



Z8 Encore!® F0830 Series MCU with Date Code 0612 and Earlier

The errata listed in [Table 1](#) are found in the Zilog's Z8 Encore!® F0830 Series devices with package date code 0612 and earlier, where the code is YYWW (year and week of assembly). When reviewing the following errata, it is recommended that you also download the most recent version of the product specification, *Z8 Encore! F0830 Series Product Specification (PS0251)*, available for download at www.zilog.com.

Table 1. Errata for Z8 Encore! F0830 Series Devices with Date Code 0612 and Earlier

No.	Summary	Detailed Description
1	Device malfunctions when the system clock source is switched from IPO to crystal oscillator or external RC oscillator	<p>For devices with a date code of 0612 and earlier, the device malfunctions when the system clock source is switched from the internal precision oscillator (IPO) to a crystal oscillator or an external RC oscillator. The trim bit address register 0006H (TCLKFLT) has the incorrect default value programmed into the register. The workaround below must be used.</p> <p>If the IPO is used as the system clock, the below workaround is not needed.</p> <p>For devices with date codes after 0612, the default value programmed into the register is correct, and the workaround is not needed.</p> <p>Workaround</p> <p>For devices with a date code of 0612 and earlier, the following workaround <i>must</i> be used if using a crystal or RC.</p> <p>Set the trim bit address register 0006H (TCLKFLT) to the correct value after the device reset and before switching the chip's clock to the external crystal. This will override the incorrect default value. Use the following sample instruction sequence:</p> <pre>ldx trmadr, #%06 ldx trmdr, #%44</pre> <p>This instruction sequence can also be used for devices with a date code later than 0612.</p>

Table 1. Errata for Z8 Encore! F0830 Series Devices with Date Code 0612 and Earlier (Continued)

No.	Summary	Detailed Description
2	Internal VBO set to 1.8 V threshold value by default	<p data-bbox="513 411 1438 567">For devices with a date code of 0612 and earlier, the default value of the internal VBO circuit threshold voltage level is set to 1.8 V, which is dangerous for Flash operation. Zilog guarantees the Flash block write operation with a voltage supply no lower than 2.7 V. A 1.8 V write operation produces unpredictable results to the chip.</p> <p data-bbox="513 604 672 634">Workaround</p> <p data-bbox="513 642 1438 764">Set the VBO trigger voltage level to 2.5 V. When the power supply drops lower than 2.5 V, the chip will be held at a reset state with no read/write Flash operations allowed.</p> <p data-bbox="513 802 974 831">Use the following instruction sequence:</p> <pre data-bbox="513 877 769 936">ldx trmadr, #%03 ldx trmdr, #%FC</pre> <p data-bbox="513 978 1438 1075">For the register definition, refer to <i>Z8 Encore! F0830 Series Product Specification (PS0251)</i>. This instruction sequence can also be used for devices with a date code later than 0612.</p>

Z8 Encore!® F0830 Series MCU with Date Codes Earlier than 0704

The errata listed in [Table 2](#) are found in the Z8 Encore!® F0830 Series products with date codes earlier than 0704. When reviewing the following errata, it is recommended that you also download the most recent version of the product specification, *Z8 Encore! F0830 Series Product Specification (PS0251)*, available for download at www.zilog.com.

Table 2. Errata for Z8 Encore![®] F0830 Series Devices with Date Codes Earlier than 0704

No.	Summary	Detailed Description																					
1	The Flash endurance specification of the current Z8 Encore! F0830 products have been reduced for the date codes indicated.	<p>Due to temporary technical issues specific only to the Flash memory, the Flash endurance specification of the current Z8 Encore![®] F0830 products have been reduced until further notice.</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Original Specification</th> <th>Current New Specification</th> </tr> </thead> <tbody> <tr> <td colspan="3"><i>Standard Temperature Range</i> (0 °C to 70 °C)</td> </tr> <tr> <td>Flash endurance</td> <td>10 K cycles</td> <td>5 K cycles</td> </tr> <tr> <td>NVDS endurance</td> <td>100 K cycles</td> <td>50 K cycles</td> </tr> <tr> <td colspan="3"><i>Extended Temperature Range</i> (-40 °C to 105 °C)</td> </tr> <tr> <td>Flash endurance</td> <td>10 K cycles</td> <td>1 K cycles</td> </tr> <tr> <td>NVDS endurance</td> <td>100 K cycles</td> <td>10 K cycles</td> </tr> </tbody> </table> <p>There are no other changes on other Flash-related parameters.</p>	Parameter	Original Specification	Current New Specification	<i>Standard Temperature Range</i> (0 °C to 70 °C)			Flash endurance	10 K cycles	5 K cycles	NVDS endurance	100 K cycles	50 K cycles	<i>Extended Temperature Range</i> (-40 °C to 105 °C)			Flash endurance	10 K cycles	1 K cycles	NVDS endurance	100 K cycles	10 K cycles
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Z8 Encore! F0830 Series MCU with Date Code 0706 and Earlier

The errata listed in [Table 3](#) are found in the Z8 Encore! F0830 Series products with date codes 0706 and before 0706, where the code is YYWW (year and week of assembly). When reviewing the following errata, it is recommended that you also download the most recent version of the product specification, *Z8 Encore! F0830 Series Product Specification (PS0251)*, available for download at www.zilog.com.

Table 3. Errata for Z8 Encore! F0830 Series Devices with Date Code 0706 and Earlier

No.	Summary	Detailed Description
1	NVDS data may be corrupted due to special events.	<p>For devices with a date code earlier than 0706, the NVDS data may be corrupted for the following events:</p> <ul style="list-style-type: none"> Accidental power down during NVDS internal erase or data recopy ZDS break during NVDS internal erase or data recopy <p>This problem has been fixed for devices with date codes after 0706.</p>



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