



# Atmel CryptoAuthentication Evaluation Kit

## Atmel AT88CK454BLACK Quick Start Guide

### Features

- Installing Atmel CryptoAuthentication Evaluation Studio (ACES)
- Powering the board
- Reading the device configuration information Atmel ATSHA204 device

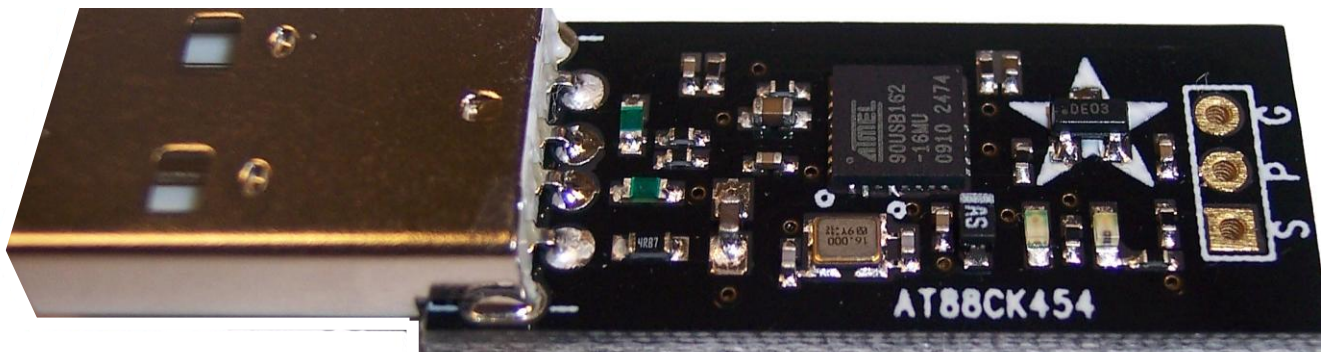
### Contents

- Atmel AT88CK454BLACK USB Dongle
- Quick start guide

### Introduction

Atmel® AT88CK454BLACK is an Atmel CryptoAuthentication™ evaluation kit, which can be used as a reference design for an USB application requiring the Atmel CryptoAuthentication product family.

Figure 1. Atmel AT88CK454BLACK evaluation kit





## 1. Install ACES (Atmel CryptoAuthentication Evaluation Studio)

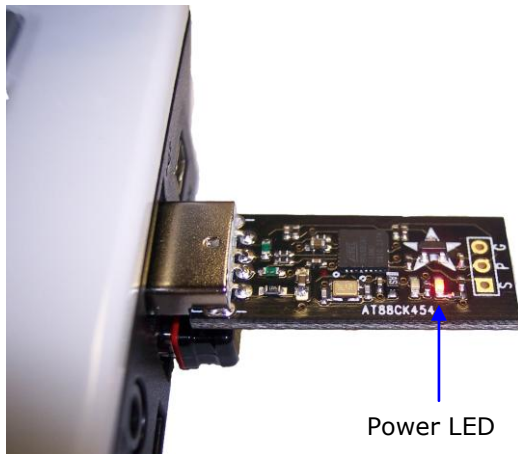
Visit [www.atmel.com/cryptokits](http://www.atmel.com/cryptokits) to download and install the latest ACES.

## 2. Powering up the board

The Atmel AT88CK454BLACK is a USB powered device.

- Simply insert the board into an open USB port

Figure 2-1. Atmel AT88CK454BLACK USB device



## 3. Reading the device configuration zone

- Insert the Atmel AT88CK454BLACK into a USB port
- Launch **ACES CE** for the desktop shortcut icon or from  
Start / All Programs / Atmel Crypto Solutions / ACES / ACES CE

