



OneStor USM USM_ONESTOR_V5.2_R2019.20.16 Release Notes

Version 1.0

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1 Introduction

1.1 What is GEM USM?

GEM Unified System Management (USM) combines the firmware from the GEM subsystem found in a traditional SBB Canister (GEM FW running on SAS expander, GEM Main CPLD, GEM Power CPLD) with firmware from other enclosure components, such as x86 subsystems (primarily BIOS, BMC and FPGA/CPLD components), to provide a coherent system management solution for a range of OneStor platform solutions.

1.2 Scope

This release note covers the USM_ONESTOR_V5.2_R2019.20.16 firmware package for all OneStor enclosures. It contains all required controller level, enclosure level, fan level and PCM/PSU level firmware components.

1.3 Terms and Abbreviations

BBU:	Battery Backup Unit
GEM:	Generic Enclosure Management (Firmware)
PCM:	Power Cooling Module
PSU:	Power Supply Unit
SBB	Storage Bridge Bay
USM:	Unified System Management
VPD:	Vital Product Data
WWN:	World Wide Name

2 Version Information

This section shows the firmware component versions contained in this package and highlights in yellow the items which have changed since the previous GEM USM package.

2.1 GEM Subsystem Firmware

2.2 Controllers

2.2.1 Pimlico - E12EBD

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Bootloader	2.01
Firmware	5.2.0.207
VPD Structure	0x6
VPD CRC	0x8eb959a1
Config CRC	0x79e10778
GEM CPLD	0x0b.00

2.2.2 Pimlico - E12EBD - Lattice

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Bootloader	2.01
Firmware	5.2.0.207
VPD Structure	0x6
VPD CRC	0xd5f28e7a
Config CRC	0x79e10778
GEM CPLD	0x20.00

2.2.3 Gallium

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Bootloader	2.01
Firmware	5.2.0.207
VPD Structure	0x06
VPD CRC	0x4c7d0269
Gallium NX - Config CRC	0x3bd5bf50
Gallium PX - Config CRC	0xc815102e

2.2.4 Indium

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Bootloader	1.0b

Firmware	5.2.0.207
Indium LX	
VPD Structure	0x6
VPD CRC	0x621d3cfe
Config CRC	0x96f85db1
Indium NX	
VPD Structure	0x6
VPD CRC	0x59af3f91
Config CRC	0xf75c88d3

2.2.5 Pleasanton Express

USM Package	USM_ONESTOR_V5.2_R2019.20.16
GEM Firmware	5.2.0.207
EPM Firmware	5.2.0.207
VPD Structure	0x08
VPD CRC	0x10c71276
Eth Switch EEPROM CRC	0x89de95af
GEM CPLD	16.00.0
BMC Boot	0.00.0000
BMC Root	0.00.0000
Main CPLD	0.00.0000000014

2.2.6 Cobra+ EBOD

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Bootloader	1.0b
Firmware	5.2.0.207
MAG FPGA	25.00
Primary Expander	
Flash Config	0x87208397
VPD Structure	0x01
VPD CRC	0x51e5446e
Secondary Expander	
Flash Config	0xd519302b
VPD Structure	0x01
VPD CRC	0xc65bae89

2.2.7 Battleship EBOD

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Package Version	0x1019
Bootloader	1.0b
Firmware	5.2.0.207
MAG FPGA	25.00
10 HDD Baseplane CPLD	04.00
Primary Expander	
Flash Config	0x12b35913
VPD Structure	0x1.0
VPD CRC	0xabd3798e
Secondary Expander	
Flash Config	0x0550261a
VPD Structure	0x1.0
VPD CRC	0x37bcc576

2.3 Sideplanes

2.3.1 SP-3584 - Titan 12G Sideplanes

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Bootloader	2.01
Firmware	5.2.0.207
Left Hand CPLD	0x07
Right Hand CPLD	0x07
Left Hand 36 Port Expander	
VPD Structure	0x07
VPD CRC	0xbb47c664
Config CRC	0x61a3e81a
Left Hand 24 Port Expander	
VPD Structure	0x07
VPD CRC	0x60787376
Config CRC	0xfe7bc727
Right Hand 36 Port Expander	
VPD Structure	0x07
VPD CRC	0x6f96875e
Config CRC	0xc589b747
Right Hand 24 Port Expander	
VPD Structure	0x07
VPD CRC	0x2035d972
Config CRC	0xbc4ca602

