



# 1/4.5-Inch 1.6Mp Digital Image Sensor

## MT9M002

### Silicon Revision 2 Errata

Refer to the MT9M002 data sheet at [www.aplina.com](http://www.aplina.com)

## Introduction

This errata summarizes known issues to date for Aptina's MT9M002 Silicon Revision 2 (Rev2). This errata is provided for customer information at this time. Any permanent changes will be incorporated into the next revision of the data sheet.

**Table 1: Known Issues and Workarounds**

Issue #	Title Description Workaround	Details
1	Title	Required initial settings.
	Description	Power-on default values for some registers are not optimized.
	Workaround	Host must load register values from Table 2. This issue will be addressed in revision 3.
2	Title	Unreliable operation of sensor at EXTCLK above 16.5 MHz.
	Description	The Rev2 silicon sometimes has problems with PLL initialization after RESET, its maximum EXTCLK frequency needs to be limited to 16.5 MHz.
	Workaround	Lower the EXTCLK maximum frequency to 16.5 MHz from 49.5 MHz. Refer "MT9M002: PLL Setup and Control addendum" for details.

**Table 2: Required Register Settings for Optimized Performance**

Register Address	Register Data
R0x41	0x0000
R0x42	0x0003
R0x43	0x0003
R0x7F	0x0000

**Table 3: Frequency Parameters**

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$f_{EXTCLK}$	Input clock frequency	PLL enabled	8	–	16.5	MHz
$f_{VCO}$	VCO Frequency	$f_{EXTCLK} * PLL\_m\_factor / (PLL\_n\_divider + 1)$	320	–	693	MHz



## Revision History

<b>Rev. F</b> .....	<ul style="list-style-type: none"> <li>• Updated trademarks</li> <li>• Applied updated template</li> </ul>	
<b>Rev. E</b> .....	<ul style="list-style-type: none"> <li>• Updated to Aptina template</li> </ul>	<b>5/19/10</b>
<b>Rev. D</b> .....	<ul style="list-style-type: none"> <li>• Added VCO frequency to Table 3, “Frequency Parameters,” on page 2, changed title</li> </ul>	<b>11/13/07</b>
<b>Rev. C</b> .....	<ul style="list-style-type: none"> <li>• Added issue two in Table 1, “Known Issues and Workarounds,” on page 1</li> <li>• Added Table 3, “Frequency Parameters,” on page 2</li> </ul>	<b>8/20/07</b>
<b>Rev. B</b> .....	<ul style="list-style-type: none"> <li>• Updated Table 2, “Required Register Settings for Optimized Performance,” on page 1</li> </ul>	<b>5/23/07</b>
<b>Rev. A</b> .....	<ul style="list-style-type: none"> <li>• Initial release</li> </ul>	<b>04/25/07</b>

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