items icluded		**Description**
Service processing board	MCIMX93-EVK	i.MX 93 applications processor evaluation kit
	Wi-Fi 6 + BLE module	Murata module with NXP IW612 (included in MCIMX93-EVK)
EVSE signal board for ISO 15118 communication	EVSE-SIG-BRD1X	Signal board with NXP LPC55S36 MCU, Lumissil CG5317 HomePlug Green PHY, NXP SJA1110 Ethernet switch and TJA1021 LIN transceiver
Security board	OM-SE050ARD-E	SE050 Arduino® compatible delelopment kit
Metering board	TWR-KM35Z75M	KM series tower system module for KM35 MCUs
NFC board	OM27160B1EVK	Development kits for PN7160 plug'n play NFC controller
Display panel	DY1212W-4856	TFT LCD panel with LDB support 12.1"

EVSE-iMX93 Hardware

Product Longevity

Application diagram



EasyEVSE development platform options summary

URL on nxp.com	www.nxp.com/EasyEVSELinux	www.nxp.com/EasyEVSEFreeRTOS	www.nxp.com/EasyEVSEAzureRTOS
Development Platform Type	MPU, Linux OS	MCU, FreeRTOS	MCU, Azure RTOS
Control Processor (OS)	i.MX 93 applications processor (Linux OS)	i.MX RT1060/64 crossover MCU (FreeRTOS)	i.MX RT1060/64 crossover MCU (Azure RTOS)
Power MCU (OS)	LPC55S36 MCU (bare metal)	NA	NA
EVSE to EV Signaling	ISO 15118-2 (Lumissil CG5317 HomePlug Green PHY); SAE J1772 (LPC55S36); SAE J3068 LIN-CP (TJA1021)	NA	NA
Security	TCP/IP TLS via EdgeLock™ SE050 secure element or Secure Enclave on i.MX 93 processor	Arm® Mbed TLS over OpenSSL and PKS11 via EdgeLock™ SE050 secure element	TCP/IP TLS via EdgeLock™ SE050 secure element
Wireless Connectivity	Wi-Fi 6 and Bluetooth LE (IW612 on Murata module)	LWIP over Wi-Fi 4 (IW416 on Murata module)	ClarinoxWiFi™ Wi-Fi 4 Stack (IW416 on u-blox module)
Wired Connectivity	Ethernet, CAN, UART, USB, I²C, SPI, SDIO	Ethernet, CAN, UART, USB, I²C, SPI, SDIO	Ethernet, CAN, UART, USB, I²C, SPI, SDIO
Tap to Authenti-cate	NFC controller (OM27160)	NFC front end (CLRC663)	NFC front end (CLRC663)
Metrology	Kinetis metrology MCU (KM35Z75)	Kinetis metrology MCU (KM35Z75)	Kinetis metrology MCU (KM35Z75)
Human Machine Interface	12.1-inch TFT LVDS display	4.3-inch LCD capacitive touch panel	4.3-inch LCD capacitive touch panel
Graphical User Interface	Qt over Wayland	LVGL	Azure RTOS GUIX
Cloud Service	Microsoft Azure IoT Central	Microsoft Azure IoT Central	Microsoft Azure IoT Central

Visit **nxp.com/EasyEVSELinux** for more details

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