2.3.2 SP-3584 - Titan 12G Sideplanes - Lattice

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Bootloader	2.01
Firmware	5.2.0.207
Left Hand CPLD	0x22
Right Hand CPLD	0x22
Left Hand 36 Port Expander	
VPD Structure	0x07
VPD CRC	0xeed8a4c3
Config CRC	0x61a3e81a
Left Hand 24 Port Expander	
VPD Structure	0x07
VPD CRC	0xb6de4030
Config CRC	0xfe7bc727
Right Hand 36 Port Expander	
VPD Structure	0x07
VPD CRC	0xf762f21d
Config CRC	0xc589b747
Right Hand 24 Port Expander	
VPD Structure	0x07
VPD CRC	0x3775e8c5
Config CRC	0xbc4ca602

2.3.3 SP-34106 - Cobra+ Sideplanes

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Bootloader	1.0b
Firmware	5.2.0.207
Flash Config	0x79699f42
VPD Structure	0x01
VPD CRC	0x8f76a88c
Baseplane Common	
CPLD	0x0e.00
Baseplane Slot 0	
VPD Structure	0x01
VPD CRC	0xfb66b9bc

Baseplane Slot 1	
VPD Structure	0x01
VPD CRC	0x022f3609

2.3.4 SP-34106 - Battleship Sideplanes

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Bootloader	1.0b
Firmware	5.2.0.207
Flash Config	0x0d5a08e1
VPD Structure	0x1.0
VPD CRC	0xe83c1dc5
Baseplane Common	
CPLD	0x0e.00
Baseplane Slot 0	
VPD Structure	0x2.0
VPD CRC	0xeb90e728
Baseplane Slot 1	
VPD Structure	0x2.0
VPD CRC	0x12d9689d

2.4 Midplanes - OneStor

2.4.1 HB1235

USM Package	USM_ONESTOR_V5.2_R2019.20.16
CPLD	0x15
VPD Structure	0x13
VPD CRC	0xb45a58bd

2.4.2 EB2425

USM Package	USM_ONESTOR_V5.2_R2019.20.16
CPLD	0x15
VPD Structure	0x13
VPD CRC	0x47c74328

2.4.3 HB2435

USM Package	USM_ONESTOR_V5.2_R2019.20.16
CPLD	0x15
VPD Structure	0x13
VPD CRC	0x9a600a82

2.4.4 SP3212A

USM Package	USM_ONESTOR_V5.2_R2019.20.16
CPLD	0x15
VPD Structure	0x13
VPD CRC	0x54b4752d

2.4.5 SP3212A - Lattice

USM Package	USM_ONESTOR_V5.2_R2019.20.16
CPLD	0x21
VPD Structure	0x0x13
VPD CRC	0x18c2c221

2.4.6 SP3224A

USM Package	USM_ONESTOR_V5.2_R2019.20.16
CPLD	0x15
VPD Structure	0x13
VPD CRC	0xa1796e3d

2.4.7 SP3224A - Lattice

USM Package	USM_ONESTOR_V5.2_R2019.20.16
CPLD	0x21
VPD Structure	0x0x13
VPD CRC	0x5f4ab797

2.4.8 SP3584 - Titan 12G

USM Package	USM_ONESTOR_V5.2_R2019.20.16
CPLD	0x03
VPD Structure	0x13
VPD CRC	0x746d7800

2.4.9 SP3584 - Titan 12G - Lattice

USM Package	USM_ONESTOR_V5.2_R2019.20.16
CPLD	0x20
VPD Structure	0x0x13
VPD CRC	0xaa7722d1

2.4.10 SP34106 - Cobra+

USM Package	USM_ONESTOR_V5.2_R2019.20.16
VPD Structure	0x01
VPD CRC	0x08522f1d

2.4.11 SP34106 - Battleship

USM Package	USM_ONESTOR_V5.2_R2019.20.16
VPD Structure	0x1.0
VPD CRC	0xe40acae6

2.5 Midplanes - OneStor-XP

2.5.1 XP-PL24P

USM Package	USM_ONESTOR_V5.2_R2019.20.16
CPLD	0x02
VPD Structure	0x0x10
VPD CRC	0x6c82a1a8
Ops Panel Firmware	0x1.3

