



UP008706-0207

# Product Update

## Errata for ZNEO™ Z16F Series Devices

### ZNEO Z16F Series MCU with Any Date Code

The errata listed in Table 1 are found in the Revision AB silicon for the ZNEO Z16F Series product with any package date code.

**Table 1. Errata to the ZNEO Z16F Series Devices**

No.	Issue	Detailed Description
1	ADC INL error does not meet specification limits when analog inputs, ANA[11:0], are below 100 mV.	The ADC INL error is greater than 3 LSB when the analog inputs, ANA[11:0], are below 100 mV. The INL error can be as high as 5 LSB when below 100 mV.
2	ADC Gain error does not meet specification limits.	The ADC Gain error for worst case conditions is $\pm 2.5\%$ of the full range instead of the $\pm 4.5$ LSB specified. The typical gain is less than 1%.
3	64K Flash parts cannot be set to 32K by the user.	<p>There are two control bits that set the usable Flash size in the ZNEO Z16F Series parts. They are decoded as follows:</p> <ul style="list-style-type: none"><li>00 - 128K</li><li>01 - 64 K</li><li>10 - 32K</li><li>11 - no memory - ROMless</li></ul> <p>These bits are in the EXTCT register describe in the “External Interface” chapter of the ZNEO Product Specification. The register allows the user to select a smaller usable Flash memory size but not a larger Flash memory size.</p> <p>However, for the 64K Flash parts, selecting 32K puts the parts in “no internal memory.”</p>
4	POPF instruction corrupts R3	<p>The execution of the POPF instruction results in the R3 register being overwritten by random data. As a workaround, in place of POPF, the following instruction sequence can be used:</p> <pre>PUSH #NextInst IRET2 NextInst:</pre> <p>Here, IRET2 is an alternative form of IRET, which is required in this context to avoid problems with chained interrupts. Its op code is FFF6.</p> <p>The ZiLOG assembler currently applies this substitution for POPF automatically.</p>

Table 1. Errata to the ZNEO Z16F Series Devices (Continued)

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No.	Issue	Detailed Description
5	Hardware breakpoint does not catch word accesses of the byte	When a hardware breakpoint is configured to break on an address byte, the breakpoint does not catch word accesses of the byte.  <b>Workaround</b> There is an address mask to break on a range of addresses. Configure the mask to ignore address bit 0.

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