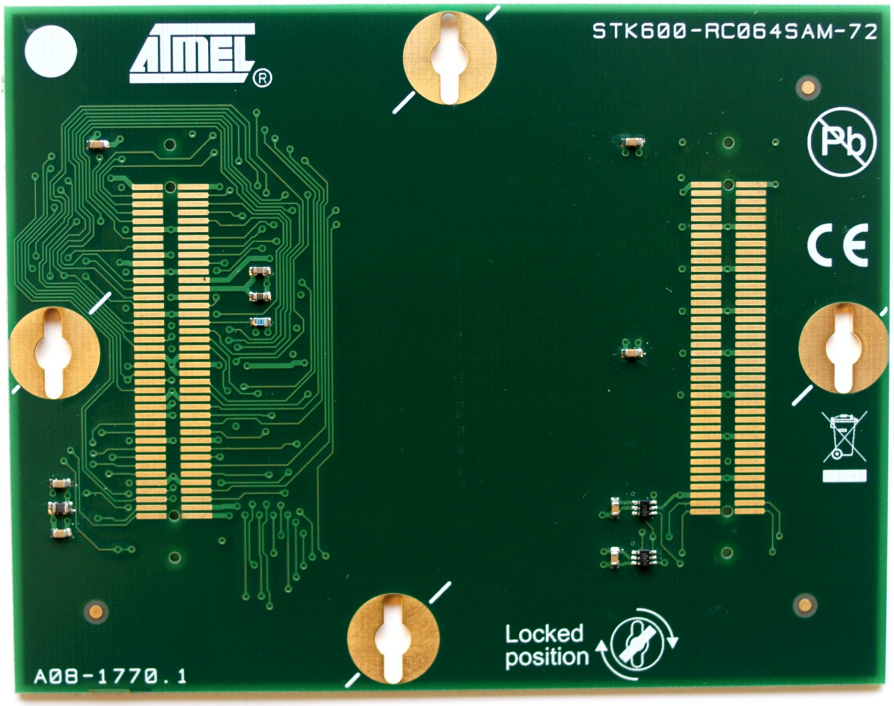
USER GUIDE

STK600-RC064SAM-72



Description

The Atmel® STK®600-RC064SAM-72 (STK600-RC72) is a routing card to support the 64-pin version of the Atmel SAM D20 ARM® Cortex™-M0+ based microcontroller on STK600. The STK600 does not support programming of the SAM D20. However, it does work as a breakout board for IO-pins and programming interface, as well as being able to power the device and provide clock signals.