2.6 PCMs / PSUs

2.6.1 HE580W Gen2 - OneStor

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Main Firmware	0x3.3d
DSP Firmware	0x3.0a
VPD Version	0x05
VPD CRC	0x3cfce593

2.6.2 HE764W - OneStor

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Main Firmware	0x2.01
DSP Firmware	0x1.07
VPD Version	0x05
VPD CRC	0xb672a592

2.6.3 HE764WDC - OneStor

USM Package	USM_ONESTOR_V5.1_R2019.20.16
Main Firmware	0x1.05
DSP Firmware	0x1.03
DSP2 Firmware	0x3.03
VPD Version	0x06
VPD CRC	0x2e004680

2.6.4 HE764W_VERC - OneStor

USM Package	USM_ONESTOR_V5.1_R2019.20.16
Main Firmware	0x3.00
DSP Firmware	0x1.07
VPD Version	0x05
VPD CRC	0x81201d04

2.6.5 HE764WDC_VERC - OneStor

USM Package	USM_ONESTOR_V5.1_R2019.20.16
Main Firmware	0x2.00
DSP Firmware	0x1.03
DSP2 Firmware	0x3.03
VPD Version	0x06
VPD CRC	0x2e004680

2.6.6 PT580W - OneStor

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Main Firmware	0x3.03
DSP Firmware	0x2.02
VPD Version	0x05
VPD CRC	0x4d503dd4

2.6.7 PT764W - OneStor

USM Package	USM_ONESTOR_V5.1_R2019.20.16
Main Firmware	0x2.03
DSP Firmware	0x1.02
VPD Version	0x05
VPD CRC	0xf08cc543

2.6.8 TT2200W - SP3584

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Main Firmware	0x3.09
DSP Firmware	0x0.0f
VPD Version	0x05
VPD CRC	0x79bd5926

2.6.9 2200W - SP3584

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Main Firmware	0x3.06
DSP Firmware	0x3.03
VPD Version	0x05
VPD CRC	0x8d93fe80

2.6.10 1440W - OneStor-XP

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Main Firmware	0x2.12
DSP Firmware	0x2.08
VPD Version	0x0x05
VPD CRC	0x306646c8

2.6.11 2000W - SP34106

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Main Firmware	0x1.06

2.7 Fan Modules

2.7.1 SP3584

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Firmware	01.10
VPD Version	5
VPD CRC	0x636b4986

2.7.2 XP-PL24P

USM Package	USM_ONESTOR_V5.2_R2019.20.16
Firmware	00.20
VPD Version	0x05
VPD CRC	0x533a28fd

3 Firmware Update Procedure

3.1 OneStor

The following section defines the process for upgrading the OneStor subsystem FW components.

3.1.1 Enclosure Upgrade Steps

The GEM subsystem refers to the following enclosure components:

1. Canister GEM Firmware: Bootloader and main GEM image.
2. Canister flash config and VPD.
3. Canister GEM CPLD and Power CPLD.
4. Midplane VPD and CPLD.
5. PCM/PSU Firmware and VPDs.

SES Page 0Eh is the firmware download mechanism used to upgrade the GEM subsystem. The details for this are covered in the GEM 5.0 ANSI SES Specification and the T-10 ANSI SCSI Enclosure Services - 3(SES-3) documentation.

3.1.1.1 Canister Upgrade

- 1 Using a page 0Eh upgrade utility, download the appropriate combined canister update GFF for the canister.

GEM will automatically reboot to activate the firmware once the update is complete.

- 2 Repeat step 1 for canister B.

3.1.1.2 Enclosure Upgrade

1. Using a page 0Eh upgrade utility, download the appropriate midplane VPD update GFF.
2. Using a page 0Eh upgrade utility, download the midplane CPLD update GFF.
3. Simultaneously reboot both canister A and B.

3.1.1.3 PCM/PSU Upgrade

1. Using a page 0Eh upgrade utility, download the appropriate VPD file for the installed PCM/PSU.
2. Using a page 0Eh upgrade utility, download the appropriate individual firmware files for the installed PCM/PSU.

3.2 Cobra+ Update Procedure

Follow the steps below to upgrade a Cobra+ enclosure to the firmware levels described in this USM. These steps assume the enclosure is at the R2017.33.0 USM package level including unique WWNs programmed for all expanders.

