



Customer Information Notification

202005006IU01

Issue Date: 27-Aug-2020

Effective Date: 28-Aug-2020

UPDATE



Change Category

- | | | | | |
|--|--|--|---|---|
| <input type="checkbox"/> Wafer Fab Process | <input type="checkbox"/> Assembly Process | <input type="checkbox"/> Product Marking | <input type="checkbox"/> Test Location | <input type="checkbox"/> Design |
| <input type="checkbox"/> Wafer Fab Materials | <input type="checkbox"/> Assembly Materials | <input type="checkbox"/> Mechanical Specification | <input type="checkbox"/> Test Process | <input type="checkbox"/> Errata |
| <input type="checkbox"/> Wafer Fab Location | <input type="checkbox"/> Assembly Location | <input type="checkbox"/> Packing/Shipping/Labeling | <input type="checkbox"/> Test Equipment | <input type="checkbox"/> Electrical spec./Test coverage |
| <input type="checkbox"/> Firmware | <input checked="" type="checkbox"/> Other - Software | | | |

Incorrect Voltage Setting with Risk of Damage to i.MX 8M Mini and i.MX 8M Nano

Description

This customer information notification (CIN) has updated information and supersedes CIN 202005006I.

The Low-dropout (LDO) linear regulators, LDO1 and LDO2 output voltage on the ROHM PMICs BD71837, BD71840, BD71847 and BD71850 are incorrectly configured in the NXP supplied Linux BSP GA releases. This impacts certain i.MX 8M Mini and i.MX 8M Nano NXP reference designs and/or customer designs using the specific ROHM PMIC's.

Affected NXP Linux software BSP GA releases:

- Linux LTS release L4.14.98_2.3.0
 - o Referenced by branch imx_4.14.90_2.3.0 with tag rel_imx_4.14.98_2.3.0
- Linux LTS release L4.19.35_1.1.0
 - o Referenced by branch imx_4.19.35_1.1.0 with tag rel_imx_4.19.35_1.1.0
- Linux LTS release L5.4.3_2.0.0
 - o Referenced by branch imx_5.4.3_2.0.0 with tag rel_imx_5.4.3_2.0.0

NXP recommends all impacted users to upgrade to the latest software version or applying the patches detailed below to prevent any damage to the SoC IO's and impact device reliability.

NXP Linux software branches that have the resolution:

- Linux LTS release L4.14.98_2.3.0 referenced by the HEAD of the branch imx_4.14.90_2.3.0
- Linux LTS release L4.19.35_1.1.0 referenced by the HEAD of the branch imx_4.19.35_1.1.0
- Linux LTS release L5.4.3_2.0.0 referenced by the HEAD of the branch imx_5.4.3_2.0.0

Software patch details in the Code Aurora Forum (CAF):

For L4.14.98_2.3.0, the git log references are:

- MLK-23275-1: ARM64: dts: freescale: fsl-imx8mm-evk: correct ldo1/ldo2 voltage
- MLK-23275-2: ARM64: dts: freescale: fsl-imx8mn-ddr4-evk: correct ldo1/ldo2 voltage
- MLK-23275-3: regulator: bd71837: correct ldo1/ldo2 group

For L4.19.35_1.1.0, the git log references are:

- MLK-23275-1: ARM64: dts: freescale: fsl-imx8mm-evk: correct ldo1/ldo2 voltage
- MLK-23275-2: ARM64: dts: freescale: fsl-imx8mn-ddr4-evk: correct ldo1/ldo2 voltage
- MLK-23275-3: regulator: bd71837: correct ldo1/ldo2 group

For L5.4.3_2.0.0, the git log references are:

- MLK-23275-1: ARM64: dts: freescale: fsl-imx8mm-evk: correct ldo1/ldo2 voltage
- MLK-23275-2: ARM64: dts: freescale: fsl-imx8mn-ddr4-evk: correct ldo1/ldo2 voltage
- MLK-23844-1: ARM64: dts: freescale: imx8mn-ddr4-evk: cleanup Rhom pmic
- MLK-23844-2: ARM64: dts: freescale: imx8mm: correct VDDARM@1.6GHz

Latest software releases can be found at: <https://www.nxp.com/imxlinux>

Reason

The LDO1 and LDO2 output voltage on the ROHM BD71837, BD71840, BD71847 and BD71850 PMICs are incorrectly configured and do not comply with the respective i.MX 8M Mini and i.MX 8M Nano device specifications and may damage device IO's connected to the specific voltage rails. There is no impact of this incorrect voltage configuration on the ROHM PMICs.

- LD01 @3.0V is connected to NVCC_SNVS_1V8 supply rail
- LD02 @0.9V is connected to VDD_SNVS_0V8 supply rail

Identification of Affected Products

Not applicable.

Update Information

Added additional information and updated the impact of the affected products.

Anticipated Impact on Form, Fit, Function, Reliability or Quality

Operating the i.MX 8M Mini and i.MX 8M Nano SoC's at higher voltages may cause damage to the IO that can potentially affect function, reliability, and impact product longevity.

Data Sheet Revision

No impact to existing datasheet

Disposition of Old Products

Not applicable.

Remarks

You have received this notice because you registered and downloaded certain materials from NXP and provided your personal contact information at that time. If you have any questions related to how NXP handles personal data please refer to NXP's privacy statement at <https://www.nxp.com/company/our-company/about-nxp/privacy:PRIVACYPRACTICES>

Contact and Support

For all inquiries regarding the ePCN tool application or access issues, please [contact NXP "Global Quality Support Team"](#).

For all Quality Notification content inquiries, please contact your local NXP Sales Support team.

For specific questions on this notice or the products affected please contact our specialist directly:

Name NXP Support
e-mail address www.nxp.com/support

At NXP Semiconductors we are constantly striving to improve our product and processes to ensure they reach the highest possible Quality Standards.
Customer Focus, Passion to Win.

NXP Quality Management Team.

About NXP Semiconductors

NXP Semiconductors N.V. (NASDAQ: NXPI) provides High Performance Mixed Signal and Standard Product solutions that leverage its leading RF, Analog, Power Management, Interface, Security and Digital Processing expertise. These innovations are used in a wide range of automotive, identification, wireless infrastructure, lighting, industrial, mobile, consumer and computing applications.