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EIN No: SSDPM7-064 Rev. A Date: April 1, 2025 Originator: Enterprise SSD Product Group 3

Engineering Information Notice (EIN)

PRODUCT AFFECTED

For Generic, Standard, KPM7 series

KPM71RUGxxxx Series: 1 DWPD
- KPM71RUG1T92: SDFU005GyAzz
- KPM71RUG3T84: SDFU004GyAzz
- KPM71RUG7T68: SDFU003GyAzz
- KPM71RUG15T3: SDFU001GyAzz
- KPM71RUG30T7: SDFU000GyAzz

KPM71VUGxxxx Series: 3 DWPD
- KPM71VUG1T60: SDFUY05GyAzz
- KPM71VUG3T20: SDFUY04GyAzz
- KPM71VUG6T40: SDFUY03GyAzz
- KPM71VUG12T8: SDFUY01GyAzz

For Generic, SIE, KPM7 series

KPM7XRUGxxxx Series: 1 DWPD
- KPM7XRUG1T92: SDFU085GyBzz
- KPM7XRUG3T84: SDFU084GyBzz
- KPM7XRUG7T68: SDFU083GyBzz
- KPM7XRUG15T3: SDFU081GyBzz
- KPM7XRUG30T7: SDFU080GyBzz

KPM7XVUGxxxx Series: 3 DWPD
- KPM7XVUG1T60: SDFUY85GyBzz
- KPM7XVUG3T20: SDFUY84GyBzz
- KPM7XVUG6T40: SDFUY83GyBzz
- KPM7XVUG12T8: SDFUY81GyBzz

For Generic, SED, KPM7 series

KPM7VRUGxxxx Series: 1 DWPD
- KPM7VRUG1T92: SDFU055GyBzz
- KPM7VRUG3T84: SDFU054GyBzz
- KPM7VRUG7T68: SDFU053GyBzz
- KPM7VRUG15T3: SDFU051GyBzz
- KPM7VRUG30T7: SDFU050GyBzz

KPM7VVUGxxxx Series: 3 DWPD
- KPM7VVUG1T60: SDFUY55GyBzz
- KPM7VVUG3T20: SDFUY54GyBzz
- KPM7VVUG6T40: SDFUY53GyBzz
- KPM7VVUG12T8: SDFUY51GyBzz

For Generic, FIPS, KPM7 series

KPM7WRUGxxxx Series: 1 DWPD
- KPM7WRUG1T92: SDFU075GyBzz
- KPM7WRUG3T84: SDFU074GyBzz
- KPM7WRUG7T68: SDFU073GyBzz
- KPM7WRUG15T3: SDFU071GyBzz
- KPM7WRUG30T7: SDFU070GyBzz

KPM7WVUGxxxx Series: 3 DWPD
- KPM7WVUG1T60: SDFUY75GyBzz
- KPM7WVUG3T20: SDFUY74GyBzz
- KPM7WVUG6T40: SDFUY73GyBzz
- KPM7WVUG12T8: SDFUY71GyBzz

(Note: y: E/F. zz: 01/02/04/05)

CLASSIFICATION

[☐] Electrical
[☐] Mechanical
[☒] Others

LEVEL

[☐] Hardware
[☒] Software (firmware)
[☐] Document
[☐] Manufacturing
[☐] Others

IMPLEMENTATION

[☒] Factory
[☐] Customer side
[☐] As required
[☐] Repaired
[☐] Retrofit kit required

PRIORITY

[☐] Urgent
[☐] Immediate
[☒] Routine

REVISION LEVEL

For Generic, Standard/SIE/SED/FIPS, KPM7 series

Item	Content	New
EC Rev.	A2	A3
FW Rev.	0104	0105

DESCRIPTION OF CHANGE

1. Fixed issues

(1): ChipKill
Problem: The host IO CMD may get timed out and shows SNS=04/40/C2 (Diagnostic failure) at the next drive power-cycle. This issue cannot be resolved by power-cycling the drive.
Cause: When the drive's internal processes detect significant errors in a specific flash memory die, the drive has a feature called die retirement, which allows it to continue functioning normally while preserving user data. However, if the die retirement occurs during a prioritized compaction operation, the drive's firmware mistakenly falls in an endless loop. When the drive is powered off in this state, the power-loss-protection (PLP) function does not operate correctly, resulting in the SNS=04/40/C2 error upon the next drive power-on.
Fix: The drive's firmware has been updated to prevent entering an endless loop in the above-mentioned situation.
Severity: High
Likelihood: Low

(2): Incorrect Data
Problem: When the host system issues multiple Log Sense CMDs or multiple Read Defect Data CMDs in a short time of period, the drive may report incorrect data to host.
Cause: The drive was deigned to execute one Log Sense (or Read Defect Data) CMD at a time, but when the drive was in the low power idle mode, there is a small time window to execute multiple Log Sense CMD (or Read Defect Data CMD) at the same time. The 2nd command process will refer the memory space where the 1st command process was used and cleared, resulting incorrect data to be send back to the host.
Fix: Modify the drive FW to take care of the host command dispatcher not to execute multiple maintenance commands (such as Log Sense and Read Defect Data) at a time.
Severity: Low
Likelihood: Middle

(3): FW Assert

Problem: PM7 RI 15.36TB, MU 12.8TB and RI 30.72TB models may report SNS=04/44/E0 (FW Assert) when the drive was in the IDLE_A power save mode.

Cause: When the drive gets into the power save mode, the FE (Frontend) CPU will go into the sleep mode with a certain time period of the timer to wake up by itself. However, when the drive internal process during FE Sleep mode takes a longer time (about 2sec), the calculated value of the timer may be unexpectedly zero, resulting the timer never expired. So that the FE CPU also never wake up, and assert condition happens.

Fix: Set the minimum value (5ms) if the calculated timer value is less than 5msec.

Severity: High

Likelihood: Low

DATE OF APPLICATION

This change is applied to the factory line from July 2025

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