

# KwikStik-K40

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## Hardware Errata

Rev. 3

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## Revision History

Revision	Date	Changes
0	April 18, 2011	Initial Release
1	April 29, 2011	Added KWIKSTIK_03 and KWIKSTIK_04
2	June 7, 2011	Added Version 4 implementation information
3	Sept 9, 2011	Added Version 5 information; added barcode label revision information

## Introduction

This report describes hardware errata of the Kinetis KwikStik (KWIKSTIK-K40) development tool hardware.

Errata ID	Errata Title	Board Version Affected
KWIKSTIK_01	K40X256 cannot be turned off using the ON/OFF switch	Ver3
KWIKSTIK_02	TWRPI connectors populated in a wrong orientation	Ver3
KWIKSTIK_03	VBat not powered	Ver3
KWIKSTIK_04	SD Card signals connected to incorrect pins	Ver3 / Ver4



Refer to the silkscreen marking on the bottom right corner on the top side of the KwikStik to identify the board version.

Additionally, the revision of the hardware can be determined by the a revision indicator on the barcode label on the back side of the KwikStik box.



Barcode Label	Hardware Revision
Rev: A0	Version 3
Rev: B0	Version 4
Rev: C0	Version 5

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## KWIKSTIK\_01: K40X256 MCU cannot be turned OFF using the ON/OFF switch

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### Description

When the ON/OFF switch SW1 is in the OFF position, the K40 MCU is not turned off. This can cause unexpected behavior when trying to use the JTAG connector for external device programming and debugging.

### Workaround

Removing power supply to VREFH will allow the K40 to be switched off. To do so, remove ferrite F5.



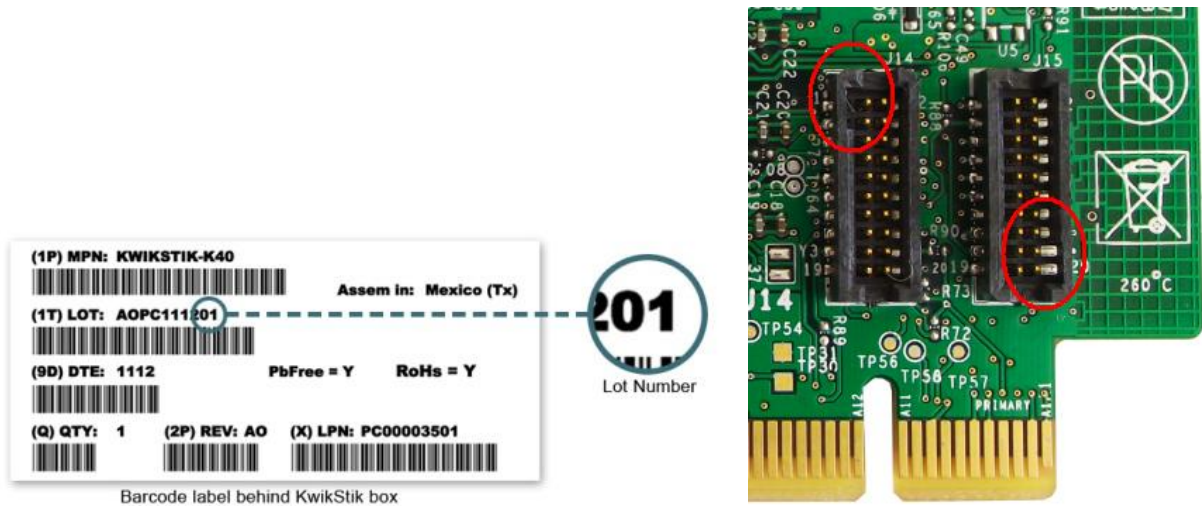
### Status

This issue is fixed starting in version 4.

# KWIKSTIK\_02: TWRPI connectors populated in a wrong orientation

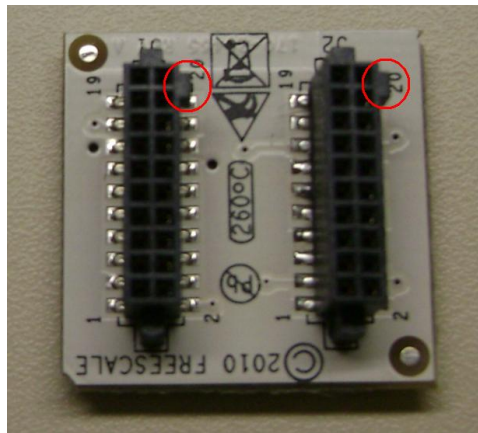
## Description

KWIKSTIK-K40 PWA Rev A/3.0 Boards of shipment lots 01-04 may have the TWRPI connectors (J14, J15) populated in a wrong orientation.



