



ATMx2xx Chip Revisions Application Note

Revision History

Date	Version	Description
March 31, 2021	0.50	Initial version created.
April 16, 2021	0.51	Updated format, no content change.
July 1, 2021	0.52	Updated Overview , added ATMx2xx-x1x Hardware Changes sections.

CONFIDENTIAL

Table of Contents

Overview	3
Related Documentation	3
Identifying the Part Version on Evaluation Boards	4
Identifying the Part Version from Top Side Marking	4
Software Development Kit Directories	6
ATMx2xx-x1x Hardware Changes	7

List of Figures

Figure 1 - Evaluation Board with Chip Identification Label

Figure 2 - Top Side Part Marking with First Character of Lot Code Highlighted

Figure 3 - Software Development Kit Directories

List of Tables

Table 1 - Lot Code Character and IC Version

Overview

Atmosic supports two different versions of all ATM2 and ATM3 devices. The difference between these two device versions is captured by the second digit in the -xxx extension to the product code for the device. In order to build the correct application software for any ATM2 or ATM3 device it is necessary to identify the device version and use the appropriate directory in the Atmosic Software Development Kit (SDK) for the software build.

This application note describes how to identify the device version based on an evaluation board sticker or via the lot code printed on the ATM2/ATM3 device itself. It also lists the hardware changes between these two device versions. For more information contact your local Atmosic sales representative or email Atmosic support (support@atmosic.com).

Related Documentation

- [SDK Quick Start Guide for ATMx2xx](#)

CONFIDENTIAL

Identifying the Part Version on Evaluation Boards

All evaluation boards have a sticker that identifies the part number of the IC on the board. If the part number on the sticker has a three digit extension with the format “-x1x” (a 1 as the second digit) then the device on the board is a -x1x version. An example of this is shown highlighted in yellow in [Figure 1](#).

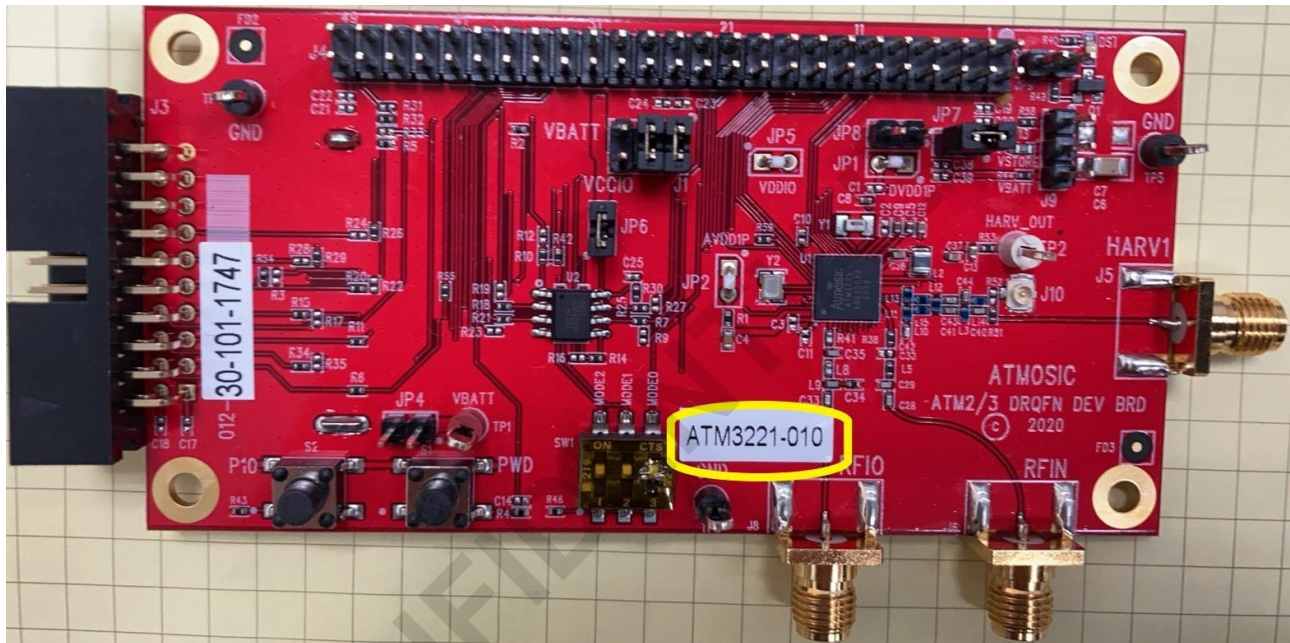


Figure 1 - Evaluation Board with Chip Identification Label

If the part number on the sticker has an extension with a 0 as the second digit, if it lacks an extension, or if the board has no part number sticker then the version of the part on the board is -x0x.

Identifying the Part Version from Top Side Marking

All Atmosic components are top-side marked with a part number, lot code and date information. The first character on the third line of the top marking is a lot code that indicates the revision of the chip. An example of the lot code character is highlighted in yellow in [Figure 2](#).



Figure 2 - Top Side Part Marking with First Character of Lot Code Highlighted

[Table 1](#) maps the first character of the lot code to the appropriate part version.

Lot Code Character	IC Version
A	-x0x
B	-x0x
C	-x0x
D	-x1x
E	-x0x
F	-x0x
G	-x1x
H	-x0x
I	-x0x

J	-x0x
K	-x0x
L	-x1x
M	-x1x
N	-x1x

Table 1 - Lot Code Character and IC Version

Software Development Kit Directories

Starting with version 4.0.0 all SDK releases provide separate directories for building software for the two different part revisions. The two directories are distinguished by the -x0x or -x1x extensions at the end of the directory name as shown in [Figure 3](#).