1. Using a page 0Eh upgrade utility, download the midplane VPD to either IOM controller primary expander.
2. Using a page 0Eh upgrade utility, download the appropriate primary expander combined image. This combined image contains the bootloader, GEM, MAG FPGA and the flash config images.
 - a. Upgrade both IOM primary expanders before moving on to the next step.
3. Using a page 0Eh upgrade utility, download the appropriate secondary expander combined image (the filename will contain "inband"). The combined image contains the bootloader, GEMLite, flash config and VPD.
 - a. Upgrade both secondary expanders before moving on to the next step.
4. Using a page 0Eh upgrade utility, download the appropriate sideplane expander combined image (the filename will contain "inband") to all of the sideplane expanders. The combined image contains the bootloader, GEMLite, flash config, sideplane VPD, baseplane VPDs and baseplane CPLD.

Note: The sideplane combined image will only update the sideplane expanders that are in the same SAS domain as the primary expander. Therefore, the same procedure needs to be completed on the other IOM controller to complete the sideplane updates.

Note: The baseplane CPLD is only updated through the primary data sideplane expanders.

5. Using a page 0Eh upgrade utility, download the combined PSU FW file to either IOM controller primary expander.

3.3 OneStor-XP

The SUU application and documentation are included in Tools Package 5.8. The firmware must be updated in the order that the component headings are presented below.

3.3.1 BMC

Download and activate the BMC image using the following commands and wait for each to complete. Configurations will be preserved by default. Append '-sc "flash(conf)"' to forcefully overwrite configurations

1. `suu --transfer -d <device_address> -f <filename>`
2. `suu --select -d <device_address> -t BMC`
3. `suu --perform -d <device_address>`
4. The BMC will reboot on activation, this takes roughly 240 seconds to complete
5. Verify the BMC version information with `suu --query -fw-v -d <device_address> -t BMC`

3.3.2 CPLD

Download and activate the CPLD image using the following commands and wait for each to complete.

Note: CPLD activations in a HA enclosure must be performed on a single canister at a time.

1. `suu --transfer -d <device_address> -f <filename>`
2. `suu --select -d <device_address> -t CPLD`
3. `suu --perform -d <device_address>`
4. The Controller will reboot on activation, this takes roughly 300 seconds to complete
5. Verify the CPLD version information with `suu --query -fw-v -d <device_address> -t CPLD`

3.3.3 GEM Components

When updating GEM components using SUU, the operation can only be performed from a single canister in an enclosure at any one time. E.g. while a GEM component is being activated from the canister in slot 0, any attempt to activate a GEM component from the canister in slot 1 will be rejected.

All GEM components can be updated in the following manner:

1. `suu --transfer -d <device_address> -f <filename>`
2. `suu --select -d <device_address> -t GEM`
3. `suu --perform -d <device_address>`
4. If a synchronous GEM reset is required, append '-sc "syncgem"' to the command line for --perform (a synchronous reset of GEM may take up to 30 seconds to complete)

3.3.3.1 Canister Firmware

Update the firmware for the GEM components resident in the canister with the commands shown in 3.3.3 (this will only update the canister firmware on the controller it is executed on).

3.3.3.2 Disruptive Canister Firmware

Firmware components in this update will disrupt I/O. Care must be taken when updating. The files are contained within the disruptive folder. A power cycle may be required as some components (e.g. the SAS controller) will have been restarted.

3.3.3.3 Enclosure Firmware

Update the firmware for the GEM components resident in the enclosure with the commands shown in 3.3.3. This only needs to be performed from one canister in an enclosure.

3.3.3.4 Power Firmware

Update the firmware for the GEM components resident in the power and cooling modules with the commands shown in 3.3.3. This only needs to be performed from one canister in an enclosure.

3.3.3.5 Verify GEM Firmware Versions

Verify the GEM version information with `suu --query -fw-v -d <device_address> -t GEM`.

4 Change History

This section documents the changes made since the previous USM release.

