

# CREATE UNRIVALLED IoT EXPERIENCES WITH i.MX RT CROSSOVER MCUs

The i.MX RT series combines ease-of-use with high-performance processing and next-level integration and security.

## HIGH-PERFORMANCE

## MODERNIZED HMI



## MEMORY FLEXIBILITY

## ADVANCED SECURITY

## WHAT CAN YOU DO WITH THE i.MX RT SERIES PORTFOLIO?



### BUILD HIGH-PERFORMANCE PRODUCTS

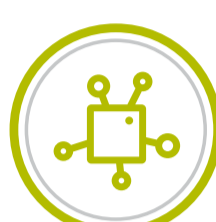
The i.MX RT series portfolio is designed with the high-performing Arm® Cortex-M based technology, which gives you up to 6468 total CoreMarks with Cortex-M7 @ 1 GHz + Cortex-M4 @ 400 MHz\* - providing both a real-time system and an applications-processor-level of performance and integration - all with ease of use of an MCU.

\*Available on the i.MX RT1170 MCU



### DESIGN NEXT-GENERATION HMI APPLICATIONS

The i.MX RT series provides scalable HMI solutions with support for parallel and MIPI display controllers and cameras. For graphics acceleration, take advantage of the 2D pixel pipeline accelerator, 2D GPU with vector graphics acceleration, in addition to embedded graphics software as part of the MCUXpresso SDK.



### EXPAND YOUR MEMORY CAPABILITIES

i.MX RT series architecture gives you flexibility to interface with multiple external memory types, including serial/parallel NOR, NAND and RAM, in addition to support for eMMC. This enables broad support of various options of memory densities, performance and power. The i.MX RT series also offers memory scalability by embedding large SRAM densities, including "zero-wait," single-cycle access.



### MAKE IT SECURE

Every interaction - whether machine-to-machine or human-to-machine - must be protected for confidentiality, integrity, and availability. The i.MX RT series, part of the EdgeLock Assurance program, is built on a foundation of secure boot, secure debug, and secure life cycle management designed to resist remote and local software attacks.

## CONNECT WITH YOUR WORLD LIKE NEVER BEFORE

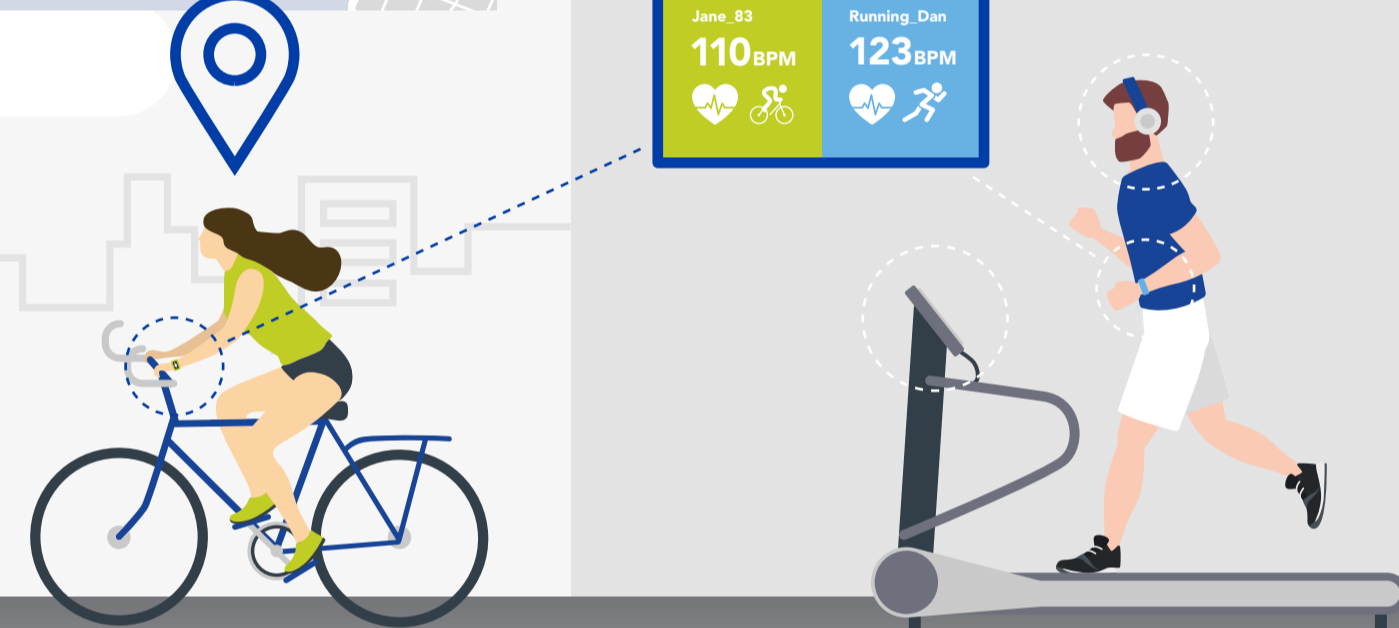
i.MX RT series of crossover MCUs push the boundaries of what's possible in the IoT.



