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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
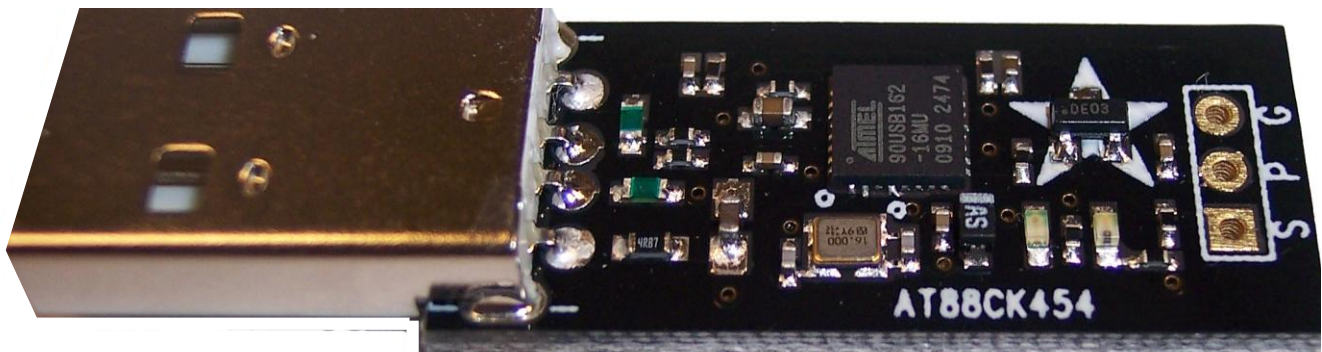
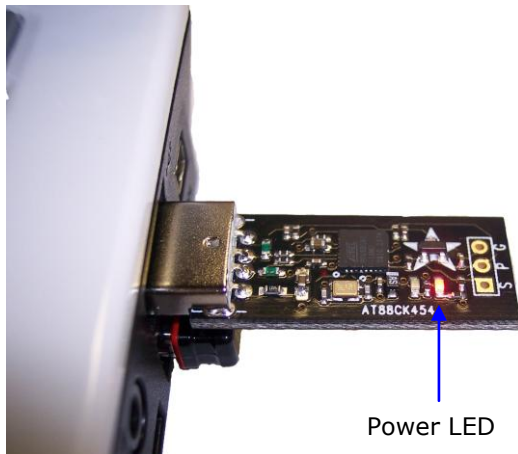# 1. Install ACES (Atmel CryptoAuthentication Evaluation Studio)

Visit www.atmel.com/cryptokits 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

Power LED

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

Atmel AT88CK454BLACK Quick Start Guide

- 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 SWI**3**.

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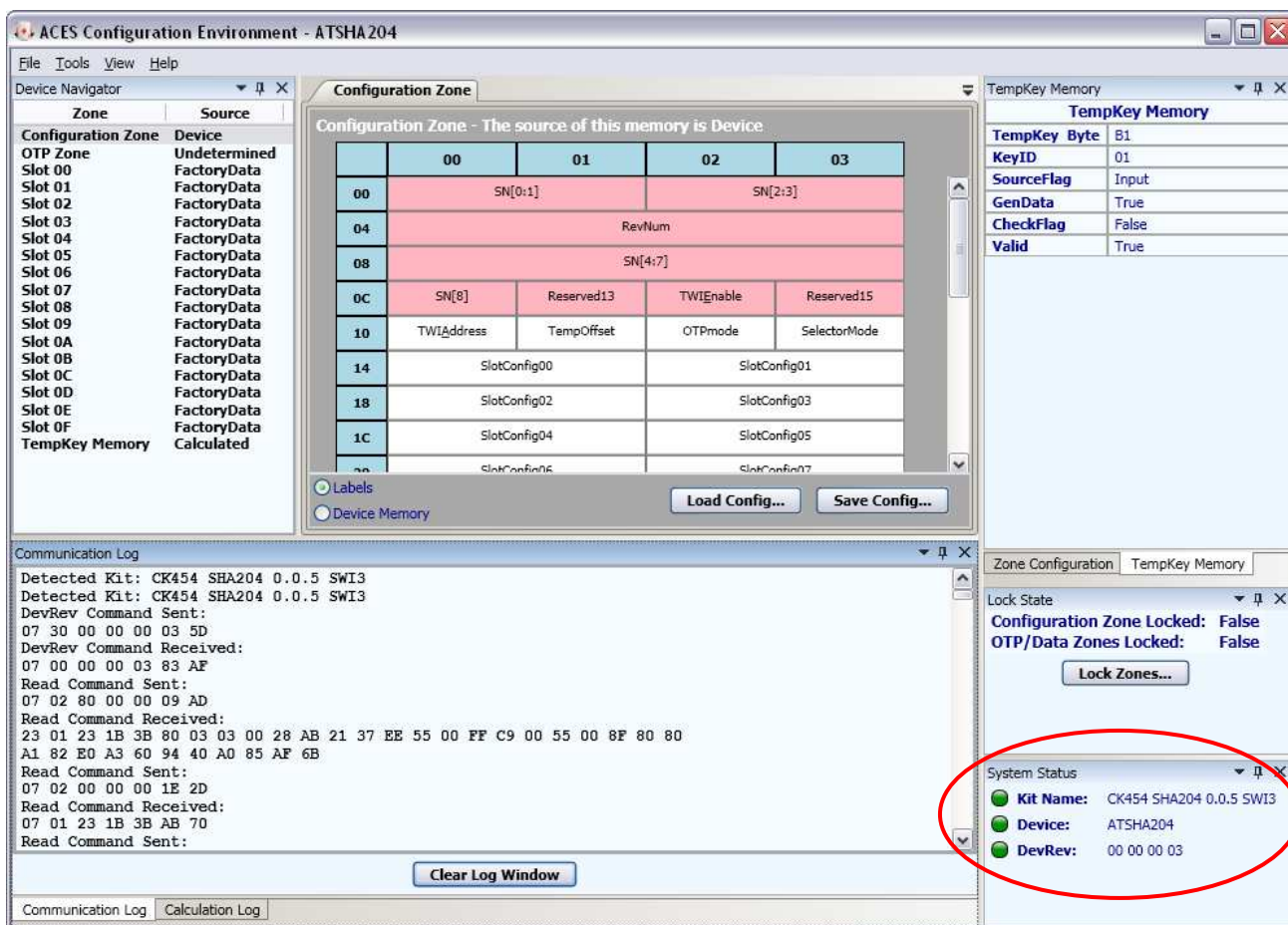
- All three **System Status** fields should be green and populated, which indicates the proper communication with the development kit and the Atmel ATSHA204 device