4.1 Issues addressed in USM_ONESTOR_V5.2_R2019.20.16

Issue ID	Description	Product
FMW-69109	G280- 5U84 Eco PSU Fault Status, 2.2K PSU firmware 3.09	Titan 12G
FMW-67372	Mfg bin files not getting created for sideplanes in the latest releases of G280MR4	Titan 12G
FMW-68698	Mfg gff config files not getting created for newly added lattice no_remap configs	Titan 12G
FMW-68701	mfg VPD .gff files have CRCs of older VPDs	Titan 12G

4.2 Issues addressed in USM_ONESTOR_V5.2_R2019.20.15

Issue ID	Description	Product
FMW-63095	G280: Support for 764W PCM and enabling Customer FRU information on 764 PCM(AC-Gold, AC-Plat, DC)	E12EBD
FMW-63078	Physical PHY mapping cannot be enabled with changes to USM physical PHY map enabling config files	Titan 12G
FMW-62108	G280 (GEM 5.2)- JBOD for GEM CLI "reset_saved_zone_info" causes GEM firmware Crash	All
FMW-64513	Part 2: Reduce watchdog refresh interval to 250 ms for SP CPLD v22	Titan 12G
FMW-66039	Update atag for canister flash config flipflop file	All
FMW-66034	Add Lattice config files in 93-1024 & 93-1025 sideplane combined files as part of manifest file	Jenkins Build Environment
FMW-62427	VPD Product ID missing in Zone Table	All
FMW-66470	Failure in the update of sideplane using SESDownload	Titan 12G
FMW-66315	G280 JBOD-764W DC : UUT is failing at "PSU 1 VPD Update" stage and PCM vpd file is failing to update with sesdownload.	All
FMW-66618	G280 JBOD : While performing normal/flipflop update with mixed IOM (Lattice + Intel) UUT failed at "PSU 1 VPD Update" stage on 764W AC Gold PSU.	All
FMW-66952	G280_MR4_USM20.15 : Combined files are flashing incorrect inband_vpd versions on Sideplanes	All
FMW-66971	G280MR4 JBOD: FF failed for PT764 AC PSU with slot mismatch error with manifest file	All
FMW-66914	G280 JBOD-764W DC : he764wdc_verC PSU FlipFlop file version mismatch.	All
FMW-50518	Unassigned Part Number for Lenovo Titan sidplane FW files	All
FMW-67138	UUT: Items indicated as mismatches even though they matched during testing of No_logical_phy_remap	All
FMW-66765	G280- Cray (SFC 12199166): Issue running UUT exes when FIPs is enabled in the OS	All
FMW-65770	Improve GEM bootloader robustness & add signature bytes to .bin in G280	All

4.3 Issues addressed in USM_ONESTOR_V5.2_R2019.20.14

Issue ID	Description	Product
FMW-62792	Firmware update failed for Mixed IOM (Lattice and Intel) configuration in flash_manager buffer id update	E12EBD
FMW-61344	G280 RBOD CPLD: 5U84 with Macronix Flash sideplane codeload failure	Titan 12G
FMW-60952	Add Part No for the Lenovo d3284 version inband sideplane combined files	Jenkins
FMW-60646	Need to sync G280 capabilities with GEM 5.2	E12EBD/ Titan 12G
FMW-59108	UUT [G280 JBOD]: Failure to update to GEM Canister firmware due to flash_manager IO_TIMEOUT	E12EBD
FMW-58669	UUT update on 5U is changing drive PHY mappings	E12EBD
FMW-51425	QUANTUM GT280R006-02 5.2.0.95 Unexpected HW power state or mismatch between EBOD and Midplane CPLD power states for drive resulted in a DU situation	E12EBD
FMW-64208	G280: Revert the sideplane CPLD version from 0x25 to 0x22	Titan 12G

4.4 Issues addressed in USM_ONESTOR_V5.2_R2019.20.12

Issue ID	Description	Product
FMW-58674	G280: CPLD type detection at SoD	E12EBD/Titan 12G
FMW-58679	G280: Lattice Sideplane CPLD inband gff image download getting timedout	E12EBD/Titan 12G
FMW-57667	G280 JBOD: On Lattice IOM Canister FW is not getting updated through combined file	E12EBD
FMW-56394	G280: Jenkins build changes required for supporting Lattice CPLD	Titan 12G
FMW-53859	G280: Code changes for Lattice CPLD update support for midplane, sideplanes and IOM's	E12EBD/Titan 12G
FMW-59501	G280: 5U JBOD: 5U84 ECO PSU Mutliple PNs in Manifest	Jenkins

4.5 Issues addressed in USM_ONESTOR_V5.2_R2019.20.11

Issue ID	Description	Product
FMW-57444	G280: Add new PCM Firmware files for ECO PCM PT 580W 3.03 main firmware	E12EBD

