Apollo4 / Apollo4 Blue / Apollo4 Plus / Apollo4 Blue Plus
PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN Number:	CN-AP4USBHS-02282025	Effective Date of Change:	February 2025
Issue Date:	02/28/2025	Running Change?	☐ *Yes ☒ No
Contact:	Yvonne Chen	*If yes, add notes:	
Email:	ychen@ambiq.com	Attachment?	☐ Yes ☒ No

Subject of Change

Removal of USB high speed (HS) functionality support in Apollo4 Family parts, including Apollo4, Apollo4 Blue, Apollo4 Plus, and Apollo4 Blue Plus.

Description of Change

☐ Design   ☐ Assembly   ☐ Electrical Specification   ☒ Other: Removal of USB high-speed support
☐ Wafer Fab   ☐ Test   ☐ Mechanical Specification

Reason for Change

Some Apollo4 Family parts exhibit high jitter on the internal HFRC2 clock, which serves as the clock source for the USB PLL. As a result, these devices do not meet USB HS timing specifications, although they may function on certain PCBs with specific hosts. Since effective ATE screening for this jitter is not feasible, an estimated <1% of shipped Apollo4 Family parts may fail to meet USB HS timing requirements.

Part Numbers Affected

This change applies to the products listed below:

- AMAP42KK-KBR-B2
- AMA4B2KK-KBR-B2
- AMAP42KP-KBR
- AMA4B2KP-KBR
- AMA4B2KP-KXR

Change Identification

☐ Product Mark   ☐ Label   ☐ Data Code   ☒ Other: None.

Risk Assessment:

No risk is expected for the affected parts due to the removal of USB HS functionality. Customers who can independently screen out high-jitter parts may choose to use USB HS at their own discretion and risk. USB full speed (FS) operation is not impacted and continues to be supported.

Reliability/Qualification Summary

Current Apollo4, Apollo4 Blue, Apollo4 Plus, and Apollo4 Blue Plus parts have qualified/passed reliability tests, so defeaturing the USB HS does not require re-qualification.

Customer Acknowledgement of Receipt
- As this change belongs to notification-only PCN, no customer approval is required
- Ambiq will implement the change after the effective date

Summary of Changes

Discontinuation of USB high speed functionality support in Apollo4 Family parts, including Apollo4, Apollo4 Blue, Apollo4 Plus, and Apollo4 Blue Plus. For additional information, refer to the respective product datasheets and errata published after February 2025.