Figure 3-1. ACES



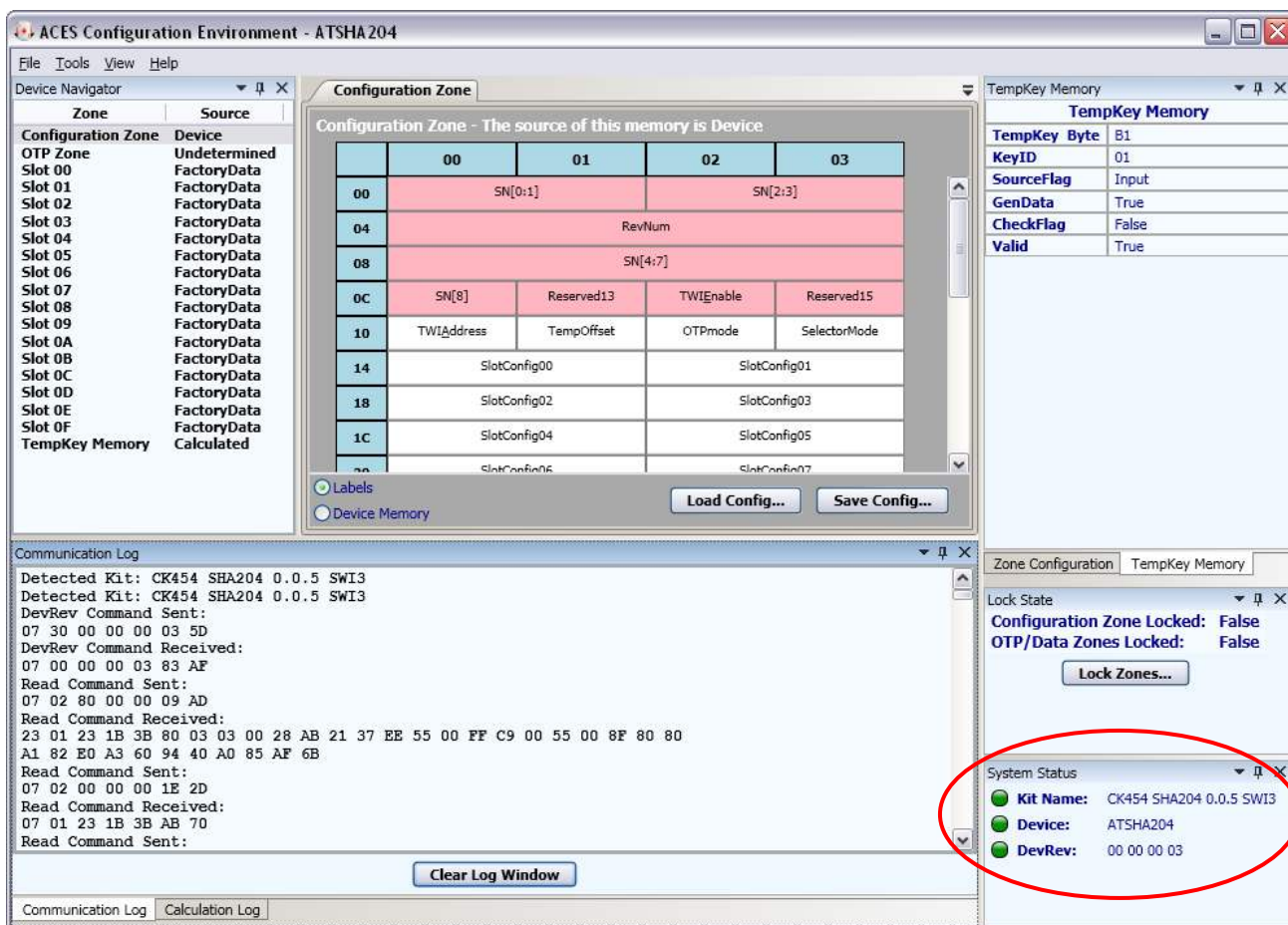
- Figure 3-2 will appear indicating the board (CK454), device (SHA204), firmware version (0.0.5), communication interface (SWI - single wire interface), and the device lead count SWI3.

Figure 3-2. Kit detection screen



- Selecting the **Show Quick Start Guide** check box will launch the QSG alongside the configuration environment
- Click the "Select Kit" button to launch **ACES Configuration Environment – ATSHA204** pane

Figure 3-3. ACES Configuration Environment – Atmel ATSHA204





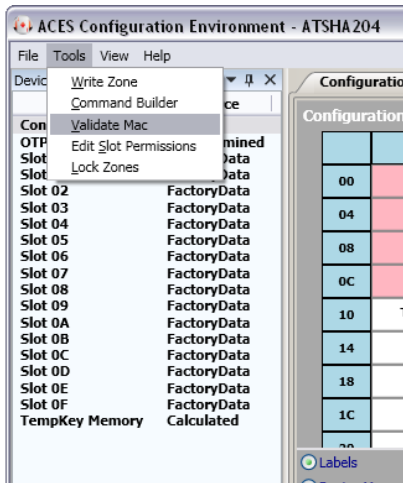
- All three **System Status** fields should be green and populated, which indicates the proper communication with the development kit and the Atmel ATSHA204 device

