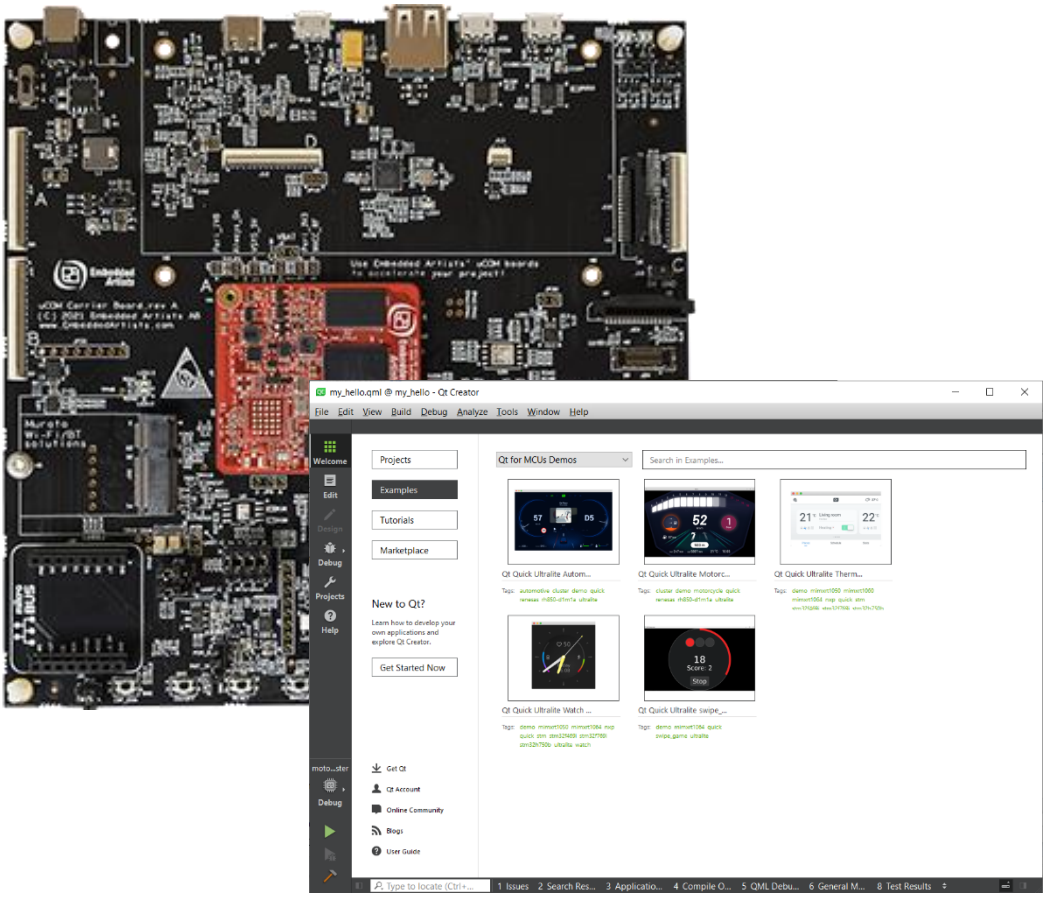
Qt for MCUs - Prebuilt Binaries



Get Up-and-Running Quickly and
Start Developing Your Application On Day 1!

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1 Document Revision History

Revision	*Date*	*Description*
A	2022-04-06	First release. Based on Qt for MCUs 2.0.0

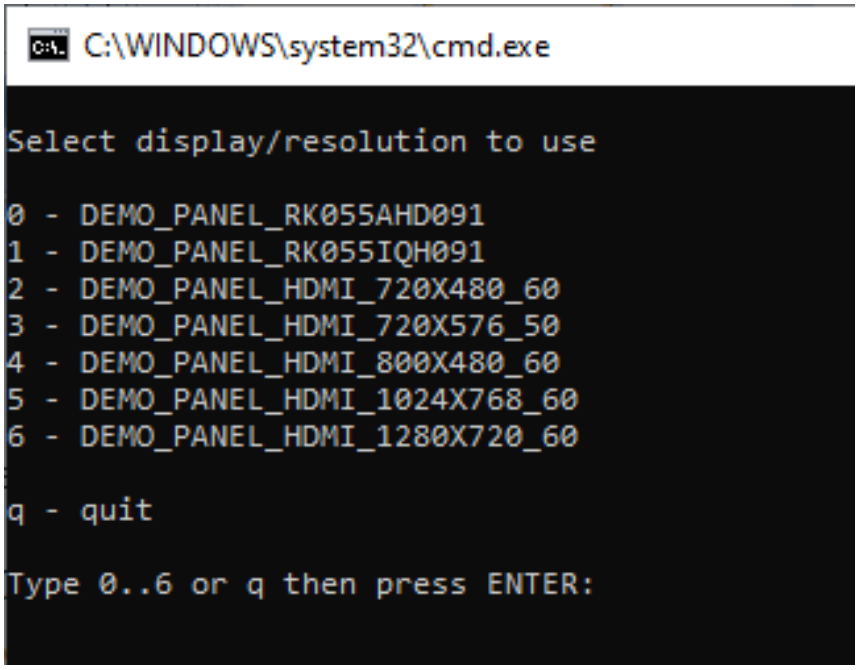
2 Intro

Download the latest archive of prebuilt binaries for the Example/Demo applications in the Qt for MCUs 2.0.0 distribution. The latest version can be found on http://imx.embeddedartists.com/.

The only requirement is the iMX RT Developer's Kit and a display.

To get started, set up the hardware including the MCU Link, unpack the archive and double click *run_demo.bat*.

You will first be presented with a menu asking you to select which display to use:



The exact content of the list may be different for you.

The two displays at the top are 5.5 inch MIPI-DSI displays from NXP with touch support (I2C).

