Indilinx Barefoot FW2030 Upgrade AP
Firmware Update 2030 Changelog

- Bug Fix: End user updater failure problem was fixed. This bug can be found with I/M 34nm NAND only. Original 1916 release did not have this fix. Later, it was applied as hot fix to 1916 MPTool.
- Feature Add: User data scrambling capability was added. Original 1916 release did not have it. Later, it was applied as hot fix to 1916 firmware.
- Bug Fix: More read fail scenarios were added to firmware bad block management.
- Bug Fix: ATA Security bug fixes. Following improvements were made. Ignoring user password at SEC1 IDENTIFY will reflect current ATA security status more correctly. Changed master password revision code to FFFE
- Bug Fix: SMART self test progress status nibble value was wrong when completed. It should remain at 0, not going back to 9.
- Bug Fix: In some rare situation, SSD power cycling may not be accompanied with IDENTIFY. In such case, SMART power cycle count was not increased.
- Feature Add: Vendor command (0xFE) was added to support LBA to NAND bank mapping capability.
- Bug Fix: The status for SMART Enable/Disable and SMART attribute autosave were changed by power cycling. It should retain the last change status permanently.
- Bug Fix: In some cases, Barefoot buffer memory returned stale data after ATA security erase has been finished.
- Feature Add: TH58NVG7D2ELA48 512GB configuration was impossible with Barefoot. Now it is possible by giving up the use of extra blocks of Toshiba NAND.
- Other: Update Maximum PE cycles value as following. Samsung 5x nm NAND : 10k -> 5k, Samsung 4x nm NAND : 10k -> 3k, Intel/Micron 3x nm NAND : 10k -> 5k, Hynix 41nm : 10k -> 5k, Hynix 32nm : 5k -> 3k
- Bug Fix: 16MB SDRAM parameters were incorrectly set. It caused SSD identification problem.
- New NAND support (Not fully tested yet) : Toshiba TC58NVG5D2FTA00, Samsung K9GBG08U0M/ K9LCG08U1M/ K9HDG08U5M/K9PFG08U5M, Hynix H27UBG8T2ATR
- Other: Read fail handling was enabled only for Hynix NAND. Now, read fail handling is enabled for all 4KB page size MLC.
- Other: For SATA Gen 1 setting, Gen 2 support bit is better to be cleared.
- Other: For sleep/standby command, idle time garbage collection is better to be not started.
- Other: When DIPM is disabled by FW build option, IDENTIFY word 78 bit 3 is better to be cleared.
- Other: When ATA8 ACS2 trim is disabled by FW build option, it is regarded as PATA SSD. In such case, IDENTIFY word 93 will have 604B to solve UDMA2 issue with some PATA-SATA bridge.
- Other: Changed word 60 bit 14 to 0, meaning trim is not deterministic for smaller size than 16KB trim request. Other: 3 channel 2/4 way configuration support is added. It will enable 48/96GB capacity. 2/2
- Other: During power cycle, user data was written to log data position and caused drive disappearance. It is believed to occur when NAND is showing abnormal behavior with 2.x V. Protection code was added to solve it.