

## Datakey – Product Change Notification / End of Life Notification

**PCN Number:** 20240325  
**Notice Date:** 25 March 2024  
**Notification Subject:** End-of-Life (EOL) Notification  
 Last-Time-Buy (LTB) Notification

### Summary Description:

This product change notification (PCN) documents changes being made to the Industrial DFX family of RUGGEDrive memory tokens and specifically the End of Life for the DFX1GB-IS RUGGEDrive memory tokens. With the industry’s transition away from 2D MLC (multi-level cell) NAND flash to 3D TLC (triple-level cell) NAND flash, the RUGGEDrive line has also transitioned to using 3D TLC NAND flash (see [PCN 20220207](#)). The DFX1GB-IS uses even older SLC (single-level cell) NAND flash. DFX1GB-IS memory tokens are EOL and are being replaced by the DFX4GB-IS models that use pseudo-SLC NAND flash.

### Affected Products:

DFX1GB-IS RUGGEDrive Memory Token, Black  
 DFX1GB-IS RUGGEDrive Memory Token, Red  
 DFX1GB-IS RUGGEDrive Memory Token, Yellow  
 DFX1GB-IS RUGGEDrive Memory Token, Green  
 DFX1GB-IS RUGGEDrive Memory Token, Blue  
 DFX1GB-IS RUGGEDrive Memory Token, Gray

### Part Numbers:

611-0228-010A  
 611-0228-012A  
 611-0228-014A  
 611-0228-015A  
 611-0228-016A  
 611-0228-018A

### Suggested Replacements:

EOL DFX-IS Models		Replacement DFX-IS Models	
Old Part Number	Description	New Part Number	Description
611-0228-010A	DFX1GB-IS Token, Black	611-0229-000A	DFX4GB-IS Token, Black
611-0228-012A	DFX1GB-IS Token, Red	611-0229-002A	DFX4GB-IS Token, Red
611-0228-014A	DFX1GB-IS Token, Yellow	611-0229-004A	DFX4GB-IS Token, Yellow
611-0228-015A	DFX1GB-IS Token, Green	611-0229-005A	DFX4GB-IS Token, Green
611-0228-016A	DFX1GB-IS Token, Blue	611-0229-006A	DFX4GB-IS Token, Blue
611-0228-018A	DFX1GB-IS Token, Gray	611-0229-008A	DFX4GB-IS Token, Gray

### Notice Details:

As stated above, the DFX1GB-IS RUGGEDrive memory tokens are now EOL and are being replaced by the DFX4GB-IS RUGGEDrive memory tokens. There are some differences between the two tokens to be aware of. First, here are the aspects of the new DFX4GB-IS memory tokens that remain the same as the DFX1GB-IS tokens:

#### Characteristics Shared Between EOL DFX1GB-IS Tokens and New DFX4GB-IS Tokens

Like the existing DFX1GB-IS memory tokens, the new DFX4GB-IS tokens share the same RUGGEDrive memory token form factor that features the redundant SlimLine™ contact system. The new tokens use the same pinout and Secure Digital (SD) interface. Both provide SD card functionality and both support SPI mode operation. Both use the same SlimLine receptacles and DFX PC adapters. Both the old and the new models have an operational temperature range of -40°C to +85°C.



The power of memory. Secured.

## Characteristics New/Changed with the New DFX4GB-IS Tokens

### **New Datakey Logo**

Existing DFX1GB-IS tokens use the “old” Datakey Electronics logo that was used with the RUGGEDrive tokens since the family was launched in late 2010. The new DFX4GB-IS tokens use the updated Datakey logo that looks like this:



### **NAND Flash Memory**

DFX1GB-IS memory tokens utilize SD memory with SLC NAND flash memory. The SLC NAND flash is rated for 100,000 program/erase (P/E) cycles per cell. The new DFX4GB-IS tokens utilize 3D TLC-based NAND flash operating in pseudo-SLC (pSLC) mode. This means that while TLC NAND flash normally can store three bits per cell (000, 001, 010, 011, 100, 101, 110, 111), when operating in pSLC-mode, it only stores one bit per cell (0 or 1). It is called pseudo-SLC as it is not truly SLC NAND flash, but it is like SLC NAND flash in that it only stores one bit per cell. Also, like SLC NAND flash, pSLC NAND flash supports a high number of program/erase cycles. Where SLC NAND is rated for 100,000 program/erase cycles per cell, pSLC NAND is rated for 30,000 P/E cycles per cell. While this is 30% of the SLC rating, the DFX4GB-IS has 4x the memory capacity, so the writes will be spread out over four times as many cells.

### **Fixed BOM Optional**

All previous Industrial DFX models came with a fixed bill of materials (BOM). This means that no changes could be made to the BOM without first issuing an EOL notification. Typically, a last time buy (LTB) would be offered and then a new replacement part number would be issued (and it would have its own fixed BOM). While having a fixed BOM can be desirable, it can also be inconvenient, especially if the changes are minor. So, instead of taking a one-size-fits-all approach, we will be removing the fixed-BOM requirement for DFX-IS tokens. Going forward, having a fixed BOM will be available as an option for customers who desire to have this extra level of control. For customers wanting a fixed BOM, they should contact the Datakey Customer Care Team (CCT) for a quote. Customers who specify they would like a fixed BOM will be assigned a special part number. For customers who order the standard DFX4GB-IS memory tokens (no fixed BOM), any changes will be documented using a product change notification, but it will not involve a new part number being issued, unless there is a change in form, fit or function.

Samples of the new DFX4GB-IS memory tokens are available for evaluation.

### **Last Time Buy Information**

Last time buy orders for DFX1GB-IS tokens will be accepted until June 28<sup>th</sup>, 2024, with final delivery by September 27<sup>th</sup>, 2024. Quantities are extremely limited and are based on stock on hand of tokens and SD memory. Contact the Datakey Customer Care Team for details.



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If you have any questions regarding this PCN, please contact the Datakey Customer Care Team.

**Contact Information:**

Customer Care Team

+1 (800) 523-6996

+1 (218) 829-9797

[CCT@datakey.com](mailto:CCT@datakey.com)

Full listing of part numbers impacted by this PCN:

611-0228-010A

611-0228-012A

611-0228-014A

611-0228-015A

611-0228-016A

611-0228-018A