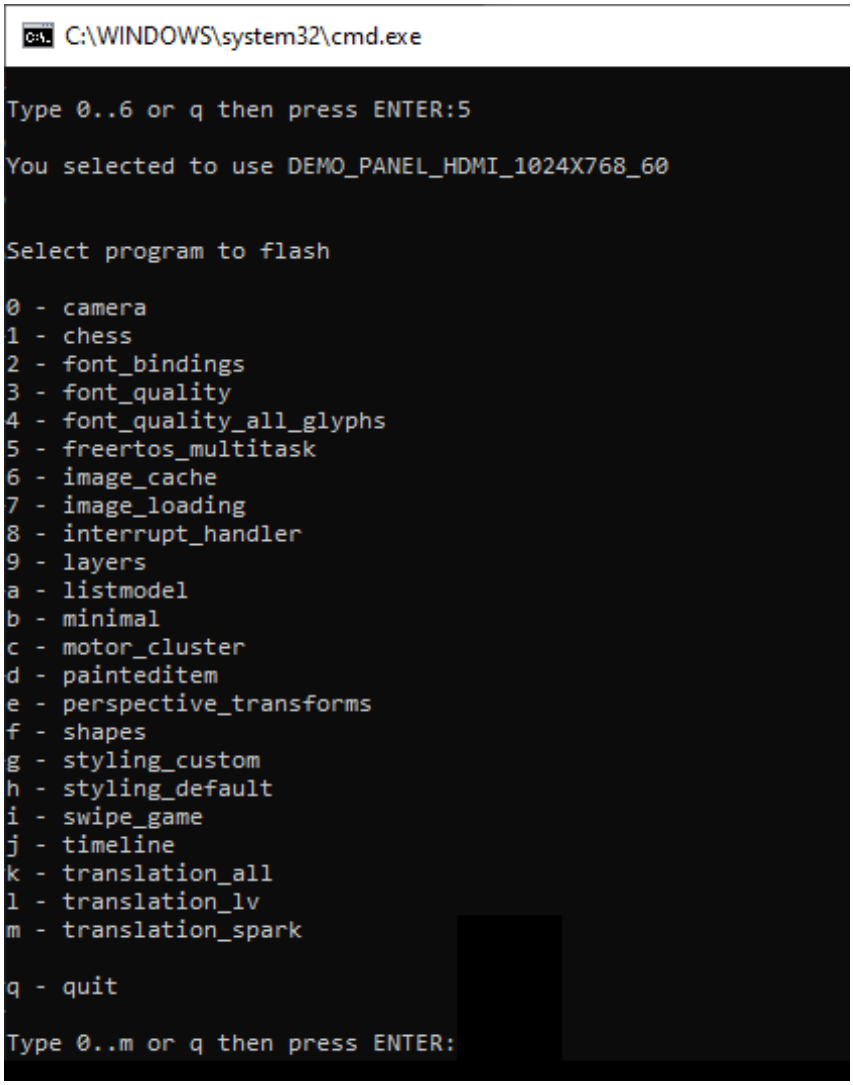
All the HDMI resolutions **should** work on most HDMI displays. The USB touch support has been tested on these two displays:

- Embedded Artists 7 inch HDMI Display Kit (EAD00363):
  https://www.embeddedartists.com/products/7-inch-hdmi-display-kit/

- NewHaven NHD-7.0-HDMI-N-RSXN-CTU:
  https://www.newhavendisplay.com/nhd70hdminrsxnctu-p-9552.html

If you are using another HDMI display with USB touch, then you will have to update the driver to support it (this is out of the scope for this document since it presents prebuilt binaries). The examples should still run but without working touch.

Select a display/resolution to continue. The new menu will show available demos/examples:

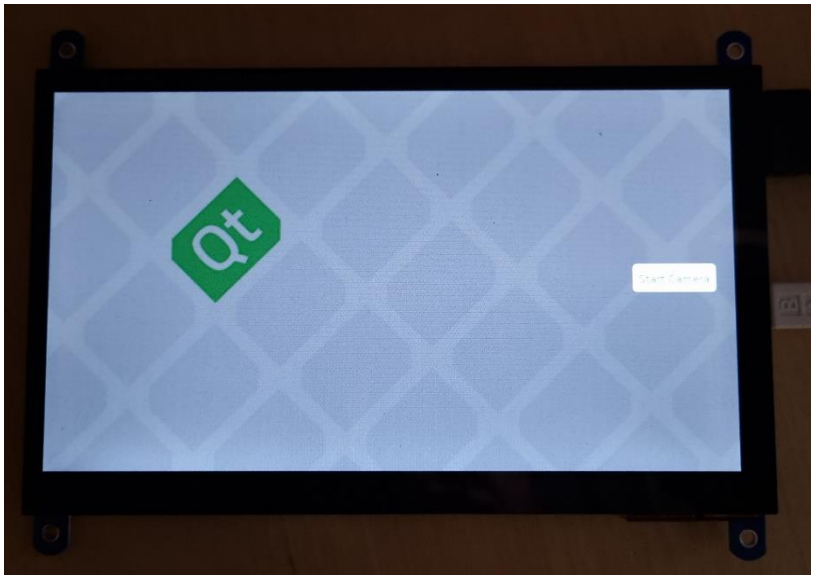


Select a program to flash and run it or press q to go back to the display selection menu.

The following sections will show a screenshot of each of the examples or explain why it is not working.

