USBPluginCard for the EVK1060A Demonstration Kit

User Guide

10626A–AT42–07/09

Section 1

Overview and Procedure

1.1 Introduction

This application note details how to set up the EVK1060A standalone evaluation board to connect to a PC using the USBPluginCard, in order to run EVK1060A demonstration software.

New users are recommended to work through the Quickstart guide to familiarise themselves with the kit and software before reading this User Guide.

Note: There are slight differences between how the EVK1060A works in a standalone mode and how it works when connected to the USBPluginCard.

For detailed information regarding these products, including the latest datasheet and demonstration software, go to www.atmel.com.

Note: This User Guide should be read in conjunction with *Software GUI for the EVK1060A Demonstration Kit* User Guide.

1.2 Getting Started

1.2.1 Components Required

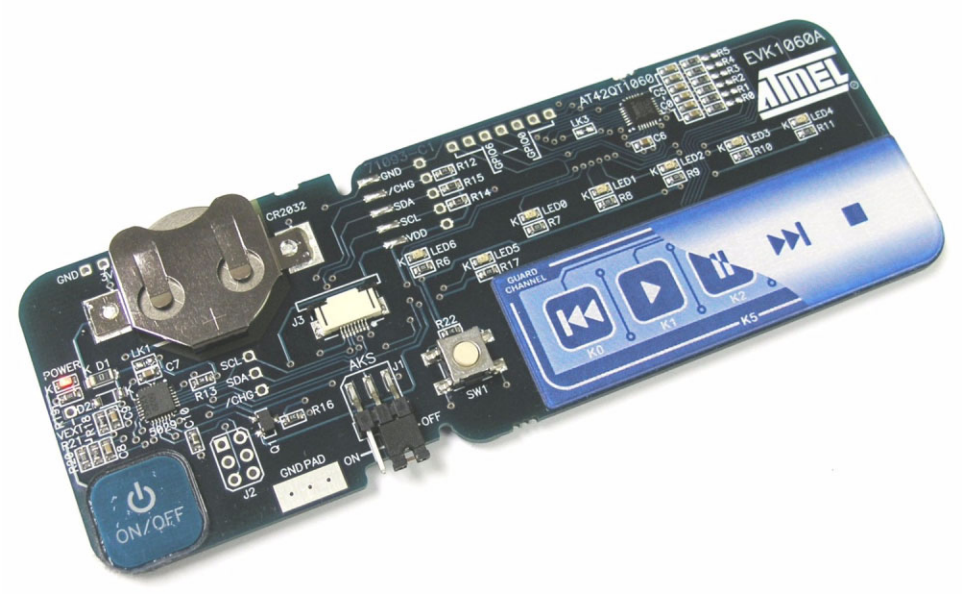
The following components are required:

- 1 x EVK1060A Evaluation Board
- 1 x 9206 USBPluginCard
- 1 x Soldering Iron
- 1 x Solder
- 1 x Tweezers

1.2.2 EVK1060A Evaluation Board

The EVK1060A Evaluation Board (see Figure 1-1 on page 1-2) comprises one AT42QT1060-MMU (QT1060) with 6 channels; these are configured as 6 capacitive sensing keys (K0 – K4, and one which is used as a guard channel, K5). There are also seven General Purpose Inputs/Outputs (GPIOs); six set as outputs (IO0 – IO5) and one as an input channel, IO6 (SW1).

