



Product Change Notice

PCN 007

NetBurner Part Number: All PK70EX based products

Implementation Date: 17-Feb-2021

Hardware Revision Number: 1.7

Development Tools Revision Number: Prior to release 2.9.5

Description

This PCN applies to customers who create their own applications for PK70EX products using the NetBurner Network Development Kit (NNDK). Customers using PK70EX products with the standard NetBurner factory application are not affected.

Cypress Semiconductor has deemed the Spansion 4MB Flash memory chip S29GL064N90FFIR20 as end of life (EOL). The replacement component is Cypress part number S29GL064S70FHIO10/3.

The new component requires a flash programming software driver change due to the significantly longer programming time for unbuffered writes. The flash driver has been updated in the latest NetBurner Network Development Kit (NNDK) to take advantage of the new flash write buffer, which allows for up to 256 bytes to be buffered for each write.

The net effect is that applications written with NNDK tools prior to 2.9.5 will experience significantly longer programming times (roughly 4 times slower), which may affect the update process for very large applications, depending on how the application was written. Rebuilding the application with the 2.9.6 or later tool set will resolve the issue and increase flash write speeds over 2 times faster than the original Spansion flash programming speed.

If you prefer to stay with your existing application and older NNDK tools, the easiest method to determine if this PCN is a factor is to update your PK70EX two times with your existing application and verify the second update is successful and within your timing requirements. For applications 1MB or less in size the programming time may not be an issue.

Hardware Effected

All hardware produced after Feb 17, 2021. The Cypress Flash chip is identical from a mechanical and signal standpoint, so the PCB revision will not change.

Software Effected

PK70EX devices are pre-programmed with an example application at the factory using the updated flash driver. If an application built with tools prior to 2.9.5 is uploaded to the device, programming will be very fast, since the factory application uses the buffered write mode driver. However, any subsequent application updates of applications built with tools prior to 2.9.5 will be much slower, since the application running on the device would be using the old flash 16-bit driver, not the buffered write driver.

More Information

If you have any further questions about this change, please do not hesitate to reach out to us at sales@netburner.com.