## Workaround

To use the TWRPI interface you will need to remove the key/notch from the female connectors of the TWRPI boards.



## Status

This issue affected a small subset of version 3 hardware only.

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## KWIKSTIK\_03: VBAT not powered

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### Description

VBAT signal is not powered in KWIKSTIK-K40 PWA Rev A/3.0 boards, making the RTC module unusable.

### Workaround

To use the RTC module, power must be supplied to VBat on TP30.



### Status

This issue is fixed starting in version 4.

## **KWIKSTIK\_04: SD Card signals connected to incorrect pins**

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### **Description**

The SD card connector's data pins (DATA0-DATA3) are connected to SDHC0\_D4-SDHC0\_D7 which are unused in 4 bit mode.

### **Workaround**

No practical workaround is available.

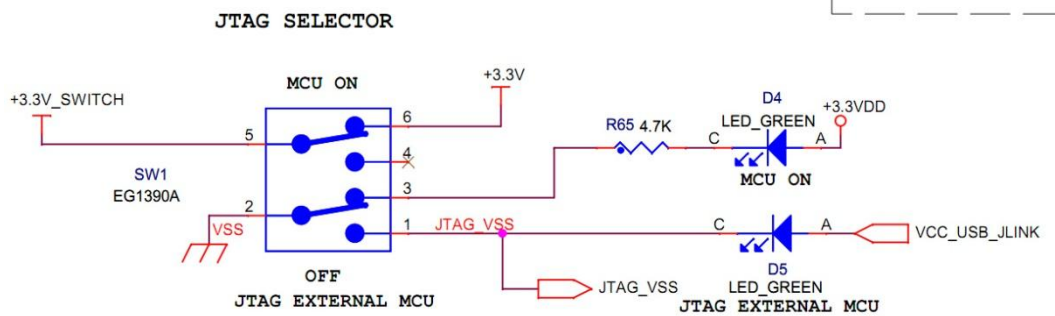
### **Status**

This issue is fixed in version 5.

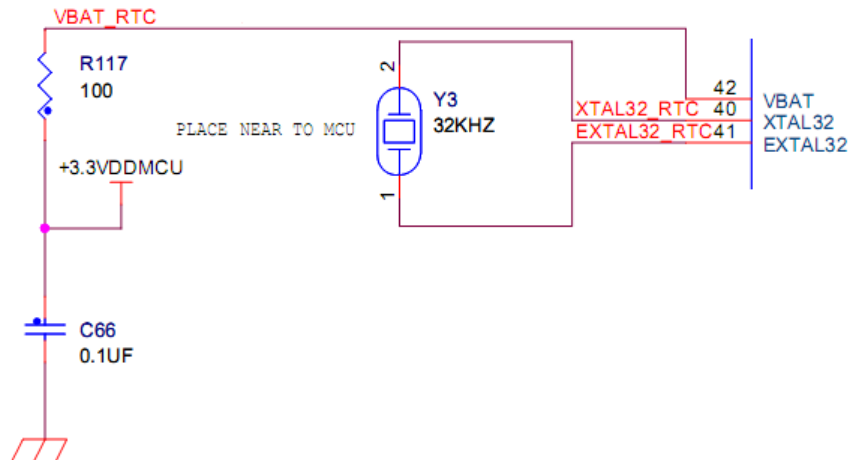
## KwikStik Version 4 Changes

The changes to version 4 of the KwikStik development tool hardware are listed below.

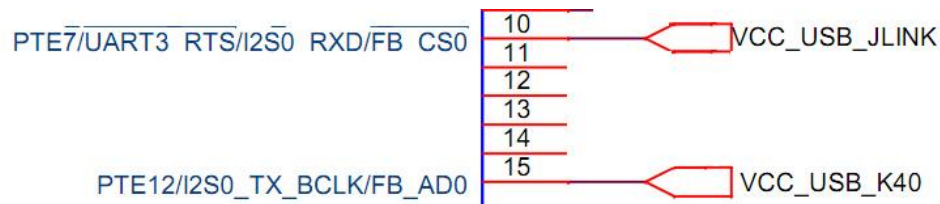
- 1) KWIKSTIK\_01 Errata was corrected. SW1 switch effectively powers down the K40 MCU



- 2) Added R117 and C66 connecting the RTC VBAT (K40X256 pin 42) to the 3.3V MCU supply.



- 3) Moved VCC\_USB\_JLINK and VCC\_USB\_K40 to GPIO pins (previously comparator pins)



- 4) Layout improvements
  - Corrected U1 footprint
  - Added solder mask to vias
  - Added fiducials inside boards
  - Added fiducials for MCUs



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## KwikStik Version 5 Changes

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KWIKSTIK\_04 Errata (SD Card slot) was corrected.