



*Embedded in Life*

An IXYS Company

## Errata for all eZ80Acclaim! & eZ80AcclaimPlus! Development Tools and Silicon

UP013901-0316 **Product Update**

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### Errata for all eZ80Acclaim! & eZ80AcclaimPlus! Development Tools and Silicon

The errata listed in Table 1 highlights the issue and workaround for all of Zilog's eZ80F910300KITG, eZ80F920200ZCOG, eZ80L920210ZCO, ZGATE000100ZCOG, eZ80F910200KITG, eZ80F910300ZCOG, eZ80L925148MODG, eZ80F920020MODG, eZ80F915150MODG, eZ80F917150MODG, and eZ80F916005MODG Development Tools, eZ80Acclaim! eZ80L92, eZ80F91, eZ80F92, eZ80F93, and eZ80AcclaimPlus! eZ80F91 silicon for all date codes, products, and packages.

**Table 1. Errata for all eZ80Acclaim! & eZ80AcclaimPlus! Development Tools and Silicon**

Item No	Issue	Description
1	The automatic leap year computation in the Real-Time Clock (RTC) circuitry is incorrect when RTC count and Alarm value registers are in binary operation.	<p>The automatic leap year computation feature in the eZ80L92, eZ80F91, eZ80F92, and eZ80F93 MCUs does not work when the Binary Coded Decimal feature is disabled (BCD_EN=0), i.e. the RTC count &amp; Alarm value registers are in binary operation. In binary operation, leap years with RTC_YR[4]=1 are computed incorrectly.</p> <p>For example, the 2016, 2020, 2024, and 2028 leap years will be computed incorrectly as 2018, 2022, 2026, and 2030. Note that the leap years from 2032 to 2044 will be computed correctly.</p> <p>The leap year computation is handled correctly when the RTC count and Alarm value registers are in Binary Coded Decimal operation.</p> <p><b>Workaround</b></p> <p>The following two options are available:</p> <ul style="list-style-type: none"> <li>● Enable the Binary Coded Decimal operation feature by setting the Real-Time Clock Control Register RTC_CTRL[5]=1 (BCD_EN=1).</li> <li>● Use the following procedure:               <ol style="list-style-type: none"> <li>1. Set an alarm for 23:59:59 on Feb 28 every year.</li> <li>2. In the ISR, perform the following tests to determine whether the current year is a leap year:                   <ul style="list-style-type: none"> <li>– If Year is not evenly divisible by 4, then call the DoNotLeapAdjust() routine and exit the ISR</li> <li>– If Year is not evenly divisible by 100, then call the DoLeapAdjust() routine and exit the ISR</li> <li>– If Year is not evenly divisible by 400, then call the DoNotLeapAdjust() routine and exit the ISR</li> <li>– Call the DoLeapAdjust() routine and exit the ISR</li> </ul> </li> <li>3. In the DoLeapAdjust routine, wait for the current time to go to 0:0:0.                   <ul style="list-style-type: none"> <li>– At 0:0:0, set MON+DOM = Feb 29 and return.</li> </ul> </li> <li>4. In the DoNotLeapAdjust routine, wait for the current time to go to 0:0:0.                   <ul style="list-style-type: none"> <li>– At 0:0:0, set MON+DOM = Mar 1 and return.</li> </ul> </li> </ol> </li> </ul>

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**Warning: DO NOT USE THIS PRODUCT IN LIFE SUPPORT SYSTEMS.**

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