

# Intel® Optane™ persistent memory 200 series Firmware

Release Notes

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*2.2.0.1516*

*July 24, 2020*

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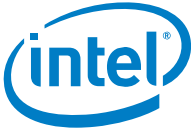
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# 1.0 Intel Optane PMem Firmware Versions

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## 1.1 The Intel Optane PMem FW versions in this release

Ingredient	Version
<b>Firmware Version</b>	2.2.0.1516
<b>Intel Optane PMem Firmware Interface Specification API</b>	2.04

## 1.2 Intel Optane PMem FW Package Contents

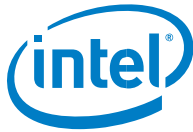
fw\_bwva1\_2.2.0.1516\_rel.bin



## ***2.0 Intel Optane PMem FW Troubleshooting***

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If any Intel Optane PMem device failure occurs, collect a dump from the respective device along with detailed configuration information and file an issue report (IPS) for further investigation. For details on reporting issues please contact your Intel representative.



# 3.0 Intel Optane PMem FW Fixed Issues

Ref ID	Title
22011126836	FIS 2.04 FW Activate return status clarification
22011075102	Fixed Overwrite DIMM progress reporting
18011987295	Resolved issue with clearing eADR status upon warm reset.
18012035091	Resolving issues with lack of logging illegal accesses to CSRs for some address areas.
14011786861	Added support for processing multiple FERR bits within one register.
22010783224	Resolved issue with generating media error logs and DDRT alerts for errors in an area inaccessible by host.
22010843438	Updated DDRT training to improve CMD Vref margins.
22010678434	Optimized processing of lifetime opt-in policies.
22010710742	Resolved issue with clearing Link Failure On Previous Boot BSR bit too early during next successful boot.
1307424133	Resolved issue with lack of access to Get/Set Security Opt-In Commands via Command Effect Log.
22010183416	Resolved issue with access to Command Effect Log FIS command via small payload when media is disabled.
14010801497	Resolved issue with incorrect SMART status due to periodic capacitor selftest.
14010554293	Resolved issue with incorrect ETC value calculation.
22010059782	Resolved issue with incorrect one of the PIMIC initialization registers value.
2206976171	Resolved issue with random fields in SMART and Health payload marked as valid but return invalid data in DIMM Fatal state.
1409589807	Resolved issue with reset passphrases retry counts when resuming from S3
2207292550	Resolved issue with random values being returned on first read of PMON counters.
1807979436	Resolved issue with improper staged FW reporting after S3 resume.
2208920443	Fix to prevent DIMM Fatal while running DDRT traffic during thermal throttling
2208163031	New FW flow to prevent DDRT host interrupt timeout during dynamic CKE
2208163638	Host Data ECC correction enabled for DDRT Error Flow A and DDRT Error Flow B
1807913057	Set Master Passphrase command included in Command Access Policy while not opted in
1409759295	Assign max power limit to be the same as average power limit when Memory Bandwidth Boost is disabled
2208036916	Get CEL via small payload causes platform hang/reset and fatal failure
2207444602	The Reset All Thresholds/Policies to Defaults affects the DDRT IO Init settings
2207697833	The Module will fall into the DIMM Fatal error if power is lost during DDRT Training
1306697570	Improved initial estimated time of completion for ARS scrub
1806779127	Replicate mailbox BOS bit across all mailboxes so that any mailbox requester can determine if a Long Op is in progress
22010012880	Updated handshake with BIOS on fast warm reset



## 4.0 Intel Optane PMem Known Issues

<b>Reference Number</b>	22010165445
<b>Title</b>	Uncorrectable error on wrong address
<b>Impact</b>	Incorrect statement in the FIS2.04 doc regarding address of logging UNC Media Error Log (Table 125 – Software Triggers Input / Output Payload)
<b>Workaround</b>	Expect Uncorrectable Media Error Log logged with address 0x400000000.

<b>Reference Number</b>	1807946548
<b>Title</b>	Secure Erase Policy is accepted with undefined value
<b>Impact</b>	Incorrect Secure Erase Policy return value for out of range input parameters (FIS doc, Table 38 – Secure Erase Policy Payload Register Values).
<b>Workaround</b>	Expect that Secure Erase Policy (Opcode 0x03 0xF7) command parameters different from 0 will be treated the same as 0x1.

<b>Reference Number</b>	1409907572
<b>Title</b>	Uncorrectable during DDRT access to Large Payload is logged in Error Log as WLM transaction type
<b>Impact</b>	Read/Write error on Large Payloads area is logged with incorrect transaction type.
<b>Workaround</b>	Expect that if there is an IO error during IO to the Large Payloads area, the error will be logged with the Wear Level Move (0x08) transaction type.

<b>Reference Number</b>	1307817466
<b>Title</b>	Multiple Error Logs generated when Percentage Remaining Threshold changed for a second time to the same value above actual Percentage Remaining
<b>Impact</b>	Multiple Error Logs generated when continuously setting the Percentage Remaining Threshold to value above current Percentage Remaining value.
<b>Workaround</b>	Expect more than one Error Log logged when setting the Percentage Remaining Threshold to value above current Percentage Remaining value.