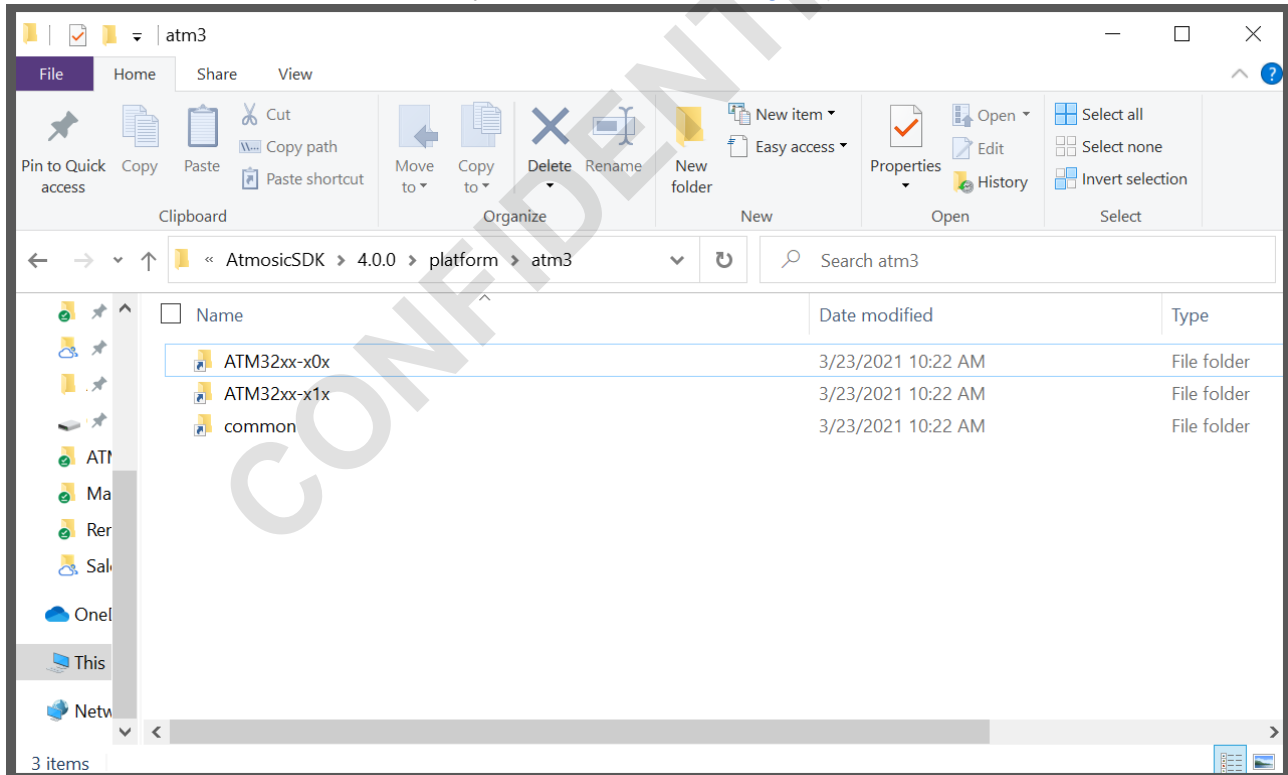


Figure 3 - Software Development Kit Directories

Users should ensure that they only build software in the directory appropriate for the version of the target device. Consult the SDK Quick Start Guide for ATMx2xx for additional information.

ATMx2xx-x1x Hardware Changes

The following changes have been made to the -x1x revision of the ATMx2xx devices:

1. Updated minor field in the CMSDK_WRPR->CHIPREV register to 3. This indicates the new version of the device.
2. Connected the internal ground reference to the Application ADC such that ATM3221-x1x applications using the ADC now have no usage restrictions on the P8 GPIO.
3. Updated reset values for some registers to reduce ATMx2xx-x1x OTP content.
4. ATM22xx-x1x applications can operate without an external 32.768 kHz crystal. Consult the ATMx2xx Reference Manual for additional information
5. Enhancements to the ROM are covered in the release SDK 4_0_0 Release notes (ATMx2xx-RNSDK-0100)

CONFIDENTIAL



ATMOSIC TECHNOLOGIES - DISCLAIMER

This product document is intended to be a general informational aid and not a substitute for any literature or labeling accompanying your purchase of the Atmosic product. Atmosic reserves the right to amend its product literature at any time without notice and for any reason, including to improve product design or function. While Atmosic strives to make its documents accurate and current, Atmosic makes no warranty or representation that the information contained in this document is completely accurate, and Atmosic hereby disclaims (i) any and all liability for any errors or inaccuracies contained in any document or in any other product literature and any damages or lost profits resulting therefrom; (ii) any and all liability and responsibility for any action you take or fail to take based on the information contained in this document; and (iii) any and all implied warranties which may attach to this document, including warranties of fitness for particular purpose, non-infringement and merchantability. Consequently, you assume all risk in your use of this document, the Atmosic product, and in any action you take or fail to take based upon the information in this document. Any statements in this document in regard to the suitability of an Atmosic product for certain types of applications are based on Atmosic's general knowledge of typical requirements in generic applications and are not binding statements about the suitability of Atmosic products for any particular application. It is your responsibility as the customer to validate that a particular Atmosic product is suitable for use in a particular application. All content in this document is proprietary, copyrighted, and owned or licensed by Atmosic, and any unauthorized use of content or trademarks contained herein is strictly prohibited.

Copyright ©2021 by Atmosic Technologies. All rights reserved.

www.atmosic.com