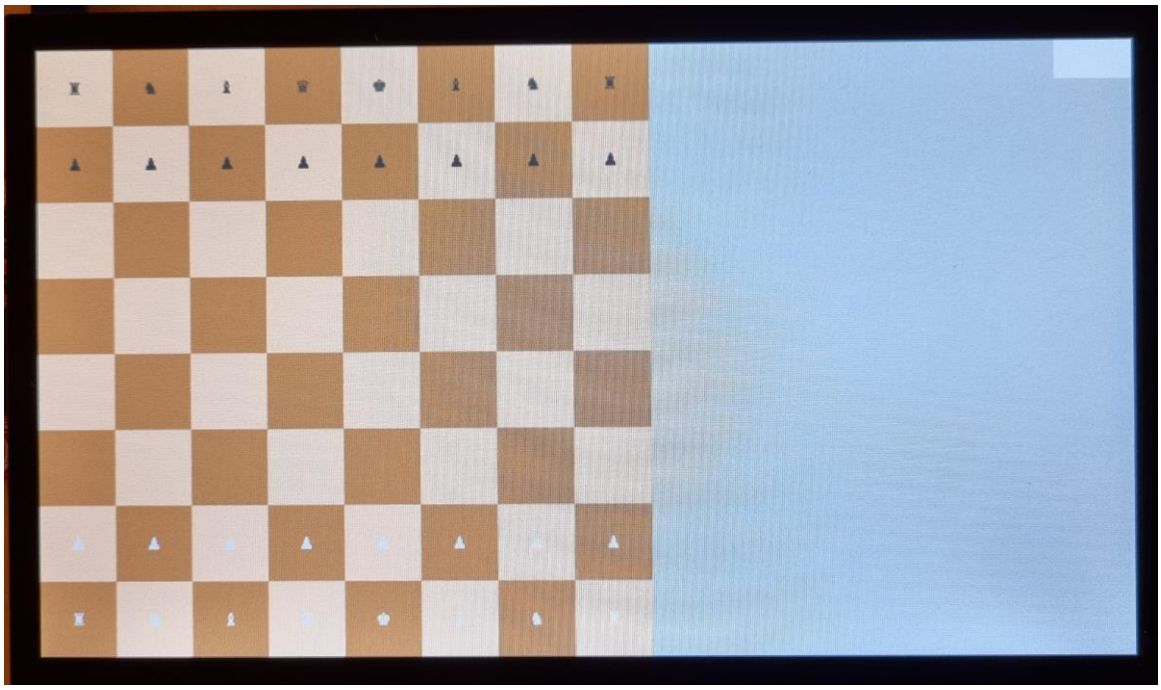
2.1 Camera

The camera example was not created for any camera supported by the iMX RT Developer's Kit and running it shows this start screen but when pressing the *Start Camera* button the screen goes black.

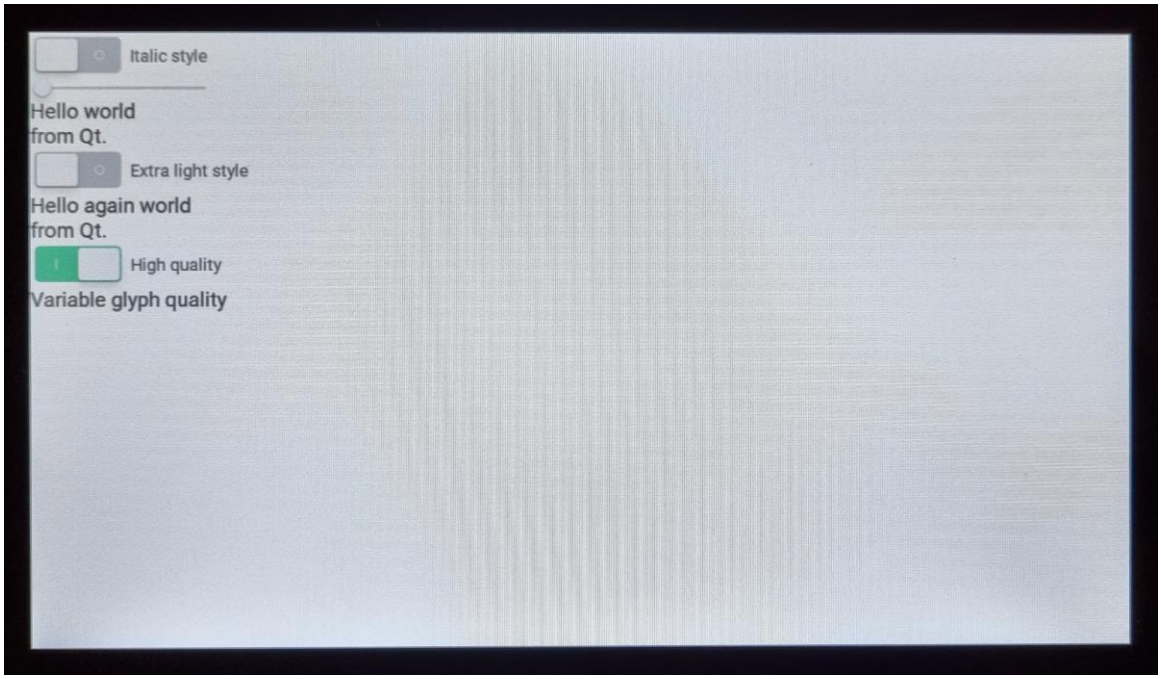


2.2 Chess

Basic chess game with touch support.



2.3 Font Bindings



2.4 Font Quality

Example without touch support.

2.5 Font Quality All Glyphs

Example without touch support.

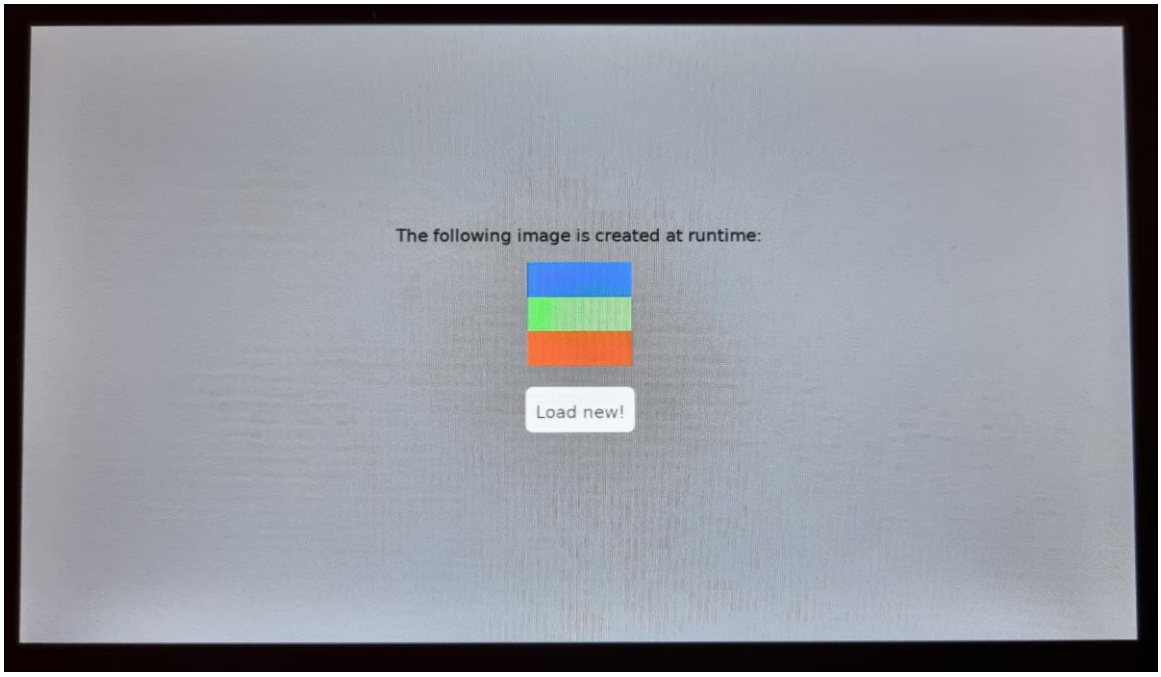
2.6 FreeRTOS Multitask

Example shows a fan that can be controlled by clicking on it to increase the speed.