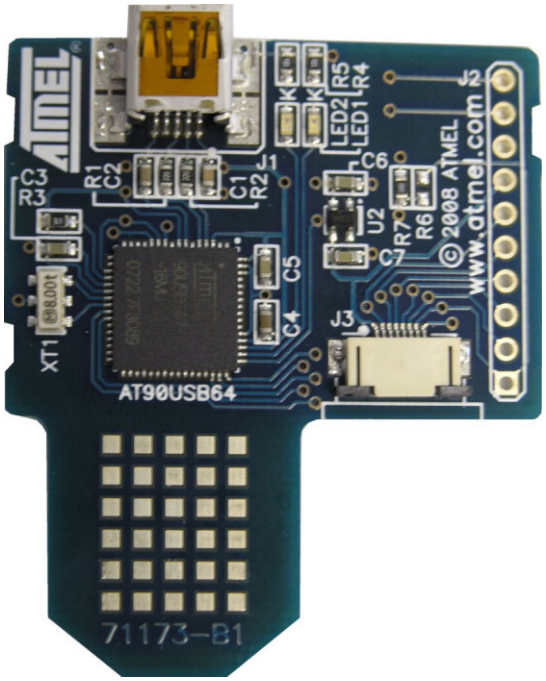
Figure 1-1. EVK1060A Evaluation Board



1.2.3 USBPluginCard

The USBPluginCard enables standalone evaluation boards such as the EVK1060A to connect to PC applications through a USB port, using I²C-compatible communications (see Figure 1-2).

Figure 1-2. USBPluginCard

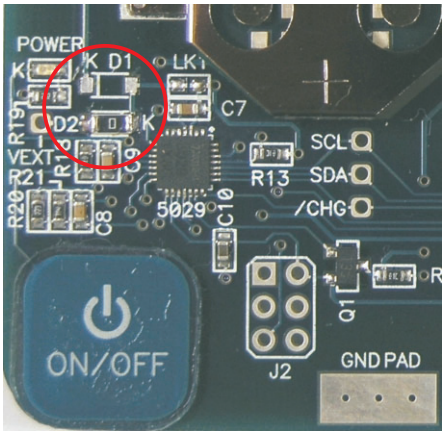


1.3 EVK1060A Preparation

The USBPluginCard is used to supply external power to the unit. To protect the unit from possible damage through cross-powering of external and battery power:

1. Remove the battery from the EVK1060A evaluation board (if fitted).
2. Remove the 0Ω resistor from D1 and fit to D2 (see Figure 1-3).

Figure 1-3. EVK1060A Adaptations

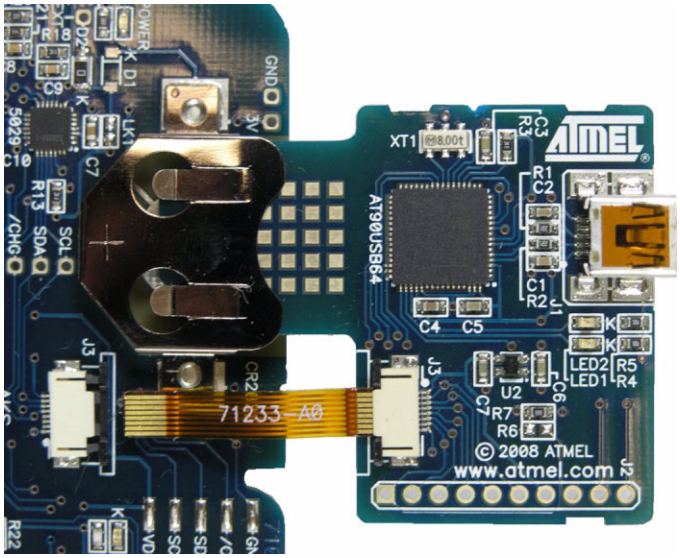


1.4 EVK1060A and USBPluginCard Assembly

To assemble the EVK1060A and USBPluginCard:

1. Open the flexible flat cable (FFC) connector (J3) on EVK1060A (see Figure 1-4).
2. Slide the USBPluginCard into the battery slot on the EVK1060A PCB (see Figure 1-4).

Figure 1-4. USBPluginCard and EVK1060A Connections



3. Insert the FCC into J3 on EVK1060A and close the connector firmly to ensure full contact. The assembly setup for connection to PC software is now complete.
4. Refer to the *Software GUI for the EVK1060A User Guide* for details of the software GUI interface.