## SMART HEALTH

Go the distance with **wearable** devices offering **advanced HMI** and **long battery life**.

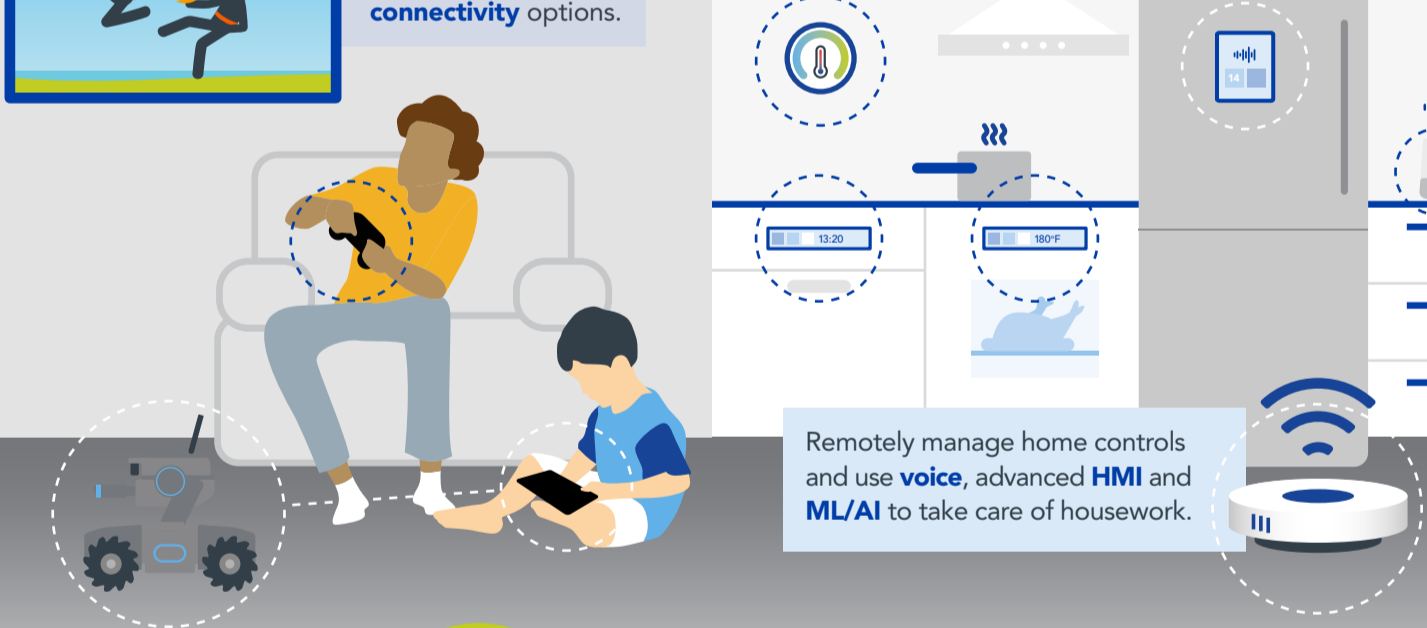
**Track and share** biometrics to optimize health and performance.



## SMART HOME

Learn and play with **motor control capabilities** and **connectivity** options.

