

Product Change Notification		Date April 7, 2021
Product	Digi Rabbit RCM3xxx/RCM4110 (29 MHz)	

Reason for Change

<input type="checkbox"/> Technical Requirement	<input checked="" type="checkbox"/> Product Transition
<input type="checkbox"/> Customer Requirement	<input type="checkbox"/> Product Discontinuation
<input type="checkbox"/> Quality Improvement	<input type="checkbox"/> Product Enhancement
	<input type="checkbox"/> Other (Brand Change)

Description of change	<p>Due to the obsolescence of the previously qualified 45ns flash memory for select SKUs in the Rabbit family's product line, Digi has qualified 55ns flash from the same supplier. Digi has qualified Microchip SST39LF020-55-4C-WHE to replace Microchip SST39LF020-45-4C-WH , qualified Microchip SST39LF040-55-4C-WHE-ND to replace SST39LF040-45-4C-WH.</p> <p>Although the flash change is backward compatible with existing customer software, Digi recommends making changes to Dynamic C 9 (Rabbit 2000 and 3000 based products) or 10 (RCM4110) to improve timing margins during BIOS startup. Please visit the following links for details:</p> <p>Dynamic C 9: https://github.com/digidotcom/DCRabbit_9/issues/7 Dynamic C 10: https://github.com/digidotcom/DCRabbit_10/issues/29</p> <p>Please refer to the attached label to identify the effective revision change.</p>
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Affected Part Numbers- /Timing	See attachment/ Effective 4 TH Quarter 2020/1 st Quarter 2021
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Quality Issues	<p>We have received reports of customers using 29MHz products and experiencing problems related to the change. In all instances, we determined that their firmware was crashing due to the undefined behavior of writing to a memory address mapped to the flash device when not in flash programming mode. This typically happened when running code from flash and dereferencing an uninitialized or NULL pointer. On products with a 45ns flash, the write was silently ignored, but with the 55ns flash it would prevent the next opcode from reading properly, resulting in the program crashing. Note that in the case of a bug dereferencing an uninitialized pointer, it could end up writing to a random address mapped to RAM, potentially overwriting other data and causing intermittent failures that would be difficult to reproduce. If you start experiencing failures with updated hardware, we recommend using the Dynamic C debugger to identify possibly coding errors causing the failures.</p>
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Contact/Questions	Please contact your Digi Sales Representative or Technical Support team via email at tech.support@digi.com .
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Issued By	Digi International Embedded Product Management
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Part number	Description	New Revision level *See attachment for location
20-101-0507	RCM3000	F
20-101-0508	RCM3010	F
20-101-0517	RCM3100	D
20-101-0518	RCM3110	D
20-101-0561	RCM3400	D
20-101-1093	RCM4110	F

