MICROEJ

SOFTWARE-DEFINED **EVERYTHING**

PLATINUM PARTNER NXP

WHEN NXP PROCESSING MEETS **MICROEJ SOFTWARE CONTAINERS**

MICROEJ®
CERTIFIED PARTNER

Following its success in the cloud and IT world, the adoption of containers is gaining momentum in the embedded world due to the business and technical value they deliver.

In addition, they can effectively address some of the most pressing challenges of the embedded industry, such as costly and time-consuming development methods and the cumbersome process of porting software components to new projects.

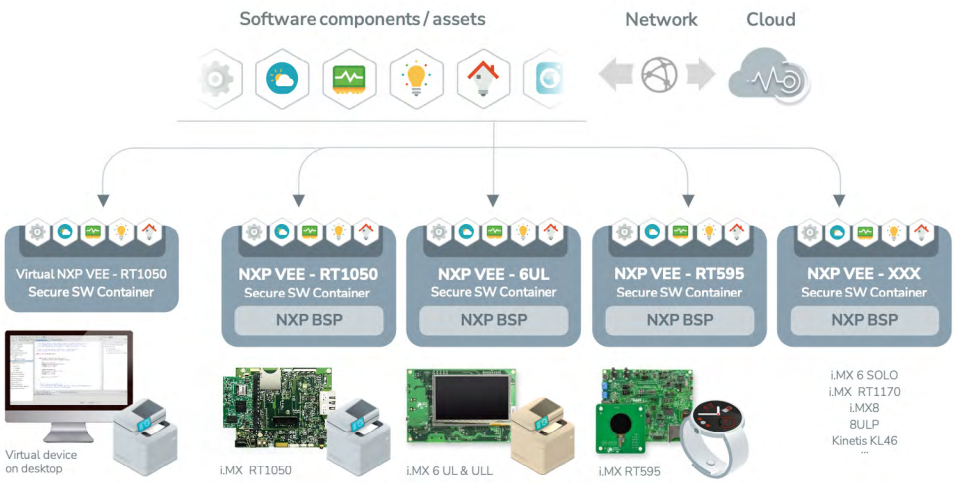
Software containers accelerate the time-to-market of new NXP-based electronic products by 2 to 3 times and open up new possibilities and business models.

TARGET APPLICATIONS

- Wearables
- Smart Cities
  Smart Grid
- Smart Home
- Healthcare
  & Medical Devices
- Industry
- Smart Printers
- Appliances
- Smart Energy

CAPITALIZE YOUR EXECUTABLE SOFTWARE ASSETS ACROSS NXP PORTFOLIO AND ACCELERATE YOUR TIME-TO-MARKET

The collaboration between MicroEJ and NXP Semiconductors makes executable software portability a reality across NXP's parts. NXP leads the edge revolution by providing a software-defined System-on-Chip (SoC) API across its portfolio, enabling the same software design found in smartphones to be implemented on any MCU/MPU. This includes agile development, simulation, managed code, continuous integration/continuous deployment (CI/CD), and reuse of binary assets, among other features.