Table of Contents

Description 1

1. Getting Started 3
   - 1.1. Card Stack 3
   - 1.2. Board Settings 3
   - 1.3. Connections 3

2. Document Revision History 5

1. Getting Started

1.1 Card Stack

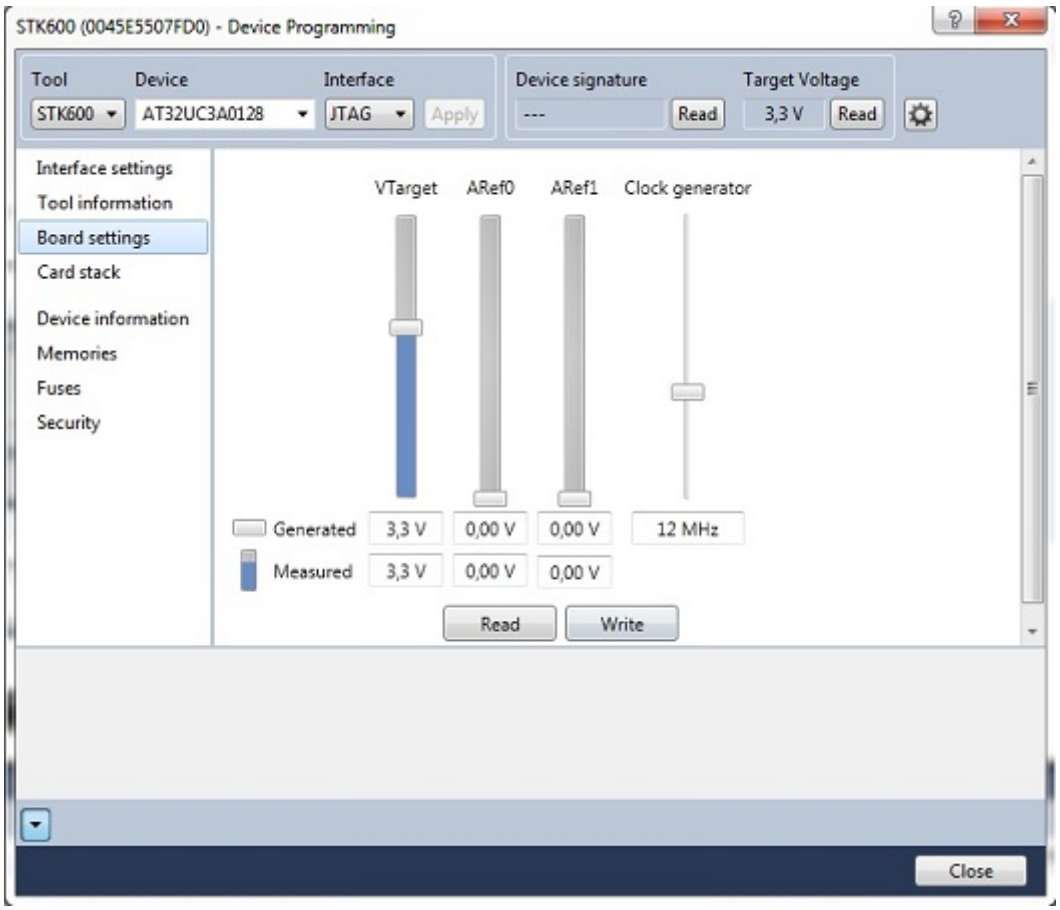
The STK600-RC064SAM-72 must be used together with an STK600. In addition a socket board is required. Depending on the package type of the device, either of STK600-TQFP64-2 and STK600-QFN64 can be used. See the STK600 User Guide for instructions on assembling the card stack.

Once the card stack is assembled, the STK600 can be powered. The status LED should be steady green. If it is blinking orange, it might be necessary to let Atmel Studio update the card stack information on the STK600. This is done automatically when connecting to STK600 in the programming dialog.

1.2 Board Settings

The programming dialog of Atmel Studio is used to set the voltages and clock frequency. Since programming of the SAM D20 is not supported by STK600, it will not show in the device list. Therefore, when connecting to STK600 in the programming dialog, it is necessary to select a different device than SAM D20. Any device and interface (e.g. AT32UC3A0128 and JTAG) from the lists will work for setting the voltage and clock. After connecting, go to board settings to access the voltage and clock settings. Move the sliders and click "Write" to change the values. Note that all voltages are limited to 3.6V.

Figure 1-1. Board settings



1.3 Connections

The SWD interface of the SAM D20 is routed to the 10-pin JTAG connector and the 6-pin ISP connector of the STK600. The pinout is shown in the figure below, in addition to the pinout for the SAM-ICE™.

Figure 1-2. Tool Pinout

1 VTREF	2 NC
3 NC	4 Gnd
5 NC	6 Gnd
7 SWDIO	8 Gnd
9 SWCLK	10 Gnd
11 NC	12 Gnd
13 SWO	14 Gnd
15 RESET	16 Gnd
17 NC	18 Gnd
19 NC	20 Gnd

