

Subject: Re: Extreme Pro 64GB Frozen Giving False Write OK [Incident: 230920-000546]
From: "John L. Poole" <jlpoole56@gmail.com>
Date: 9/19/2023, 5:10 PM
To: WD Customer Support <westerndigital@mailac.custhelp.com>

RRR

Dear Ellie B.,

You have requested the following items which I have placed in a table in the first column. In the second column I have placed links and the information requested with additional information your engineers may find helpful.

Requested Item	Response/URL
<ul style="list-style-type: none">• Clear and zoomed in pictures of the card (front and rear side)	<p>I took photos and below are links to the JPEG photos:</p> <ul style="list-style-type: none">• front: https://saledata.us/GenPi64/logs/20230917/wd/photos/micro_front_DSC_3297.jpg• back: https://saledata.us/GenPi64/logs/20230917/wd/photos/micro_back_DSC_3296.jpg• package front: https://saledata.us/GenPi64/logs/20230917/wd/photos/package_front_DSC_3298.jpg• package back: https://saledata.us/GenPi64/logs/20230917/wd/photos/package_back_DSC_3299.jpg <p>I have a Nikon 60mm Macro and could take better shots if needed. I understand you need to rule out counterfeit.</p>

<ul style="list-style-type: none"> Operating system of computer 	<p>The operating system was created from the GenPi64 Project at https://github.com/GenPi64 using the Build.Dist sub project. The GenPi64 project builds Gentoo Linux images compatible for Raspberry Pi units. The current image has a file system of btrfs. The image was built by the principal developer, Michael Jones, in Chicago and the build completed August 17, 2023.</p> <pre> jlpoole@Rpi4B3 ~ \$ date; uname -a Tue Sep 19 04:24:10 PM PDT 2023 Linux Rpi4B3 5.15.61-v8-p4 #1 SMP PREEMPT Thu Aug 17 19:31:53 CDT 2023 aarch64 GNU/Linux jlpoole@Rpi4B3 ~ \$ </pre> <p>The Gentoo operating system for the Raspberry Pi 4B in zip format may be downloaded:</p> <ul style="list-style-type: none"> https://saledata.us/GenPi64/logs/20230917/wd/img/GenPi64OpenRC_Jones_20230913.img.zst [610 MBs] https://saledata.us/GenPi64/logs/20230917/wd/img/GenPi64OpenRC_Jones_20230913.img.zst.sum [162 bytes] <p>To replicate the problem, load micro onto a Raspberry 4B and perform (root passwd "GenPi64@"):</p> <ul style="list-style-type: none"> determine IP, create a local user account, ssh as local user and su to root and execute "dmesg -w" to monitor system errors In main console, or another ssh console, as root eix-sync to pull in packages, In session other than above "dmesg -w", execute as root: emerge sys-kernel/raspberrypi-sources. The errors will occur after the posting of "Installing....". Example of a later attempt is here - see lines 420-436.
<ul style="list-style-type: none"> Proof of purchase 	<p>Proof of Purchase at https://saledata.us/GenPi64/logs/20230917/wd/photos/Poole_Amazon.com%20-%20Order%20113-1228016-1850638.pdf</p>
<ul style="list-style-type: none"> Exact make and model of the host device 	<p>Raspberry Pi 4B</p>