2.7 Image Cache

This example switches between a number of images.

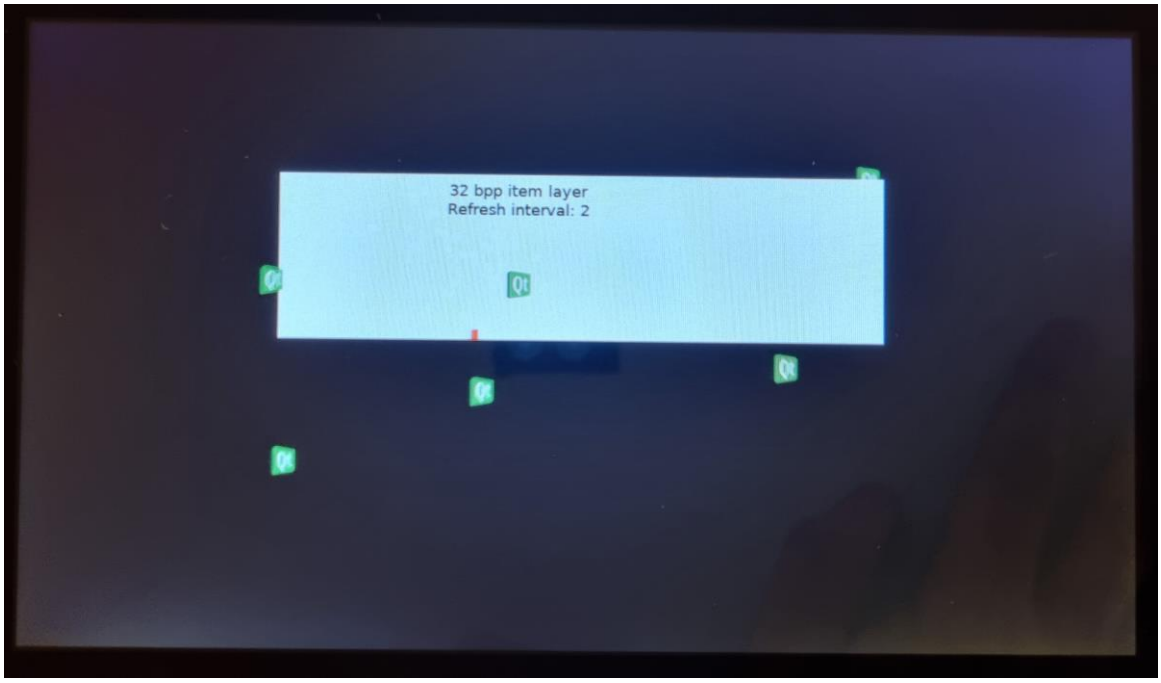
2.8 Image Loading



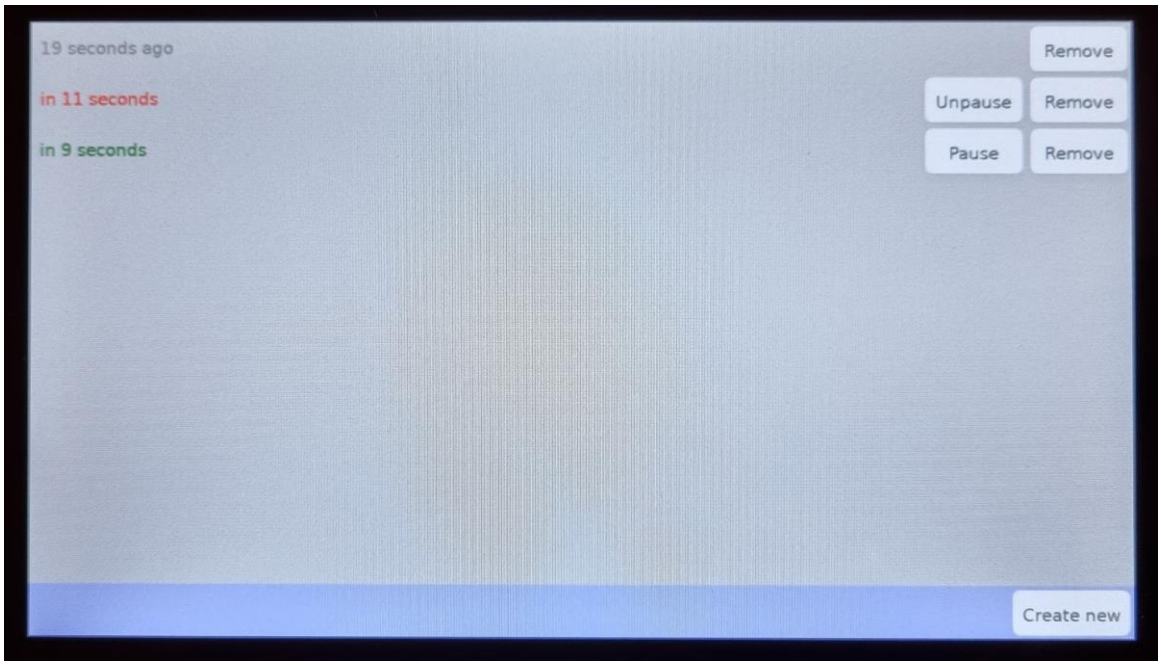
2.9 Interrupt Handler

This example does not work, and nothing is shown on the display or in the terminal