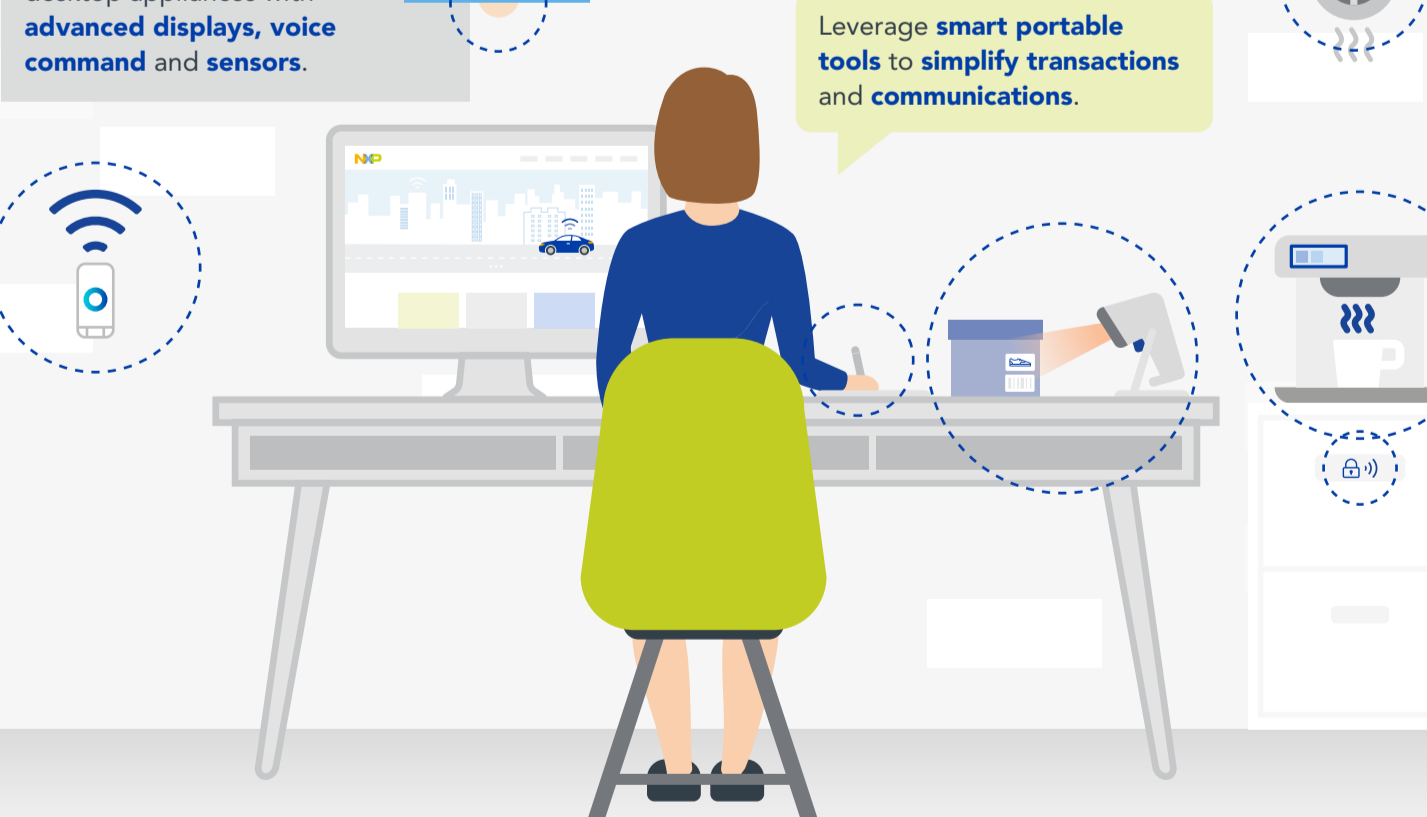
Remotely manage home controls and use **voice**, **advanced HMI** and **ML/AI** to take care of housework.



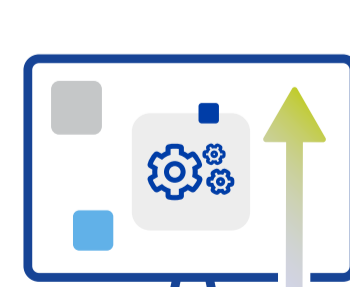
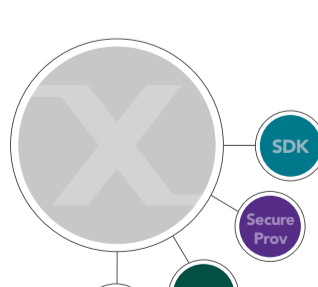
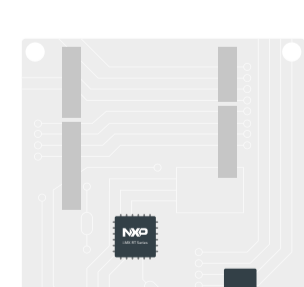
## SMART OFFICE

Optimize office controls and **advanced displays**, with **voice command** and **sensors**.

Leverage **smart portable tools** to **simplify transactions** and **communications**.



## GETTING STARTED IS AS SIMPLE AS 1-2-3



### 1 >>>>>> LAUNCH FASTER WITH i.MX RT EVALUATION KITS

Take your design to the next level by reducing complexity and accelerating time to market with i.MX RT series robust technology. Expand upon the i.MX RT series feature-rich EVK with compatible Arduino™ hardware shields.

### 2 >>>>>> SPEED UP DEVELOPMENT WITH MCUXpresso SOFTWARE AND TOOLS

Optimize, standardize and accelerate embedded system development of applications on NXP's Arm Cortex-M-based MCUs with MCUXpresso Software and Tools.

### 3 >>>>>> DEVELOP CUSTOM UIs WITH ADVANCED FUNCTIONALITY

Leverage integrated DSPs for voice solutions, NXP's eIQ™ ML Software Development Environment for ML/AI, embedded graphics for innovation, next-generation HMI and NXP EdgeReady voice control and face recognition solutions to get to market fast.

[www.nxp.com/iMXRT](http://www.nxp.com/iMXRT)

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