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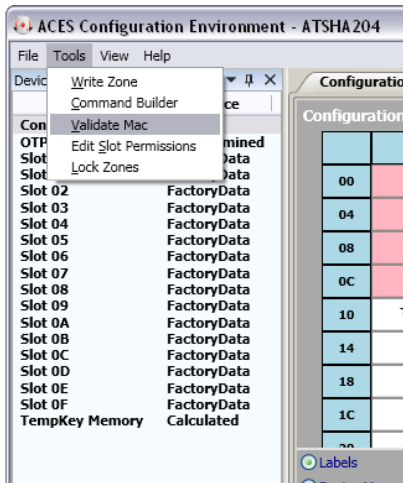
- Figure 4-2 will appear
- Click the Execute Nonce button
- Click the MAC button
- Click the CheckMac button
- The CheckMac Result: should indicate Matched

Figure 4-2. Validate MAC pane
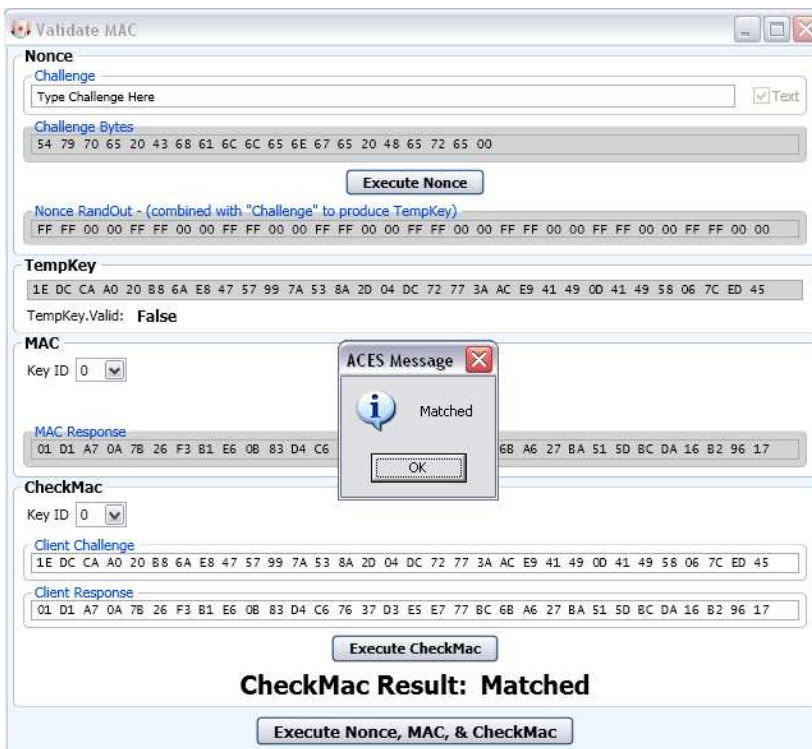
Congratulations, your Atmel AT88CK454BLACK is up and running.

See ACES online Help additional information.

For additional samples, go to: http://www.atmel.com/forms/Samples.asp?family_id=699

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.

8. EVALUATION BOARD/KIT IMPORTANT NOTICE

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