FMW-53304	PSU Eco design :2.2KW Unable to Brand or update VPD	Titan 12G
FMW-54135	Add capability for default/min zone mode	All
FMW-53382	Fix for redundant BROADCAST(SES) due to power manager module and new CLI command to enable BROADCAST(SES) events filter mode.	2U12
FMW-47035	G280 fix to avoid EMP communication fault alerts in case of GEM expander reboot	All
FMW-53687	Classification of Power Manager SES Broadcasts	2U12
FMW-53839	G280: PSU failure event is not generating if PSU incompatible alert is present	All
FMW-53055	G280:Codeload failure - bootloader version mismatch for Gallium	E12EBD/Titan 12G
FMW-45797	G280: Titan 5U84 Support for the Flex Eco Design 2.2KW Titanium PSU	Titan 12G
FMW-51647	G280: Titan3/Pimlico - Add Single Bank NOR flash Support (13-1088 Micron Singlebank)	E12EBOD/Titan 12G
FMW-52758	'set_fanvpd' command timed out issue	All
FMW-50342	G280: codeload with pfu and io fails due to degraded drives	All
FMW-47121	Root expander experienced a communication fault	All
FMW-50518	Unassigned Part Number for Titan sidplane FW files	Titan 12G
FMW-43704/ FMW-48343	An alert condition was detected on a sideplane element - Master Case	Titan 12G
FMW-48142	Add logical PHY mapping to defaults on Titan sideplanes	Titan 12G
FMW-46521	G280: Jenkins changes to Add PT580W files to G280 build	2U/4U ENC
FMW-45197	VPD format version reporting in USM manifest is not consistent	All
FMW-42238 /FMW-45597	Generating suu and gff binaries from vendor provided raw hex files and pcm_vpd.bat PT580W	2U/4U ENC
FMW-41534 /FMW-36364	LENOVO: UUT: D3284 fails to upgrade FW - both with BOMC and standalone package	All
FMW-36364	G280 Overlapped command Check Condition seen with no overlapped command	All
FMW-57495	G280: Add new PCM Firmware files for ECO PCM TT 2.2KW 3.07 main firmware	Titan 12G

4.6 Issues addressed in USM_ONESTOR_V5.2_R2019.20.10

Issue ID	Description	Product
FMW-33990	Fix GEM CLI 'set_pcmvpd'	All
FMW-43462	Fix GEM CLI 'ddump_pwrmgr' to show correct PCM/PSU SN	All
FMW-43225	Fix EBOD Titan sideplane down issue on EBOD CPLD update	Titan 12G, E12EBD
FMW-42630, FMW-42514	Coverity fixes	All
FMW-44331	Fix for Swap bit of Host Temp. sensor not getting cleared	Gal3
FMW-44959	PMC 12G Treck TCPIP Stack Patch for Ripple 20	E12EBD
FMW-42096	Suppress same repeated SES PAGE 2 Ctrl requests	All

4.7 Issues addressed in USM_ONESTOR_V5.2_R2019.20.9

Issue ID	Description	Product
FMW-42109	Added zone modes to RSS sideplane config as well, to be used in channel customers as well	Titan12G
FMW-42120	Drives taking long time (approx 150 sec) to detect after SP combined file flash	Titan12G
FMW-41430	New Zone Mode Support(2 Drive Group) on generic Titan12G configuration	Titan12G

4.8 Issues addressed in USM_ONESTOR_V5.2_R2019.20.8

Issue ID	Description	Product
FMW-40715	SATA Drive and Zoning Support on generic Titan12G configuration	Titan12G

4.9 Issues addressed in USM_ONESTOR_V5.2_R2019.20.7

Issue ID	Description	Product
FMW-35299	High fan speed due to PCM hotspot temperature. Updated target temperature threshold in 2.2 KW PSU VPD.	Titan12G

4.10 Issues addressed in USM_ONESTOR_V5.2_R2019.20.6

Issue ID	Description	Product
FMW-33752	TT-51976-Intermittent Fan Failure and Recovery	Titan12G
FMW-35158	Root Expander Comms Failure	2U/4U ENC
FMW-29997	Midplane vpd corruption	Gal3 + 2U ENC
FMW-35131	Update Midplane CPLD Low density to v15	2U/4U ENC
FMW-36736	Ported Flash manager fixes from GEM 5.3 branch	All
FMW-34503/ FMW-35348	GEM reports PCM Voltage and Current sensor values 0 after reseal	All
FMW-36365	Cable LED remains ON even on cable removal	All
FMW-32255	Recovery Mode causes lost enclosure, vdisks in QTOF	Titan12G