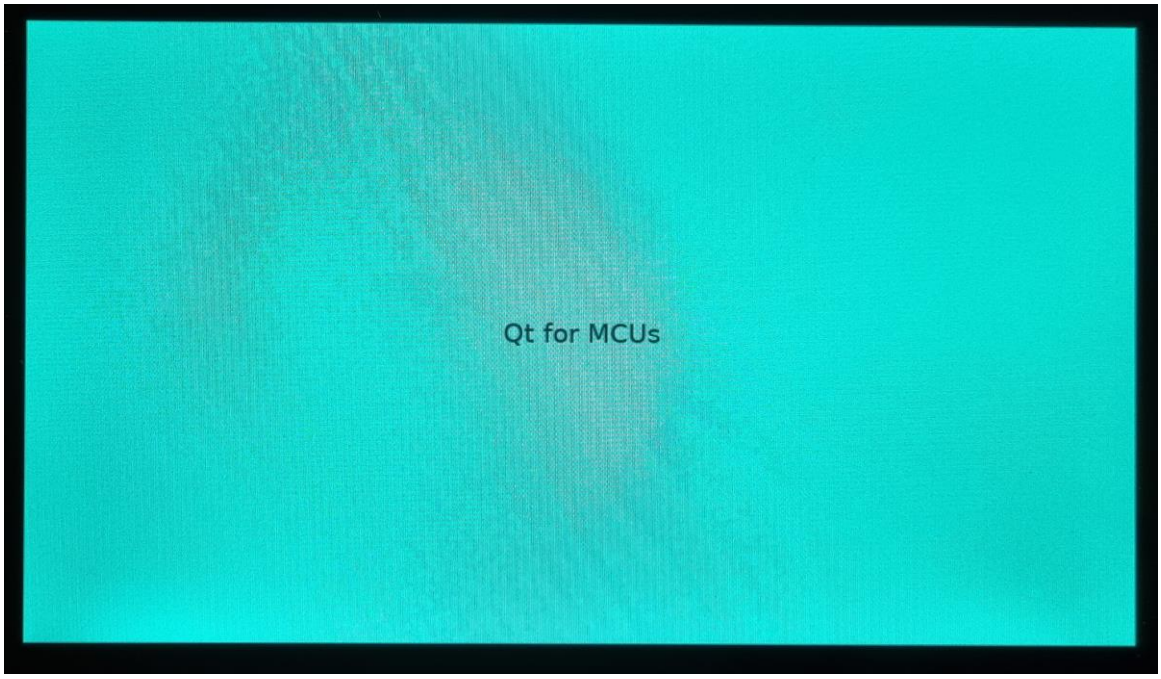
2.10 Layers



2.11 List Model

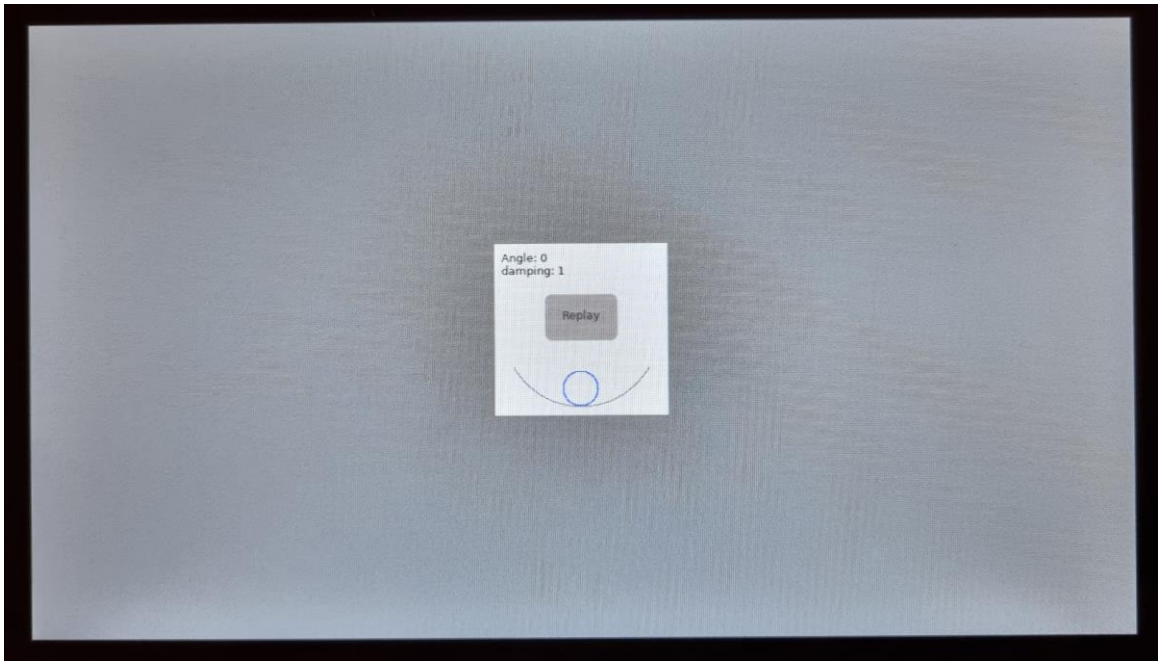


2.12 Minimal



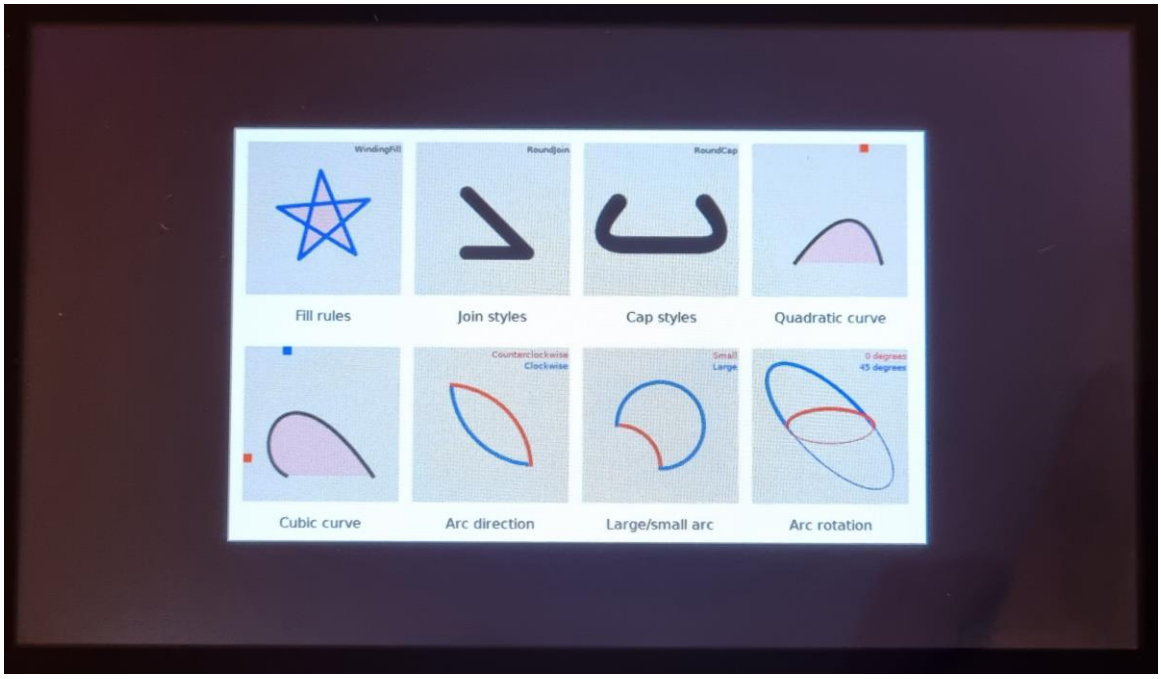
2.13 Motor Cluster

2.14 Painted Item

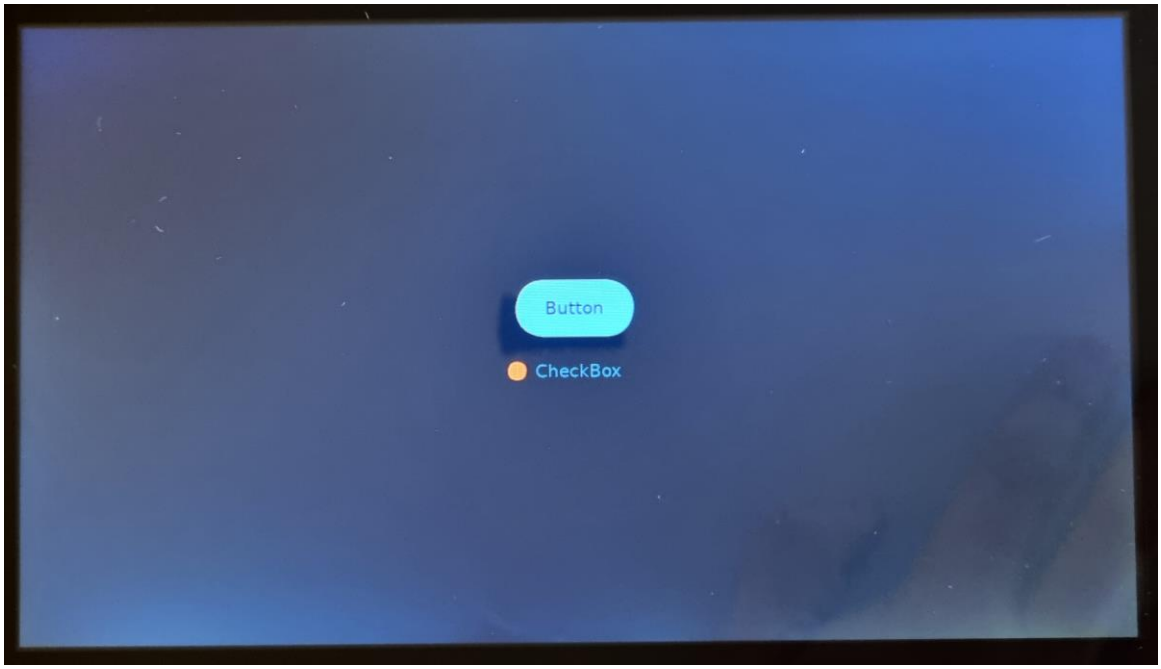


2.15 Perspective Transforms

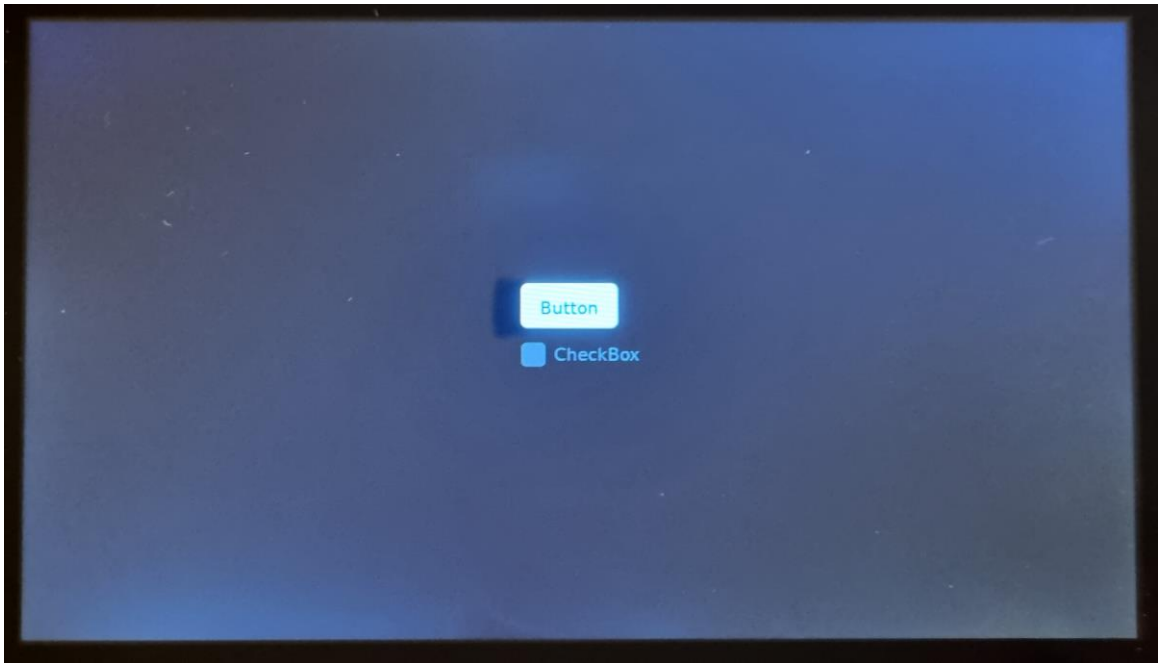
2.16 Shapes



2.17 Styling Custom

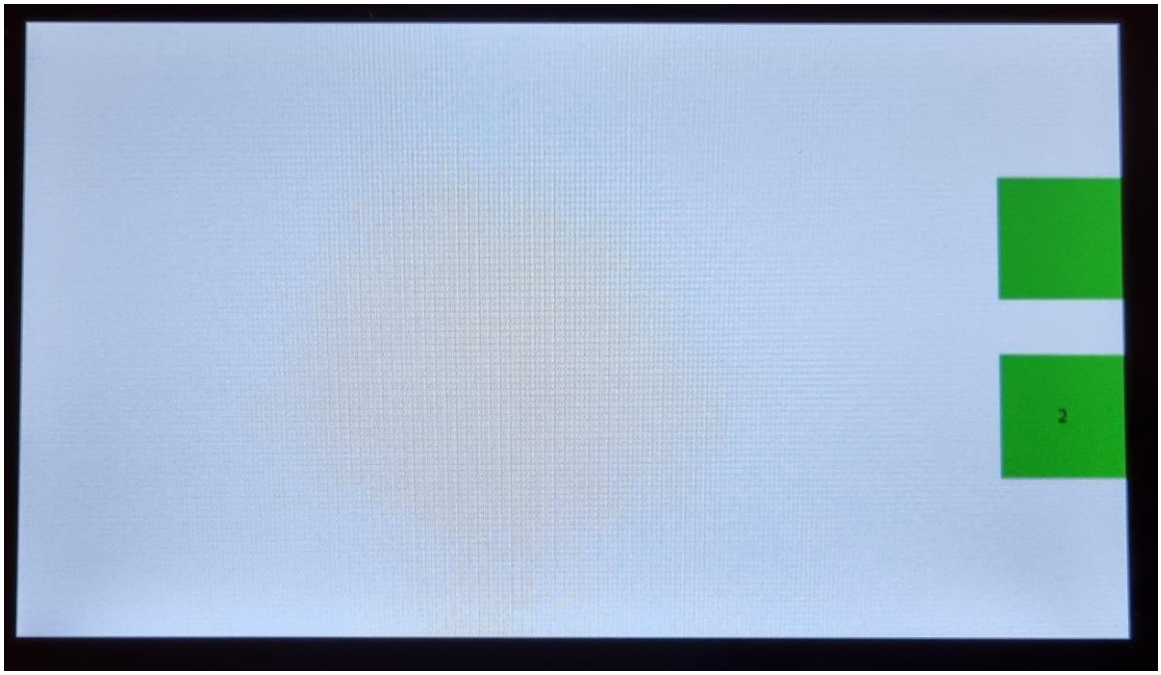


2.18 Styling Default



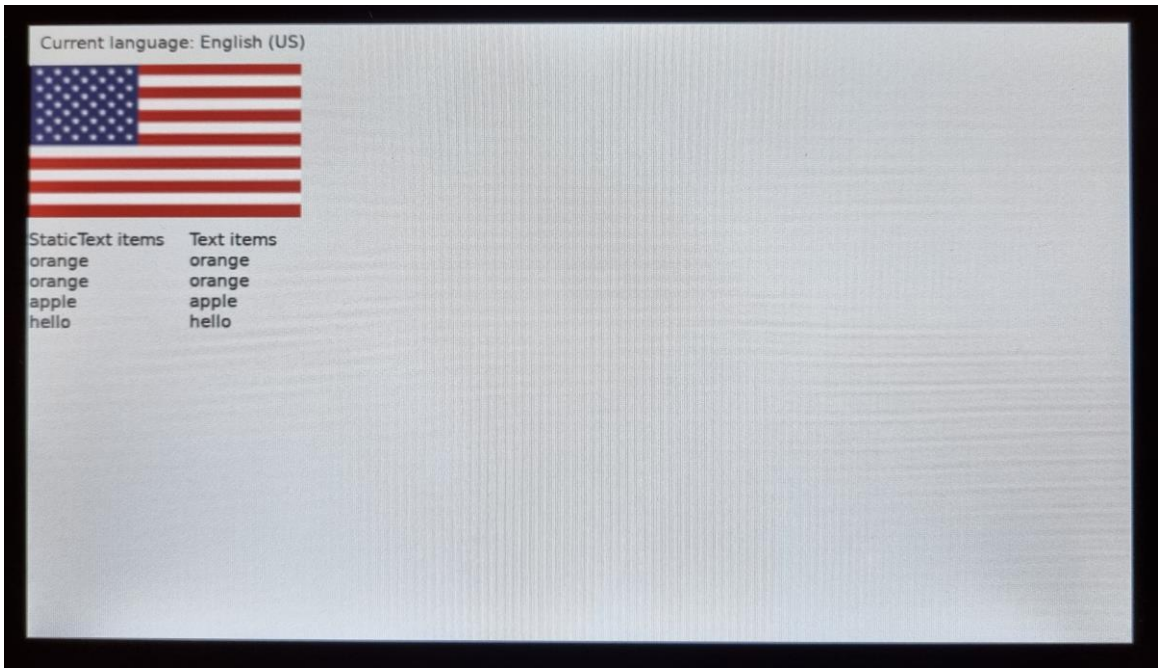
2.19 Swipe Game

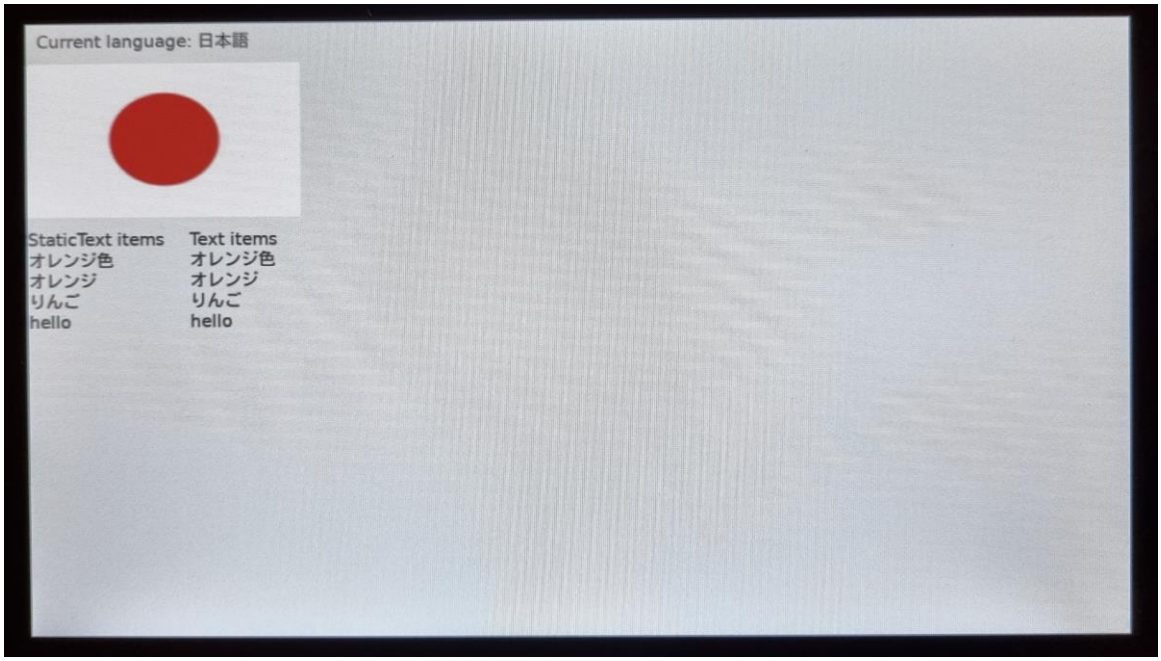
2.20 Timeline



2.21 Translation All

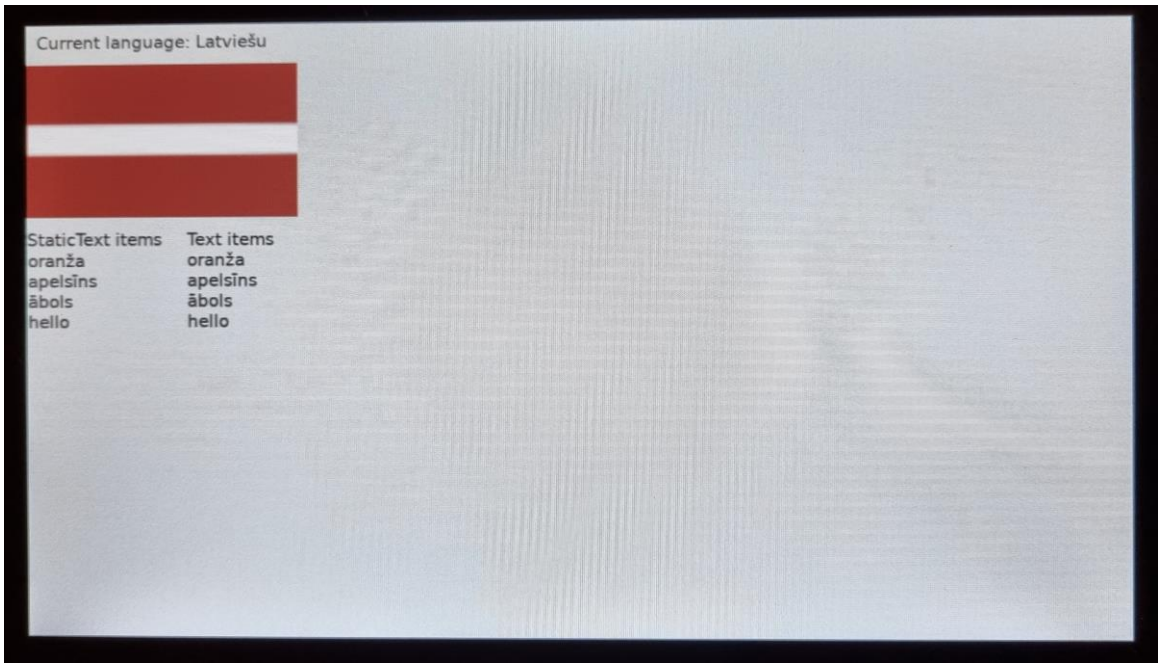
This example shows off different translation. Switch between them by clicking on the screen





2.22 Translation LV

Like *Translation All* but only shows one translation – Latvian. No touch.



