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MB9AA30N/130N/B40NA/A40NA/340NA /140NA/150R Series

November 29, 2013

Silicon Errata for the MB9AA30N/130N/B40NA/A40NA/340NA/140NA/150R Series 32-bit ARM® Cortex®-M3 based Microcontroller

This document describes the errata for the MB9AA30N/MB9A130N/MB9AB40NA/MB9AA40NA/MB9A340NA /MB9A140NA/MB9A150R Series 32-bit ARM® Cortex®-M3 based Microcontroller. Compare this document to the device's data sheet for a complete functional description.

Contact your local Cypress Sales Representative if you have questions.

Part Numbers Affected

Part Number
MB9AA30N/MB9A130N Series **MB9AB40NA/MB9AA40NA/MB9A340NA/MB9A140NA Series** **MB9A150R Series**

Description

This document describes the silicon updates to the functional specifications for FM3 MB9AA30N/MB9A130N series, MB9AB40NA/MB9AA40NA/MB9A340NA/MB9A140NA series and MB9A150R series microcontrollers. Considering the characteristic of the maximum rise time (250µs) for CEC output signal of HDMI-CEC standard, the period of arbitration lost detection was changed.

Affected Devices

Table 1. Target Device

Series	Part Number
MB9AA30N series	MB9AFA31N, MB9AFA32N MB9AFA31M, MB9AFA32M MB9AFA31L, MB9AFA32L
MB9A130N series	MB9AF131N, MB9AF132N MB9AF131M, MB9AF132M
MB9AB40NA /MB9AA40NA /MB9A340NA /MB9A140NA series	MB9AFB41NA, MB9AFB42NA, MB9AFB44NA MB9AFA41NA, MB9AFA42NA, MB9AFA44NA MB9AF341NA, MB9AF342NA, MB9AF344NA MB9AF141NA, MB9AF142NA, MB9AF144NA MB9AFB41MA, MB9AFB42MA, MB9AFB44MA MB9AFA41MA, MB9AFA42MA, MB9AFA44MA MB9AF341MA, MB9AF342MA, MB9AF344MA MB9AF141MA, MB9AF142MA, MB9AF144MA MB9AFB41LA, MB9AFB42LA, MB9AFB44LA MB9AFA41LA, MB9AFA42LA, MB9AFA44LA MB9AF341LA, MB9AF342LA, MB9AF344LA MB9AF141LA, MB9AF142LA, MB9AF144LA
MB9A150R series	MB9AF154R, MB9AF155R, MB9AF156R MB9AF154N, MB9AF155N, MB9AF156N MB9AF154M, MB9AF155M, MB9AF156M

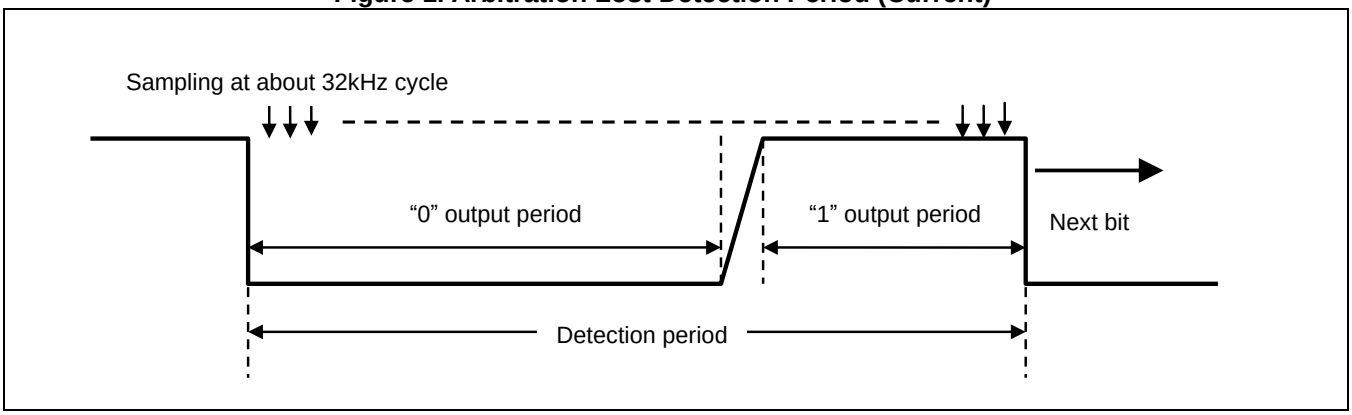
The period of arbitration lost detection

When detecting the difference between a data on CEC bus and a send data by 32 kHz sampling, identify an arbitration lost occurs.

Original

The period of arbitration lost detection is as follows:
From the start of the “0” output until the end of the “1” output period.