- Screenshot of error message you get on computer

```

416 [Sun Sep 17 17:31:57 2023] IPv6: ADDRCONF(NETDEV_CHANGE): empi18u204: link becomes ready
417 [Sun Sep 17 17:31:57 2023] rtk152_2-2-411:0 empi18u204: carrier on
418 [Sun Sep 17 17:31:57 2023] uart-pl111 fe201000,serial: no DMA platform data
419 [Sun Sep 17 17:31:57 2023] can-dummy-reg: disabling
420 [Sun Sep 17 17:31:57 2023] INFO: task kworker/1:3-833 blocked for more than 122 seconds.
421 [Sun Sep 17 17:31:57 2023]          tainted: G         C         5:15-01-vd-p4-p1
422 [Sun Sep 17 17:31:57 2023] "echo 0 > /proc/sys/kernel/hung_task_timeout_secs" disables this message.
423 [Sun Sep 17 17:31:57 2023] task:kworker/1:3  0184c0 stack:  0 pid:  833 ppid:  2 flags:0x00000000
424 [Sun Sep 17 17:31:57 2023] workqueue: events_freeable mmc_rescan
425 [Sun Sep 17 17:31:57 2023] Call trace:
426 [Sun Sep 17 17:31:57 2023]   __switch_to+0x119/0x164
427 [Sun Sep 17 17:31:57 2023]   __schedule+0x370/0x93c
428 [Sun Sep 17 17:31:57 2023]   schedule+0x70/0x130
429 [Sun Sep 17 17:31:57 2023]   __mmc_claim_host+0xe4/0x210
430 [Sun Sep 17 17:31:57 2023]   mmc_get_card+0x0/0x0
431 [Sun Sep 17 17:31:57 2023]   mmc_sd_detect+0x2c/0xa0
432 [Sun Sep 17 17:31:57 2023]   mmc_rescan+0x38/0x2f0
433 [Sun Sep 17 17:31:57 2023]   process_one_work+0x200/0x49c
434 [Sun Sep 17 17:31:57 2023]   worker_thread+0x7c/0x160
435 [Sun Sep 17 17:31:57 2023]   kthread+0x144/0x160
436 [Sun Sep 17 17:31:57 2023]   ret_from_fork+0x10/0x20
437 [Sun Sep 17 17:32:36 2023] BTRFS warning (device mmcblk0p2): csum failed root 5 ino 731133 off 1925459968 csum 0xed4e9903 expected csum 0x31dbdf09 mirror 1
438 [Sun Sep 17 17:32:36 2023] BTRFS error (device mmcblk0p2): kdev /dev/mmcblk0p2 errs: wr 0, rd 0, flush 0, corrupt 1, gen 0
439 [Sun Sep 17 17:32:36 2023] BTRFS warning (device mmcblk0p2): csum failed root 5 ino 731133 off 1925459968 csum 0xed4e9903 expected csum 0x31dbdf09 mirror 1
440 [Sun Sep 17 17:32:36 2023] BTRFS error (device mmcblk0p2): kdev /dev/mmcblk0p2 errs: wr 0, rd 0, flush 0, corrupt 2, gen 0
441 [?]2004h]0;root@eos:~/home/jlpoole/eos/home/jlpoole # exit
442 [?]20041
exit

```

Source: https://saledata.us/GenPi64/logs/20230917/test_rpi_src/dmesg_after_card1_btrfs_failure.script.html

Note: I've mounted the disk onto a System 76 Pangolin laptop running Gentoo Linux and I have tried to:

Command	Result
fdisk, -d all partitions then write.	Partitions are not erased
add files to both FAT and btrfs partitions	All indications during the mount are that the files were written. However, when the disk is remounted, they're one.

- Screenshot of disk management

```

357 [?]2004h]0;root@eos:/home/jlpoole/eos/home/jlpoole # fdisk /dev/mmcblk0
358 [?]20041

359 Welcome to fdisk (util-linux 2.38.1).
360 Changes will remain in memory only, until you decide to write them.
361 Be careful before using the write command.
362
363
364 [?]2004hCommand (m for help): p
365 [?]20041

isk /dev/mmcblk0: 59.48 GiB, 63864569856 bytes, 124735488 sectors
366 Units: sectors of 1 * 512 = 512 bytes
367 Sector size (logical/physical): 512 bytes / 512 bytes
368 I/O size (minimum/optimal): 512 bytes / 512 bytes
369 Disklabel type: dos
370 Disk identifier: 0xdb97fc2a
371
372 Device      Boot Start      End  Sectors  Size Id Type
373 /dev/mmcblk0p1 *    2048    524287    522240    255M c W95 FAT32 (LBA)
374 /dev/mmcblk0p2          524288 124735487 124211200    59.26 83 Linux
375
376 [?]2004hCommand (m for help): q
377 [?]20041

378 [?]2004h]0;root@eos:/home/jlpoole/eos/home/jlpoole # exit
379 [?]20041

exit
380
381 Script done on 2023-09-19 09:56:06-07:00 [COMMAND_EXIT_CODE="0"]

```

Source: https://saledata.us/GenPi64/logs/20230917/fdisk_session_card2_20230919_0948.script.html