Kit Name: SHA204 0.0.3 SWI  
Device: ATSHA204  
DevRev: 00 00 00 03

#### 4. Executing the **Validate MAC** Command

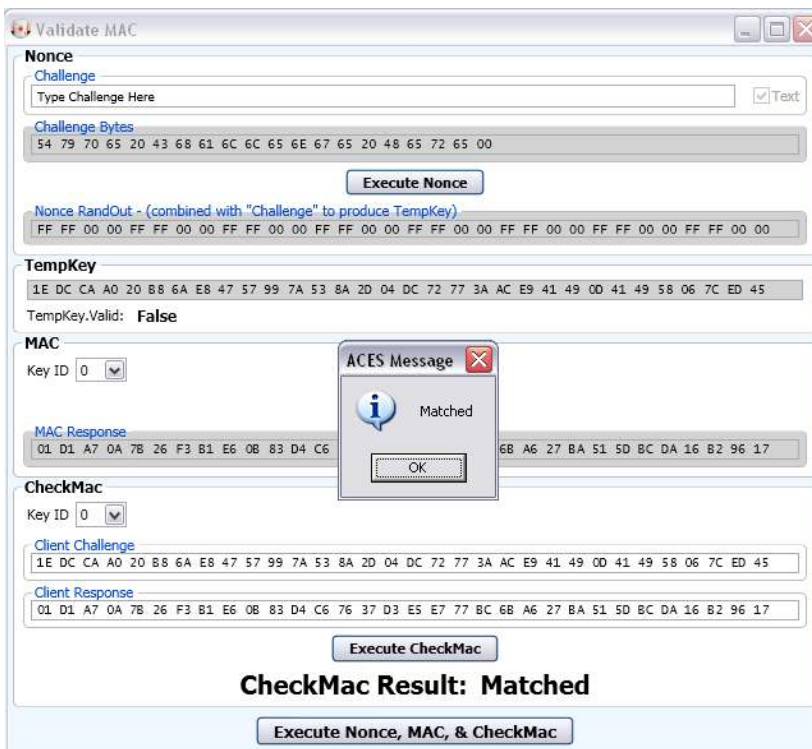
- Go to Tools \ Validate MAC to launch the Validate MAC window, see Figure 4-1

Figure 4-1. Validate MAC tools menu



- Figure 4-2 will appear
- Click the Execute Nonce button
- Click the MAC button
- Click the CheckMac button
- The CheckMac Result: should indicate Matched

Figure 4-2. Validate MAC pane



Congratulations, your Atmel AT88CK454BLACK is up and running.

See ACES online Help additional information.

For additional samples, go to: [http://www.atmel.com/forms/Samples.asp?family\\_id=699](http://www.atmel.com/forms/Samples.asp?family_id=699)

## 5. Additional Kits Information

Table 5-1. Atmel CryptoAuthentication kits

| Atmel CryptoAuthentication kits |                        |                  |                 |
|---------------------------------|------------------------|------------------|-----------------|
| Atmel kits                      | Atmel device supported | Device footprint | Socket(s)       |
| AT88CK454BLACK                  | ATSHA204               | SOT23-3          | None/USB Dongle |
| AT88CK101STK3                   | ATSHA204               | SOT23-3          | 1               |
| AT88CK101STK8                   | ATSHA204               | 8LD SOIC         | 1               |
| AT88CK109STK3                   | ATSHA204               | SOT23-3          | 2               |
| AT88CK109STK8                   | ATSHA204               | 8LD SOIC         | 2               |

## 6. Firmware upgrade

See application note, doc8746, Upgrading Crypto Kits Firmware.



## 7. References and further information

A complete reference design including schematics, Gerber files, bill of materials (BOM), hardware user guide and development and demonstration software is conveniently downloadable from the Atmel website at [www.atmel.com/cryptokits](http://www.atmel.com/cryptokits).

## 8. EVALUATION BOARD/KIT IMPORTANT NOTICE

This evaluation board/kit is intended for **ENGINEERING, DEVELOPMENT, DEMONSTRATION** or **EVALUATION PURPOSE ONLY**. It is not a finished product and may not (yet) comply with some or any technical or legal requirements that are applicable to finished products, including, without limitations, directives regarding electromagnetic compatibility, recycling (WEEE), FCC, CE or UL (except as may be otherwise noted on the board/kit). Atmel® supplied this board/kit "AS IS," without any warranties, with all faults, at the buyer's and further users' sole risk. The user assumes all responsibility and liability for proper and safe handling of goods. Further, the user indemnifies Atmel from claims arising from the handling or use of goods. Due to open construction of the product, it is the user's responsibility to take any and all appropriate precautions with regard to electrostatic discharge and any other technical or legal concerns.

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