Figure 1-5. USBPluginCard and EVK1060A Setup Complete

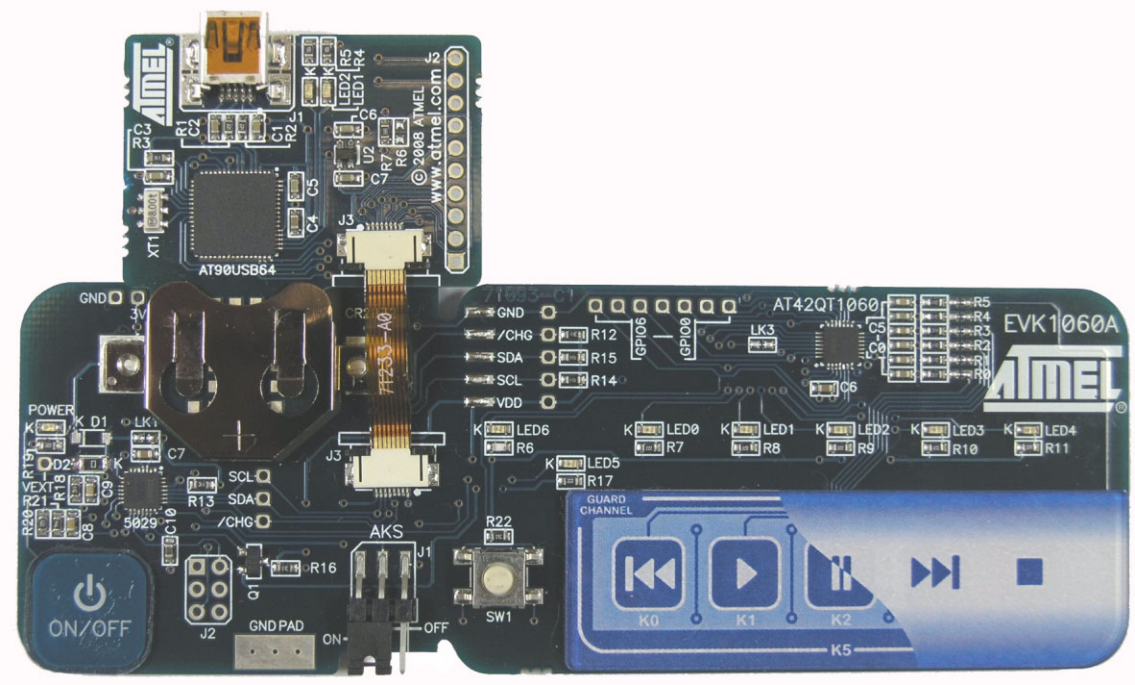


Figure 1-6. EVK1060A