Screenshot of root directory of the card

```

jlpoole@Rpi4B3:~
jlpoole@Rpi4B3 ~ $ date;ls -la /
Tue Sep 19 04:59:10 PM PDT 2023
total 48
drwxr-xr-x  1 root root   126 Aug 17 18:08 .
drwxr-xr-x  1 root root   126 Aug 17 18:08 ..
drwxr-xr-x  1 root root  1206 Aug 19 15:16 bin
drwxr-xr-x  3 root root 16384 Dec 31  1969 boot
drwxr-xr-x 16 root root  4340 Dec 31  1969 dev
drwxr-xr-x  1 root root  2434 Sep 19 16:23 etc
drwxr-xr-x  1 root root    30 Aug 19 11:08 home
drwxr-xr-x  1 root root   178 Aug 17 18:07 lib
drwxr-xr-x  1 root root  3414 Aug 18 12:33 lib64
drwxr-xr-x  1 root root    0 Aug 13 17:03 media
drwxr-xr-x  1 root root   12 Sep 10 09:11 mnt
drwxr-xr-x  1 root root    0 Aug 13 17:03 opt
dr-xr-xr-x 196 root root    0 Dec 31  1969 proc
drwx----- 1 root root   132 Sep 10 09:47 root
drwxr-xr-x 16 root root   620 Sep 19 16:24 run
drwxr-xr-x  1 root root  2590 Aug 19 15:16/sbin
dr-xr-xr-x 12 root root    0 Dec 31  1969 sys
drwxrwxrwt  1 root root   100 Dec 31  1969 tmp
drwxr-xr-x  1 root root   134 Aug 13 17:11 usr
drwxr-xr-x  1 root root    86 Aug 25 12:47 var
jlpoole@Rpi4B3 ~ $ █

```

Please note I have 5 disks I purchased. 4 of them have Gentoo Linux systems from the GenPi64 project on them, at least 2 have problem, possibly 4. I have a fifth disk which was only subjected to an F3 test, the results of which are at: <https://saledata.us/GenPi64/logs/20230917/f3/20230916/>

I can take my 5th disk which does not exhibit problems and burn an GenPi64 image onto it and then try the event of installing the 1.1 GB source files. It is my belief that the file transfer of 1.1 GBs is overwhelming the Raspberry Pi's card slot port which on the Raspberry Pi people are concluding has a 50 MBs limit and that the btrfs file system with its "Copy On Write" ("COW") system is creating 2.2 GBs and detects the SanDisk Extreme Pros ability to have faster I/O and is flooding the port resulting in loss on the disk. Then btrfs detects an error and freezes. But, what is disconcerting is that the disk, itself, seems frozen outside of the context of a btrfs system. For instance I tried delete the partitions and fdisk concluded success, but, in fact, it failed -- the partitions persisted.

Please do not hesitate to let me know if there is anything more Western Digital requires. I have tried several builds, including on built in September and have encountered the same problem. My records may suffer from some confusion over builds, I did not realize this problem would become a major effort to documents and try to get to the bottom of what is causing the problem: Western Digital's disk or btrfs or both.

Thank you,

John Poole

On 9/19/2023 3:28 PM, WD Customer Support wrote:

Western Digital.

Incident Update

Reference #: 230920-000546



Incident Details

Reference #: 230920-000546

Subject: Extreme Pro 64GB Frozen Giving False Write OK

Product: 64GB

Response by Email Ellie B
(09/19/2023 03:28 PM)

Dear John Poole,

Thank you for contacting Western Digital Customer Service and Support. My name is Ellie B.

We understand that you are facing issue with the card. We sincerely apologize for the inconvenience caused to you. Rest assured, we are here to help. We need to escalate the case to Level 3 technician. Please provide the below details so that we can escalate the case:

- Clear and zoomed in pictures of the card (front and rear side)
- Operating system of computer
- Proof of purchase
- Exact make and model of the host device
- Screenshot of error message you get on computer
- Screenshot of disk management
- Screenshot of root directory of the card

We will be waiting for your response. If you have any further questions or your issue is still unresolved, please reply to this email and we will be happy to assist you further. Alternatively, you can start a live chat or a phone call with one of our support specialists by clicking on the following link:

Chat: https://support-en.wd.com/app/chat/chat_launch

Phone: https://support.wdc.com/contact_phone.aspx?lang=en

Sincerely,

Ellie B

Western Digital Service and Support

<https://www.westerndigital.com/support>

Note: If you have not visited our community forums, please make sure to do so. You may also find answer(s) to your question(s) there. Link to WD

community forums at: <https://community.wd.com>.

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John Laurence Poole

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