2.23 Translation Spark

This example shows off different translation. Switch between them by clicking on the screen

3 Things to Note

3.1 ESD Precaution

Please note that the *iMX RT uCOM Board* and *uCOM Carrier Board* come without any case/box and all components are exposed for finger touches – and therefore extra attention must be paid to ESD (electrostatic discharge) precaution.

Make it a habit always to first touch the metal surface of one of the USB, SD or Ethernet connectors for a few seconds with both hands before touching any other parts of the boards. That way, you will have the same potential as the board and therefore minimize the risk for ESD.

Never touch directly on the *iMX RT uCOM Board* and in general as little as possible on the *uCOM Carrier Board*. The push-buttons on the *uCOM Carrier Board* have grounded shields to minimize the effect of ESD.

Note that Embedded Artists does not replace boards that have been damaged by ESD.

3.2 General Handling Care

Handle the *iMX RT uCOM Board* and *uCOM Carrier Board* with care. The boards are not mounted in a protective case/box and are not designed for rough physical handling. Connectors can wear out after excessive use. The *uCOM Carrier Board* is designed for prototyping use, and not for integration into an end-product.

For boards with LCD, do not exercise excessive pressure on the LCD glass area. That will damage the display. Also, do not apply pressure on the flex cables connecting the LCD/touch screen. These are relatively sensitive and can be damaged if too much pressure is applied to them.

Note that Embedded Artists does not replace boards where the LCD has been improperly handled.

3.3 OTP Fuse Programming

The i.MX RT MCU has on-chip OTP fuses that can be programmed. Once programmed, there is no possibility to reprogram them.

iMX RT uCOM Boards are delivered with OTP fuse programming to boot from external QSPI flash. The rest of the fuses are completely up to the user to decide if OTP fuses shall be programmed and in that case, which ones.

Note that Embedded Artists does not replace iMX RT OEM Boards because of wrong OTP programming. It's the user's responsibility to be absolutely certain before OTP programming and not to program the fuses by accident.

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