SAM-ICE

1 SWDIO	2 VCC
3 SWCLK	4 NC
5 RESET	6 Gnd

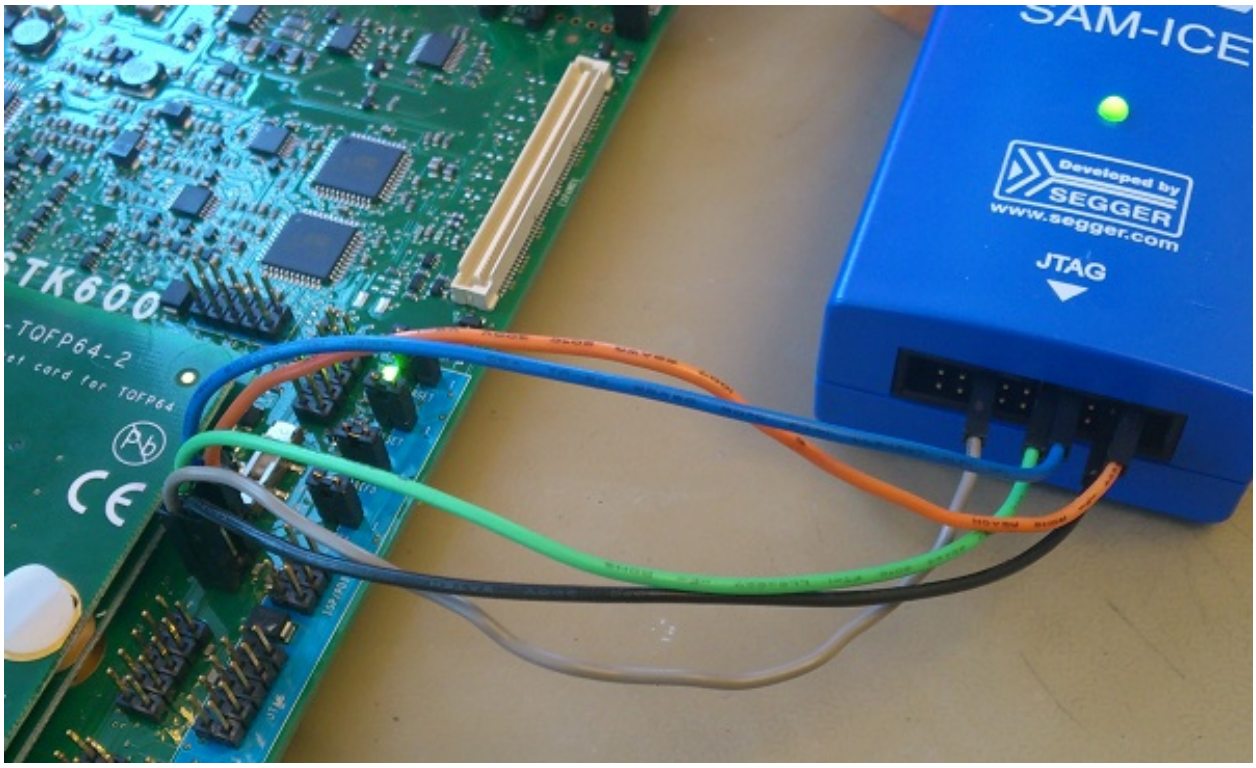
STK600 ISP

1 SWCLK	2 Gnd
3 NC	4 VCC
5 SWDIO	6 RESET
7 NC	8 NC
9 NC	10 Gnd

STK600 JTAG

It is necessary to use single wires to connect the SAM-ICE to the STK600 headers. The picture below is a reference for making the connections.

Figure 1-3. Connecting SAM-ICE over SWD



2. Document Revision History

Doc. Rev.	Date	Comment
A	06/2013	First release



Atmel Corporation 1600 Technology Drive, San Jose, CA 95110 USA **T:** (+1)(408) 441.0311 **F:** (+1)(408) 436.4200 | www.atmel.com

© 2013 Atmel Corporation. All rights reserved. / Rev.: 42148A-MCU-06/2013

Atmel®, Atmel logo and combinations thereof, Enabling Unlimited Possibilities®, and others are registered trademarks or trademarks of Atmel Corporation or its subsidiaries. ARM® and Cortex® are registered trademarks of ARM Ltd. Other terms and product names may be trademarks of others.

Disclaimer: The information in this document is provided in connection with Atmel products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Atmel products. EXCEPT AS SET FORTH IN THE ATMEL TERMS AND CONDITIONS OF SALES LOCATED ON THE ATMEL WEBSITE, ATMEL ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL ATMEL BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS AND PROFITS, BUSINESS INTERRUPTION, OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF ATMEL HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Atmel makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and products descriptions at any time without notice. Atmel does not make any commitment to update the information contained herein. Unless specifically provided otherwise, Atmel products are not suitable for, and shall not be used in, automotive applications. Atmel products are not intended, authorized, or warranted for use as components in applications intended to support or sustain life.