Qt for MCUs

Ultimate Performance.
Tiny Footprint.

Delivering a rich ***User eXperience*** on embedded hardware while catering to requirements such as low power consumption, real-time processing and instant boot is a challenge. Adding to that is the business need to keep the total cost envelope low, especially for mass-market devices.

Creating a ***Graphical User Interface*** for an embedded device is often more challenging than a similar activity for a mobile or a web app. Factors such as available memory, processing power, hardware graphics capabilities or variety of device configurations can greatly limit design options. Using efficient tools and optimized libraries can help reduce such complexities and boost product development significantly.

Qt for MCUs provides the necessary libraries and productivity tools to design and develop graphical applications for devices powered by low cost embedded processors. The libraries and tools are continuously improved and fine-tuned to provide the best performance versus memory usage on 32 bit micro-controllers.

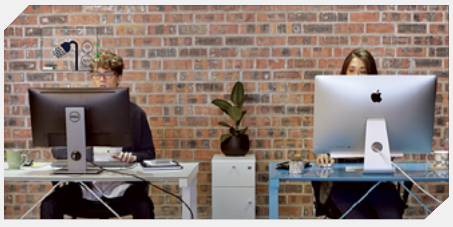
Supported platforms: https://doc.qt.io/QtForMCUs/qtul-supported-platforms.html

Smartphone-like UX

Create beautiful 2D/2.5D GUIs including animations, transitions and other visual effects with or without touch support for a variety of screen sizes.

Re-use Code

Reuse existing application logic with Qt QML GUI. The QML GUI code can be reused, not only on other supported MCUs, but also on MPUs running OSs such as Embedded Linux.



Design-Develop Workflow

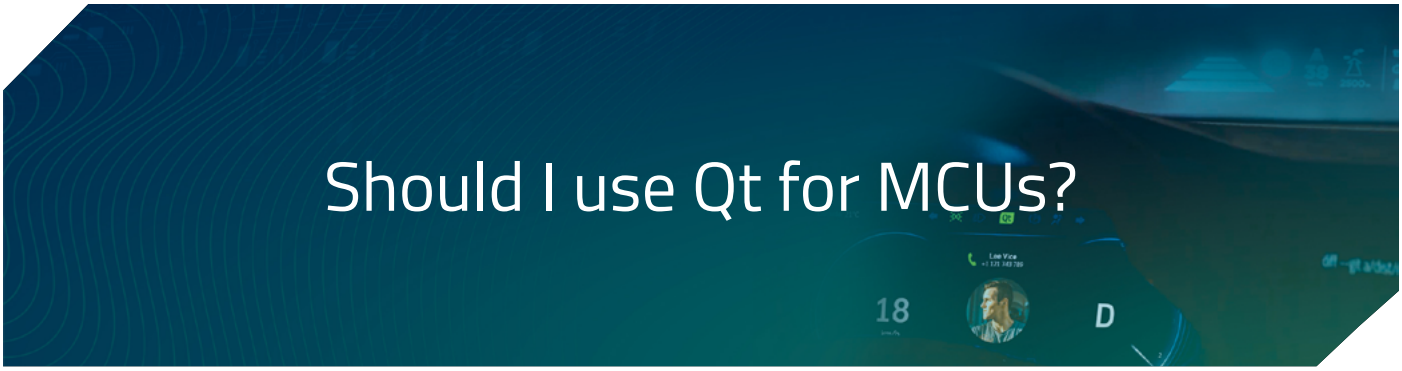
Design. Develop. Iterate. With Qt's Design Tools and Developer tools, GUI creation becomes a fast, iterative process helping to deliver a quality product within time.

NXP GOLD PARTNER · RENESAS RA · RENESAS R-Car · ST Authorized Partner · IAR SYSTEMS

www.qt.io/product/develop-software-microcontrollers-mcu

QR code

Should I use Qt for MCUs?



Ultimate Performance

- 60fps can be achieved on 32 bit MCUs with gfx acc.

Tiny Footprint

- The graphics library requires around 80kB RAM

Scalable GUIs

- Supports multiple resolutions, color formats, color depths and orientations

Asset Management & Conditioning

- Optimize images and fonts to adapt to custom hardware configuration

GUI Control Templates

- A suite of GUI control templates that can be easily customized and used to build the HMI

RTOS or Bare Metal

- Freedom to integrate into RTOS of choice or run application directly on bare metal

Internationalization Tools

- Translate User Strings with the Linguist tool
- No computer knowledge beyond the ability to start a program and use a text editor is required

Low-memory Scalable Fonts

- Use dynamic, full-quality, scalable fonts with a runtime RAM footprint as low as 20kB
- Ditch bitmap headaches

Large User Community

- Benefit from peer-to-peer help from over 1.5 million users of Qt

Local Support

- Support is available nearby from one of the Qt offices located in your region

Design Tool

- Import designs from Sketch and Photoshop, animate them, test them and convert into code

Supports Multiple IDEs

- A wide range of IDEs are supported for developing the GUI application

The Qt Company

Qt Group (Nasdaq Helsinki: QTCOM) is a global software company with a strong presence in more than 70 industries and is the leading independent technology behind millions of devices and applications. Qt is used by major global companies and developers worldwide, and the technology enables its customers to deliver exceptional user experiences and advance their digital transformation initiatives. To learn more, visit www.qt.io

QR code

www.qt.io/product/develop-software-microcontrollers-mcu