



MB9B360R Series Datasheet

September 24, 2015

Datasheet Errata for the MB9B360R Series 32-bit ARM® Cortex®-M4F based Microcontroller

This document describes the errata for the MB9B360R Series 32-bit ARM® Cortex®-M4F 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
MB9B360R Series

Page	Item	Description																							
Original document code: DS709-00003-1v0-E																									
Rev. 1.0 January 9, 2014																									
74	ELECTRICAL CHARACTERISTICS 2. Recommended Operating Conditions	<p>It should be corrected as indicated by the shading below.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Parameter</th> <th rowspan="2">Symbol</th> <th rowspan="2">Conditions</th> <th colspan="2">Value</th> <th rowspan="2">Unit</th> <th rowspan="2">Remarks</th> </tr> <tr> <th>Min</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>Power supply voltage</td> <td>VCC</td> <td style="text-align: center;">-</td> <td style="background-color: #cccccc;">2.7</td> <td style="background-color: #cccccc;">5.5</td> <td style="text-align: center;">V</td> <td></td> </tr> <tr> <td>Analog reference voltage</td> <td>AVRH</td> <td style="text-align: center;">-</td> <td style="background-color: #cccccc;">*4</td> <td style="background-color: #cccccc;">AV_{CC}</td> <td style="text-align: center;">V</td> <td></td> </tr> </tbody> </table> <p style="font-size: small;">*4 :The minimum value of Analog reference voltage depends on the value of compare clock cycle (T_{ck}). See "5. 12-bit A/D Converter" for the details.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; text-align: center;"> See the description of the same item on Rev. 2.0 (P.3). </div>	Parameter	Symbol	Conditions	Value		Unit	Remarks	Min	Max	Power supply voltage	VCC	-	2.7	5.5	V		Analog reference voltage	AVRH	-	*4	AV _{CC}	V	
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Rev. 2.0 April 25, 2014																																												
2	FEATURES	<p>•32-bit ARM Cortex-M4F Core “should be corrected as indicated by the shading below.</p> <p>(Error)</p> <ul style="list-style-type: none"> • Processor version: r2p1 <p>(Correct)</p> <ul style="list-style-type: none"> • Processor version: r0p1 																																										
49	I/O CIRCUIT TYPE	<p>It should be added as indicated by the shading below.</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Circuit</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>I</td> <td> </td> <td> <ul style="list-style-type: none"> • CMOS level output • CMOS level hysteresis input • 5V tolerant • With standby mode control • Pull-up resistor : Approximately 50kΩ • I_{OH} = -4mA, I_{OL} = 4mA • Available to control of PZR registers. </td> </tr> </tbody> </table>	Type	Circuit	Remarks	I		<ul style="list-style-type: none"> • CMOS level output • CMOS level hysteresis input • 5V tolerant • With standby mode control • Pull-up resistor : Approximately 50kΩ • I_{OH} = -4mA, I_{OL} = 4mA • Available to control of PZR registers. 																																				
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		VBAT pin status type	Function group	INITX input state	Device internal reset state	TIMER mode, RTC mode, or STOP mode state		Deep standby RTC mode or Deep standby STOP mode state		Return from Deep standby mode state	
				Power supply stable		Power supply stable		Power supply stable		Power supply stable	
				INITX=0	INITX=1	INITX=1		INITX=1		INITX=1	
				-	-	SPL=0	SPL=1	SPL=0	SPL=1	-	
		S	GPIO selected	Setting disabled	Setting disabled	Maintain previous state	Hi-Z / Internal input fixed at "0"	GPIO selected Internal input fixed at "0"	Hi-Z / Internal input fixed at "0"	GPIO selected	
		T	GPIO selected	Setting disabled	Setting disabled	Maintain previous state	Hi-Z / Internal input fixed at "0"	GPIO selected Internal input fixed at "0"	Hi-Z / Internal input fixed at "0"	GPIO selected	
			External sub clock input selected	Setting disabled	Setting disabled	Maintain previous state	Hi-Z / Internal input fixed at "0"	Maintain previous state	Hi-Z / Internal input fixed at "0"	Maintain previous state	
			Sub crystal oscillator output pin	Hi-Z / Internal input fixed at "0"	Hi-Z / Internal input fixed at "0"	Maintain previous state/When oscillation stops*, Hi-Z / Internal input fixed at "0"	Maintain previous state/When oscillation stops*, Hi-Z / Internal input fixed at "0"	Maintain previous state/When oscillation stops*, Hi-Z / Internal input fixed at "0"	Maintain previous state/When oscillation stops*, Hi-Z / Internal input fixed at "0"	Maintain previous state/When oscillation stops*, Hi-Z / Internal input fixed at "0"	
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87	ELECTRICAL CHARACTERISTICS 4. AC Characteristics	<p>“(3) Built-in CR Oscillation Characteristics” should be corrected as indicated by the shading below.</p> <ul style="list-style-type: none"> Built-in High-speed CR <p style="text-align: right;">(VCC = 2.7V to 5.5V, VSS = 0V)</p> <table border="1"> <thead> <tr> <th rowspan="2">Parameter</th> <th rowspan="2">Symbol</th> <th rowspan="2">Conditions</th> <th colspan="3">Value</th> <th rowspan="2">Unit</th> <th rowspan="2">Remarks</th> </tr> <tr> <th>Min</th> <th>Typ</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Clock frequency</td> <td rowspan="2">F_{CRH}</td> <td>T_j = -20°C to +105°C</td> <td>3.92</td> <td>4</td> <td>4.08</td> <td rowspan="2">MHz</td> <td>When trimming*1</td> </tr> <tr> <td>T_j = -40°C to +125°C</td> <td>3.88</td> <td>4</td> <td>4.12</td> <td>When not trimming</td> </tr> <tr> <td>Clock frequency</td> <td>F_{CRH}</td> <td>T_j = -40°C to +125°C</td> <td>3</td> <td>4</td> <td>5</td> <td></td> <td></td> </tr> <tr> <td>Frequency stabilization time</td> <td>t_{CRWT}</td> <td>-</td> <td>-</td> <td>-</td> <td>30</td> <td>μS</td> <td>*2</td> </tr> </tbody> </table> <p>*1: In the case of using the values in CR trimming area of Flash memory at shipment for frequency/temperature trimming. *2: This is the time to stabilize the frequency of high-speed CR clock after setting trimming value. This period is able to use high-speed CR clock as source clock.</p>	Parameter	Symbol	Conditions	Value			Unit	Remarks	Min	Typ	Max	Clock frequency	F _{CRH}	T _j = -20°C to +105°C	3.92	4	4.08	MHz	When trimming*1	T _j = -40°C to +125°C	3.88	4	4.12	When not trimming	Clock frequency	F _{CRH}	T _j = -40°C to +125°C	3	4	5			Frequency stabilization time	t _{CRWT}	-	-	-	30	μS	*2																																																	
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Document History Page

Document Title: Datasheet Errata for the MB9B360R Series 32-bit ARM® Cortex®-M4F based Microcontroller			
Document Number: 002-04873			
Rev.	ECN No.	Orig. of Change	Description of Change
**	—	AKIH	Initial release
*A	5155917	AKIH	Migrated to Cypress format

Cypress Semiconductor
 198 Champion Court
 San Jose, CA 95134-1709
 Phone: 408-943-2600
 Fax: 408-943-4730
<http://www.cypress.com>

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