PCN# 20250509000

Update Default Core Voltage Level on all

MitySOM-AM62A Modules

Date: May 9, 2025

To: Purchasing Agents & Design Engineers

Dear Customer,

This is an initial announcement of a change to a product that is currently offered by Critical Link. The details of this change are on the following pages.

For questions regarding this notice, contact the Hardware Manager Alex Block.

Sincerely,

Critical Link, LLC

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PCN Number: 20250509000

PCN Date: May 09, 2025

Title:

Contact: Alex Block

Phone: (315) 425-4045

EOL Date: June-2025, Rev -3 variants only

Overview

Changes to MitySOM-AM62A System on Modules are identified in the following sections. These changes should only effect early adopters of the module.

1 Change Default

1.1 Description of Change

The revision -3 and earlier variants of the MitySOM-AM62A provide a default 0.75V VDD_CORE Voltage from an on-board power management integrated circuit (PMIC) device, TPS62871QWRXSRQ1. Revision -4 devices will provide a default 0.85V power rail to supply the VDD_CORE voltage to the AM62A processor device by utilizing a TPS62872Y4QWRXSRQ1 device.

1.2 Reason for Change

To support the 1.4 GHz ARM Cortex-A53 operating performance point (OPP), the VDD_CORE core voltage must be set to 0.85V. On the older revisions, Critical Link software was adjusting the VDD_CORE voltage from 0.75V to 0.85V during the boot process prior to enabling the 1.4 GHz OPP. Texas Instruments (TI) has advised Critical Link that dynamically adjusting the VDD_CORE voltage once the boot software has loaded is not officially supported for the AM62A family of devices. If the VDD_CORE voltage is not adjusted, then at 0.75V the MitySOM-AM62A maximum CPU speed should be limited to the 1.250 GHz OPP. Adjusting the PMIC voltage to start at 0.85V will allow enabling the 1.4 GHz OPP in a manner that is officially supported by TI.

1.3 Anticipated Impact on Form, Fit, Function (positive / negative)

Starting a revision 10.0 of Critical Link's SDK release, the VDD_CORE voltage will no longer be adjusted by the boot software. Revision -3 (and earlier) SOMs will be limited to a maximum OPP of 1.25 GHz while newer SOMs will support up to 1.4 GHz. No other impact on Form, Fit, Function is expected.

1.4 Anticipated Impact on Quality or Reliability (positive / negative)

Critical Link has not observed any issues with boot or processor stability with the older (-3 and below) revisions of the MitySOM-AM62x when adjusting the VDD_CORE voltage prior to enabling the 1.4 GHz OPP. While there is no known impact to Quality or Reliability, it is anticipated that the change will bring additional design margin to the SOM and improve long term quality of the product.

2 Products Affected

Details regarding the full revision history are located in the MitySOM-AM62A Revision History section on the Critical Link support site.

https://support.criticallink.com/redmine/projects/mitysom_am62x/wiki/Errata_and_Module_Product_Change_Notifications

Table 1 Products Affected

Model Number	Starting PCA	Replacement PCA
62A74-TX-XXD-RI	80-001734RI-3	80-001734RI-4
62A74-TX-X9D-RC	80-001735RC-3	80-001735RC-4
62A74-TX-XAE-RI	80-001736RI-3	80-001736RI-4

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3 Document Revision History

Date	Version	Change Description
5-09-2025	1.0	Initial Version