Demonstration Board Schematic

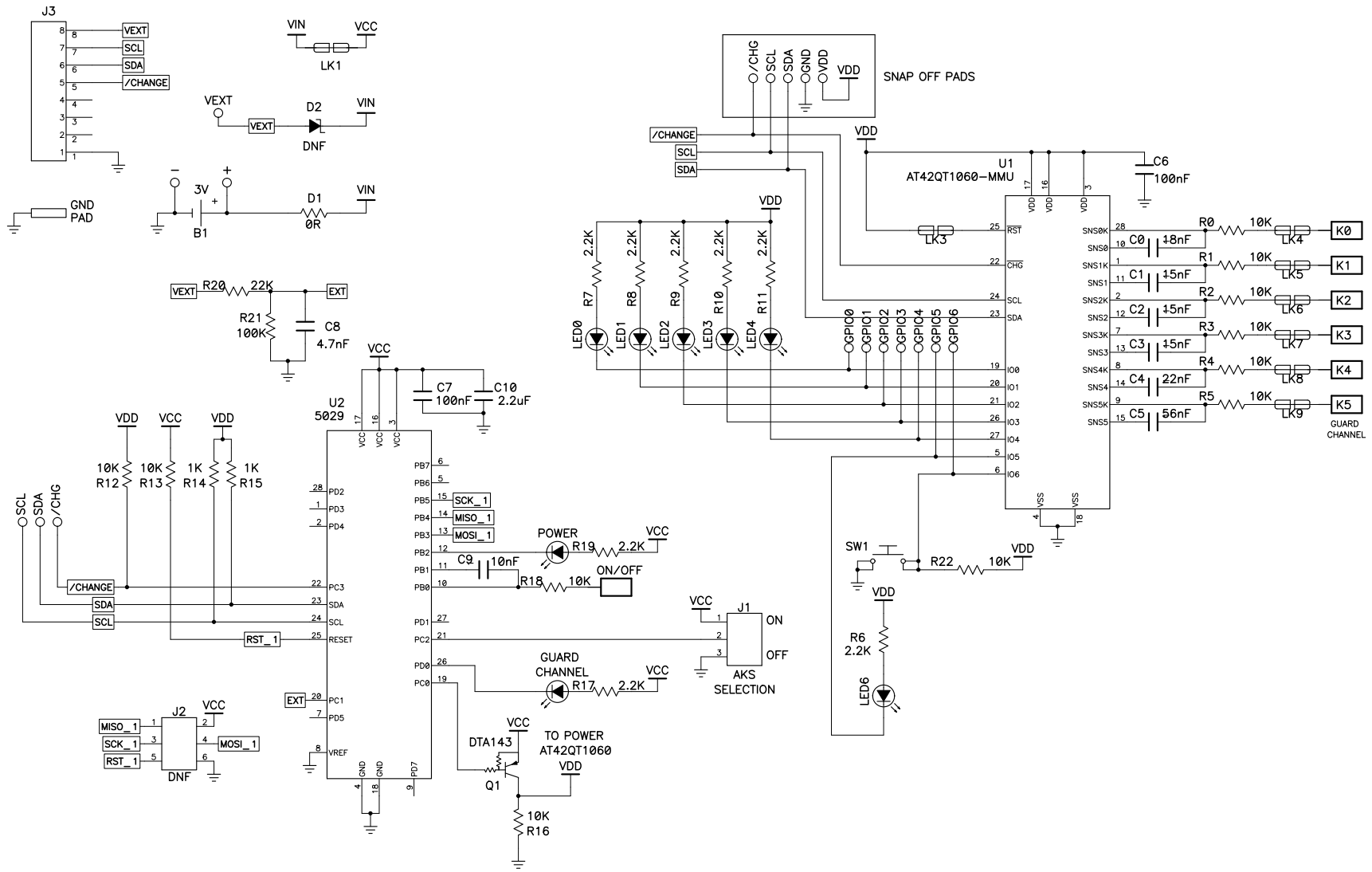
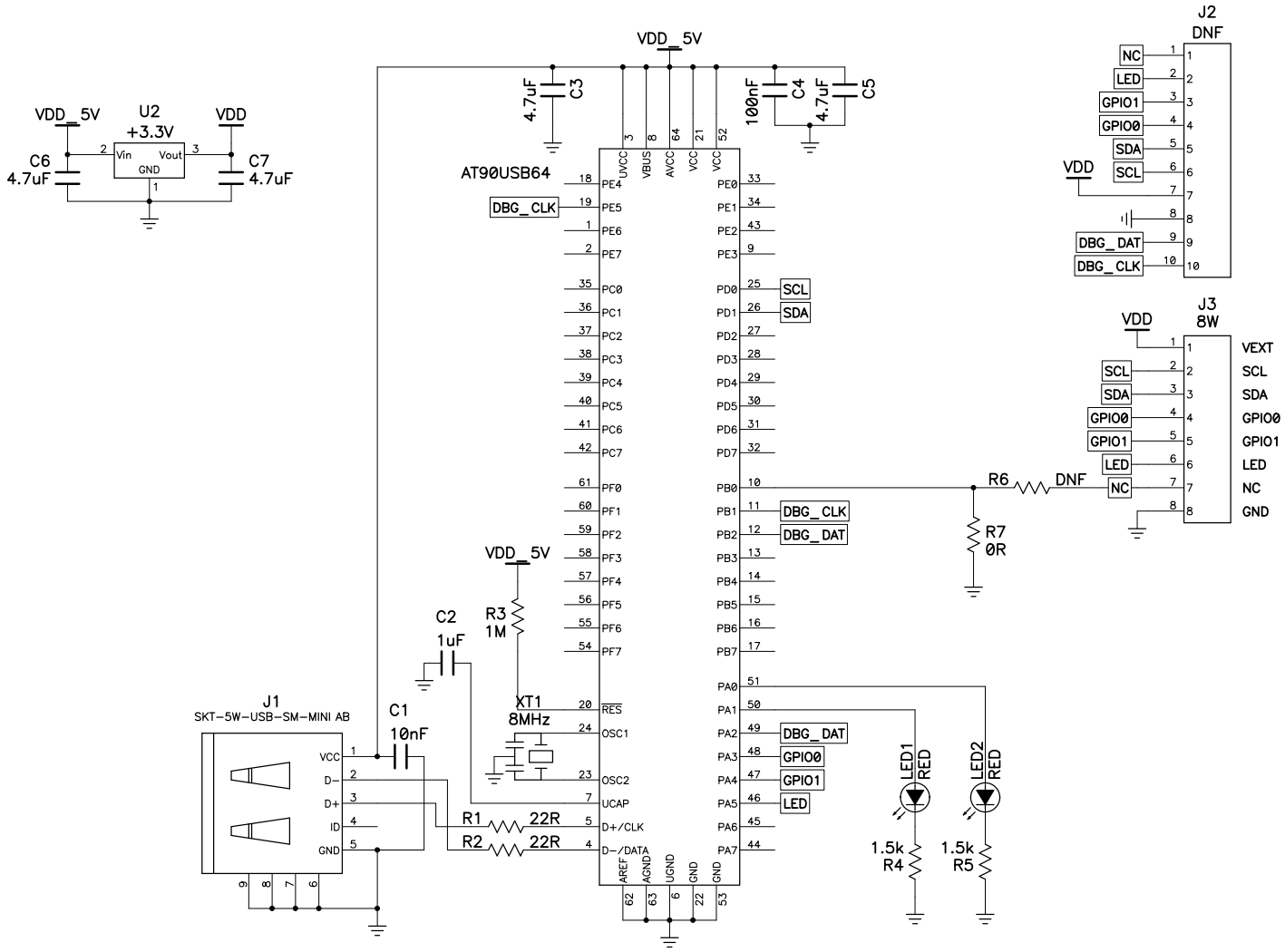


