Quick Start Guide for KwikStik



KwikStik

Cost-effective development board for the K40X256

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Get to Know the KwikStik

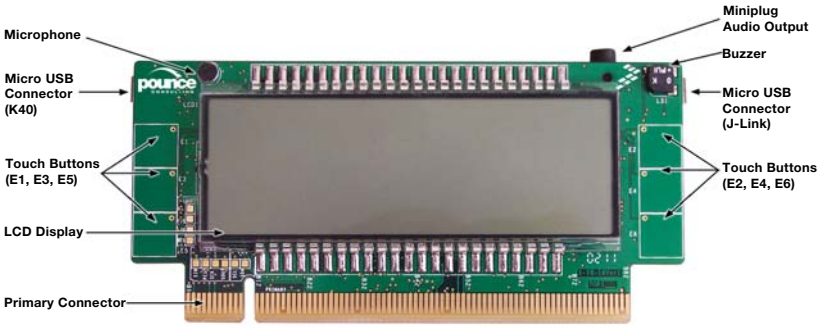


Figure 1: Front Side of KwikStik Development Board



KwikStik

The Kinetis KwikStik is a cost-effective development tool for the Kinetis family of MCUs. It features the K40X256VLQ100 (144LQFP) MCU with USB, capacitive touch sensing and segment LCD functionality. The KwikStik can function either as a standalone development tool or with the Freescale Tower System (freescale.com/tower). The J-Link™ debug interface can be used to program the on-board K40X256 MCU or an external Kinetis MCU. Explore the Kinetis KwikStik DVD to find software installer and documentation. For additional information on the Kinetis KwikStik and the Kinetis family of microcontrollers, please visit freescale.com/KwikStik.

Get to Know the KwikStik



Figure 2: Back Side of KwikStik Development Board

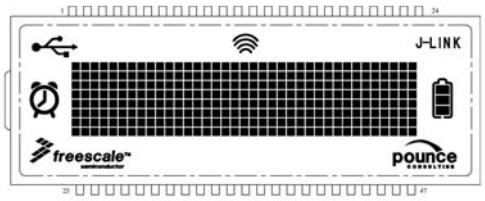


Figure 3: LCD Segment Display of the KwikStik

Demo Applications

These simple demo applications highlight some of the features of the K40X256 MCU and the KwikStik evaluation and develoment board. All of the applications run under the Freescale MQX™ RTOS. Refer to the user manual for details on the features and functionality of these demos.

Remote Control

The remote control application uses the infrared transmitter to send SIRC protocol commands that can control most Sony televisions.

Joystick

The KwikStik can used as a USB joystick device when running this application. Use the touch-sensing electrodes to send commands to the PC.

Sound Recorder

Raw sound data can be recorded from the microphone, stored in the K40 internal memory and reproduced using the audio output mini-plug connector. A pair of headphones or external speakers are required for this demo application.

Step-by-Step Installation Instructions

In this Quick Start Guide, you will learn how to set up the KwikStik board and run the default demonstration applications.



Turn on the Board

Plug in the micro-USB cable into either USB connector on the KwikStik. This will turn on the KwikStik and start charging the rechargeable battery.



Navigate through the Demo Applications

Use electrodes 1 and 2 to navigate through the different demo applications available.



Select an Application

Use electrode 5 or 6 to select the demo application to run. Refer to the user manual for specific functionality of each application.



Learn More About the Kinetis K40 Microcontrollers

Find more MQX and bare-metal labs and software for the Kinetis K40 microcontrollers at freescale.com/KwikStik

J-Link Features

The KwikStik contains an on-board JLINK programmer which can program the K40X256 or an external MCU using a JTAG connector.

To start, make sure the necessary software and tools are installed on the PC.

Programming the K40X256 MCUs

To program the on-board K40X256 MCU, the ON/OFF switch must be in the ON position, this disables the JTAG connector.

Programming External MCUs

To program an external MCU, a JTAG connector must be placed on J8 and the ON/OFF switch must be in the OFF position to deactivate the K40X256 MCU.

Additional Features

Rechargeable Battery

The KwikStik contains an Li-Mg rechargeable battery. Both USB connectors can recharge the battery when needed. Out of the box, the battery may be discharged, thus it may be necessary to charge the battery before use.

Power Consumption Sensing Circuit

The KwikStik contains testpoints to precisely measure the amount of current the system or the K40 MCU are consuming. Please consult the user manual for further information regarding this feature.

Communication Testpoints

UART, SPI, I2C, and CAN signals of the K40X256 MCU can be accessed through testpoints included on the board. Consult the user manual for further information regarding this feature.

To learn more about the **KwikStik** and other Freescale Kinetis microcontroller products, please visit **freescale.com/KwikStik** and **freescale.com/Kinetis.**

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Doc Number: KWIKSTIKQSG / REV 1
Agile Number: 926-78576 / REV B