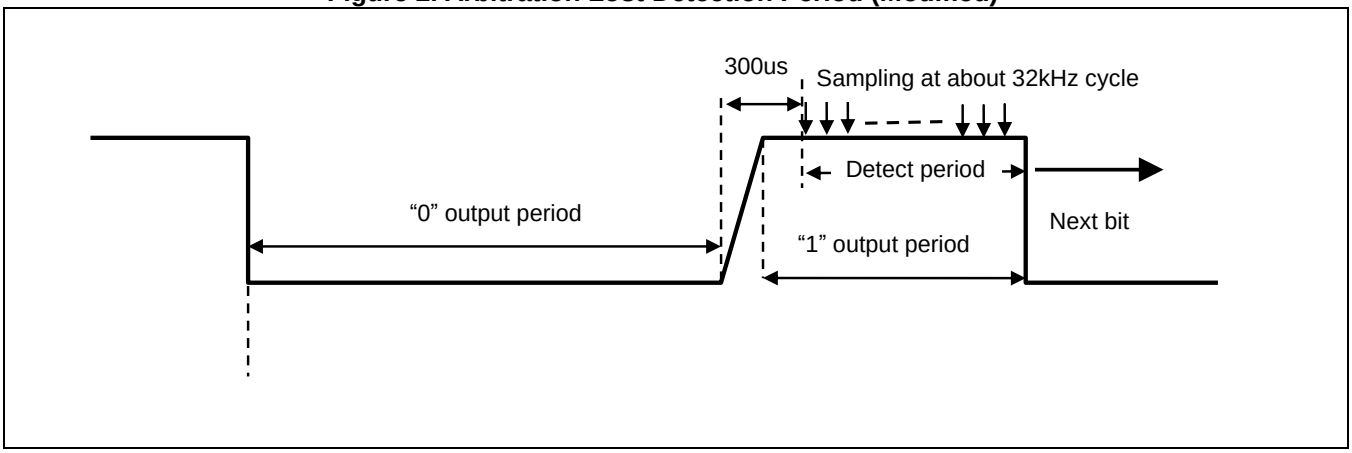
Figure 1. Arbitration Lost Detection Period (Current)



Modification

The period of arbitration lost detection is changed as follows:
During the “1”out put from 300µs(10 clock) after the bus data rises to high

Figure 2. Arbitration Lost Detection Period (Modified)



Redesign Schedule

Table 2. Revision Schedules

Series	Part Number	Schedule
MB9AAA0N MB9A1A0N series(*1)	MB9AFAA1N, MB9AFAA2N MB9AFAA1M, MB9AFAA2M MB9AFAA1L, MB9AFAA2L MB9AF1A1N, MB9AF1A2N MB9AF1A1M, MB9AF1A2M MB9AF1A1L, MB9AF1A2L	ES : '14/04/15 CS : '14/06/30
MB9AB40NB /MB9AA40NB /MB9A340NB /MB9A140NB series(*2)	MB9AFB41NB, MB9AFB42NB, MB9AFB44NB MB9AFA41NB, MB9AFA42NB, MB9AFA44NB MB9AF341NB, MB9AF342NB, MB9AF344NB MB9AF141NB, MB9AF142NB, MB9AF144NB MB9AFB41MB, MB9AFB42MB, MB9AFB44MB MB9AFA41MB, MB9AFA42MB, MB9AFA44MB MB9AF341MB, MB9AF342MB, MB9AF344MB MB9AF141MB, MB9AF142MB, MB9AF144MB MB9AFB41LB, MB9AFB42LB, MB9AFB44LB MB9AFA41LB, MB9AFA42LB, MB9AFA44LB MB9AF341LB, MB9AF342LB, MB9AF344LB MB9AF141LB, MB9AF142LB, MB9AF144LB	ES : '13/11/15 CS : '14/02/15
MB9A150RA series(*3)	MB9AF154RA, MB9AF155RA, MB9AF156RA MB9AF154NA, MB9AF155NA, MB9AF156NA MB9AF154MA, MB9AF155MA, MB9AF156MA	ES : '13/12/13 CS : '14/03/14

MB9AA30N and MB9A130N series are not updated, please use MB9AAA0N and MB9A1A0N series (*1) instead.
MB9AB40NA/MB9AA40NA/MB9A340NA/MB9A140NAseries were updated and part number is changed (*2).
MB9A150Rseries was updated and part numbers are changed (*3).

Document History Page

Document Title: Silicon Errata for the MB9AA30N/130N/B40NA/A40NA/340NA/140NA/150R Series 32-bit ARM® Cortex®-M3 based Microcontroller Document Number: 002-04525			
Rev.	**ECN No.**	**Orig. of Change**	**Description of Change**
**	_	YUIS	Initial release
			Deleted the devices below from "2.1 Affected Devices". MB9AF131L, MB9AF132L
*A	5247253	YUIS	Migrated to Cypress format

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