4.11 Issues addressed in USM_ONESTOR_V5.2_R2019.20.5

Issue ID	Description	Product
FMW-33992	G280 Ambient temperature sensor inaccurate on 2U12/2U24/4U24	2U/4U ENC
FMW-31339	TITAN: 2.2kW PCM: Updated warning and critical Temp Thresholds	Titan 12G

4.12 Issues addressed in USM_ONESTOR_V5.2_R2019.20.4

Issue ID	Description	Product
FMW-26007	Software watchdog GEM after stack overflow(set_enc_id failed)	E12EBD
FMW-31908	GEM crash om CLI 'hspower'	Titan 12G
FMW-31089	Stack overflow when serial port in using, trigger IO module reboot.	E12EBD

4.13 Issues addressed in USM_ONESTOR_V5.2_R2019.20.3

Issue ID	Description	Product
FMW-30004	PSU Update fails with status 7 (UNSUCCESSFUL)	All
FMW-30852	GEM 5.2: Titan: Drive PHY mapping errors	All
FMW-31084	Stack overflow causing Telnet server reset and IO module reboot - Workaround	E12EBD
FMW-31055	Updated E12EBD canister CPLD to v0x0B	E12EBD

4.14 Issues addressed in USM_ONESTOR_V5.2_R2019.20.2

Issue ID	Description	Product
FMW-29370	Side plane removal of cover leads to both sideplanes failing, not just the one being serviced	All
FMW-29129	GT275R005-04 Power supply status stays Amber! (TT51212)	All
FMW-30272	Change Bootloader version reporting format for sideplane	Titan 12G
FMW-29594	Need some changes in xml file of Customer combined package	Jenkins
FMW-27413	Remote connection fault Reported -cable Fault LED ON	Titan 12G
FMW-26006	jbod_conf help for set_zone_mode missing optional parameter	All
FMW-24634	Cannot see all drives after 5U84 or 3284 are power cycled when connected to 930-8e HBA	All

FMW-24245	GEM 'driveinv' command does not list the drive temp	All
FMW-24194	Re-inserted SAS cable takes ~9 min for I/O to failback in RHEL 7.3 & ServerRAID M5225 HBA	All
FMW-21270	Incorrect drive temperature reported by driveinv	All
FMW-22648	VMware ESXi 6.5 drives Unconfigured Bad if 5U84 enclosure is powered on after server	All
FMW-22649	RAID arrays not shown by MegaRAID Storage Manager with VMware 6.5, GUI also freezes	All
FMW-23450	jbodupdate.x86_64_rhel6 hangs up after sideplane USM download on 5U84 in a mixed config	All
FMW-22275	Member drives disappear from 5U84 md RAID arrays causing I/O failures when SAS cable pulled and reinserted	All
CSIT-66	LSI Storage Authority (LSA) 3.023.000.000 only sees 237 of the 260 drives present	All
CSIT-72 / BCOM-352	Incorrect number of drives detected in D3284 with Vero	All
FMW-26241	SAS cables pulled resulting in Sled 0 & 1 fault: Phy connection failure on 5U84ENC	All
FMW-24991	Storage 2U12/2U24 Assertion Crash after AC Power Loss event	2U
FMW-25157	2U24 for SAPHANA encounters hardreset resulting in DU condition	2U24
FMW- 26324	Jbodupdate v5.1 - 'Firmware Activation Failed - Status: 256' with RAID 930-8e and 5U84ENC	Titan
FMW-26195	Jbodupdate -- Error - Enclosure Rediscover Time Out on a 5U84ENC Variant	Titan
FMW-24622	jbodupdate r failed to update enclosure when using a single SAS cable connected to 930-8e	JBOD
CSIT-182	Drive disappeared on a RHEL 7.6 server after a SAS cable pull	All
FMW-29016	Jbodupdate summary should not list non-Seagate enclosure Seagate Internal	All
FMW-28866	ADAPT pool in QTOF the other in FTDN - TT51127	All