Figure 1-7. USBPluginCard Schematic



Associated Documents

- User Guide – *Software GUI for the EVK1060A Demonstration Kit*

Revision History

Revision No.	History
Revision A – July 2009	• Initial version for EVK1060A (71093-C1) and USBPluginCard (71173-B1)

Headquarters

Atmel Corporation
2325 Orchard Parkway
San Jose, CA 95131
USA
Tel: 1(408) 441-0311
Fax: 1(408) 487-2600

International

Atmel Asia
Unit 01-05 & 16, 19/F
BEA Tower, Millennium City 5
418 Kwun Tong Road
Kwun Tong
Kowloon
Hong Kong
Tel: (852) 2245-6100
Fax: (852) 2722-1369

Atmel Europe
Le Krebs
8, Rue Jean-Pierre Timbaud
BP 309
78054 Saint-Quentin-en-
Yvelines Cedex
France
Tel: (33) 1-30-60-70-00
Fax: (33) 1-30-60-71-11

Atmel Japan
9F, Tonetsu Shinkawa Bldg.
1-24-8 Shinkawa
Chuo-ku, Tokyo 104-0033
Japan
Tel: (81) 3-3523-3551
Fax: (81) 3-3523-7581

Touch Technology Division
1 Mitchell Point
Ensign Way
Hamble
Southampton
Hampshire SO31 4RF
United Kingdom
Tel: (44) 23-8056-5600
Fax: (44) 23-8045-3939

Product Contact

Web Site
www.atmel.com

Technical Support
touch@atmel.com

Sales Contact
www.atmel.com/contacts

Literature Requests
www.atmel.com/literature