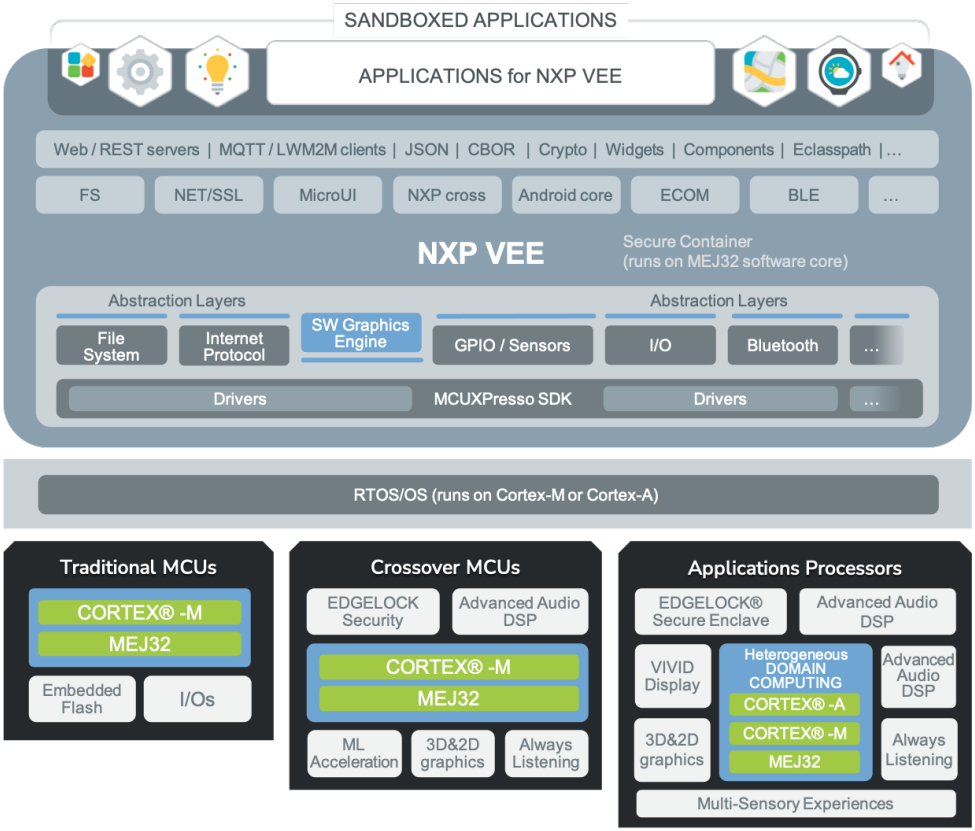
LEVERAGE NXP INNOVATIONS

MicroEJ supports the entire NXP processing solutions, breaking down the traditional MCU-MPU barrier. It incorporates NXP's latest hardware innovations, such as multi-core processors, accelerators, smart DMA, and advanced power modes, while abstracting hardware-level programming complexity. This empowers manufacturers to swiftly select the right NXP peripherals, reducing development time from months to days and enabling faster product launches with an optimized Bill of Materials.

INTEGRATE APP-ORIENTED BUSINESS MODELS

Servitization enables an «as-a-service» model, facilitated by the **application container** acting as a technical brick to extend device functionalities. NXP supports two options: Android for high-memory SoCs, and **MICROEJ VEE** for other scenarios. Manufacturers can add value post-sales with personalized services that can be dynamically loaded onto any NXP MCU and MPU. As a result, sustainable «pay-per-use» business models materialize into actual revenue streams.

COVERING THE WHOLE NXP'S PORTFOLIO



- The MICROEJ VEE software container has a **footprint ranging from 30KB to 50KB**, making it the smallest standard container available in the embedded market.
- **Offers a unified set of APIs** for all NXP processing solutions, compatible with any operating system (OS), real-time operating system (RTOS), and compiler toolchain.
- **Shares the same set of APIs as Android** for «any market» as much as possible, providing a unified interface for functions such as ethernet, file systems, graphics, serial communication, and more.
- **Provides dedicated APIs** for NXP's integrated IP, efficiently utilizing NXP hardware features such as GPU, low-power capabilities, security, and more.
- **Leverages an APP-oriented design**, enabling the utilization of software assets as binary software components that can be dynamically (or statically) loaded across the entire NXP portfolio.

KEY BENEFITS INTRODUCED BY MICROEJ AND NXP PARTNERSHIP

2X FASTER PRODUCT DEVELOPMENT AND COST OPTIMIZATION

MicroEJ enables parallel hardware, firmware, and software development, accelerating time-to-market and reducing costs.

Example: Customers of the combined solution from MicroEJ and NXP benefit from an average acceleration of 2 to 3 times in time-to-market.

HYPERSEGMENTATION TO ADDRESS NICHE MARKETS

MICROEJ VEE for NXP allows customization of product lines while preserving product design, facilitating regional personalization with minimal risks.

Example: The worldwide leader in industrial printers was able to address niche markets without increasing their R&D budget.

APP AND SERVICE ADD-ONS FOR RECURRING REVENUE BUSINESS MODEL

Device manufacturers can monetize apps and services, adding value for users and generating recurring revenues.

Example: A prominent player among smart electric meter companies worldwide enabled an app ecosystem on their devices to leverage the benefits of app characterization.

SAME INTERFACES AND IOT COMPONENTS ACROSS ALL DEVICES

Application reuse ensures consistent user interface and experience across devices, enabling seamless IoT connectivity for current and future products.

Example: A renowned smartwatch manufacturer utilized the same interface components across products to save time and maintain consistent branding.

SEPARATION OF NEW AND LEGACY CODE WITH SANDBOXING

Separating new and legacy code through application sandboxing simplifies and cost-effectively enables digital transformation.

Example: Several IoT module manufacturers worldwide have benefited from MicroEJ's application sandboxing, which enables the reuse of new and legacy software assets.

APPLICATION-LEVEL UPDATES FOR ENHANCED FUNCTIONALITY

MICROEJ VEE for NXP enables over-the-air updates and the installation and removal of individual containerized applications. This ensures that devices are always up-to-date and simplifies device management.

Example: A top-tier home appliance company with an international presence utilized over-the-air updates for their devices to add or update IoT agents.

GET CONNECTED WITH MICROEJ AND NXP

MICROEJ

- www.microej.com
- developer.microej.com

PLATINUM PARTNER NXP

NXP

- www.nxp.com

MICROEJ CERTIFIED PARTNER