



MICROCODE REVISION GUIDANCE

JANUARY 22 2018

MICROCODE REVISION LIST – CLIENT

For those concerned about system stability while we finalize the updated solutions, we are also working with our OEM partners on the option to utilize a previous version of microcode that does not display these issues, but removes the Variant 2 (Spectre) mitigations. This would be delivered via a BIOS update, and would not impact mitigations for Variant 1 (Spectre) and Variant 3 (Meltdown).

Product Names	Public Name	CPUID	STOP deployment of these MCU versions	Continue use of these MCU versions	Comments
Coffee Lake-S + KBL PCH	8th Generation Intel® Core™ Desktop Processor Family	906EB	80	0x72	
Coffee Lake U43e	8th Generation Intel® Core™ Processor Family	806EA	80	0x70	
Kaby Lake Refresh U4+2	8th Generation Intel® Core™ Mobile Processor Family	806EA	80	0x70	
Kaby Lake U/Y, U23e	7th Generation Intel® Core™ Mobile Processors	806E9	80	0x70	
Kaby Lake H/S/X/G,	7th Generation Intel® Core™ Processor Family	906E9	80	0x70	
Skylake X	Intel® Core™ i9 79xxX, 78xxX	50654	0200003C	200003A	
Skylake U/Y/U23e	6th Generation Intel® Core™ m Processors	406E3	000000C2	0xBE	
Skylake H/S	6th Generation Intel® Core™ Processor Family	506E3	000000C2	0xBE	
Broadwell U/Y	5th Generation Intel® Core™ Processor Family, Intel® Pentium® Mobile Processor Family, and Intel® Celeron® Mobile Processor Family	306D4	28	0x25	
Broadwell H	5th Generation Intel® Core™ Mobile Processor Family	40671	0000001B	0x17	
Haswell ULT	4th Generation Intel® Core™ Mobile Processor Family, Intel® Pentium® Mobile Processor Family, and Intel® Celeron® Mobile Processor Family	40651	21	0x20	
Haswell Perf	Intel® Core™ Extreme Processor (5960x, 5930x, 5820x)	40661	18	0x17	
Haswell	4th Generation Intel® Core™ Mobile Processor Family, Intel® Pentium® Mobile Processor Family, and Intel® Celeron® Mobile Processor Family	306C3	23	0x22	
Ivy Bridge	3rd Generation Intel® Core™ Mobile Processor Family, Intel® Pentium® Mobile Processor Family, and Intel® Celeron® Mobile Processor Family	306A9	N/A	0x1C	Intel did not post a variant #2 mitigation MCU for this product
Sandy Bridge	Intel® Core™ i3-21xx/23xx-T/M/E/UE Processor, Intel® Core™ i5-23xx/24xx/25xx-T/S/M/K Processor Intel® Core™ i7-2xxx-S/K/M/QM/LE/UE/QE Processor Intel® Core™ i7-29xxXM Extreme Processor Intel® Celeron® Desktop G4xx, G5xx Processor Intel® Celeron® Mobile 8xx, B8xx Processor Intel® Pentium® Desktop 350, G6xx, G6xxT, G8xx Processor Intel® Pentium® Mobile 9xx, B9xx Processor	206A7	N/A	0x29	Intel did not post a variant #2 mitigation MCU for this product

MICROCODE REVISION LIST – DATACENTER/WORKSTATION

For those concerned about system stability while we finalize the updated solutions, we are also working with our OEM partners on the option to utilize a previous version of microcode that does not display these issues, but removes the Variant 2 (Spectre) mitigations. This would be delivered via a BIOS update, and would not impact mitigations for Variant 1 (Spectre) and Variant 3 (Meltdown).

Product Names	Public Name	CPUID	STOP deployment of these MCU versions	Continue use of these MCU versions	Comments
Sandy Bridge	Intel® Xeon® Processor E3-1200 Product Family	206A7	N/A	0x29	Intel did not post a variant #2 mitigation MCU for this product
Sandy Bridge E, EN, EP, EP4S	Intel® Xeon® Processor E5 Product Family	206D7	N/A	0x710	Intel did not post a variant #2 mitigation MCU for this product
Sandy Bridge E, EP (C1, M0)	Intel® Xeon® Processor E5 Product Family	206D6	N/A	0x619	Intel did not post a variant #2 mitigation MCU for this product
Ivy Bridge	Intel® Xeon® Processor E3-1200 v2 Product Family	306A9	N/A	0x1C	Intel did not post a variant #2 mitigation MCU for this product
Ivy Bridge EN, EP	Intel® Xeon® Processor E5v2 Product Family	306E4	0x42a	0x428	
Ivy Bridge EX	Intel® Xeon® Processor E7v2 Product Family	306E7	N/A	0x70D	Intel did not post a variant #2 mitigation MCU for this product
Haswell EP, EN	Intel® Xeon® Processor E5v3 Product Family	306F2	0x3b	0x3a	
Haswell EX	Intel® Xeon® Processor E7v3 Product Family	306F4	0x10	0x9 (M), 0xF (L)	
Haswell	Intel® Xeon® Processor E3v3 Product Family	306C3	23	0x22	
Broadwell DE (V1)	Intel® Xeon® Processor D-1500 Product Family	50662	0x14	0xF	
Broadwell DE (V2, V3)	Intel® Xeon® Processor D-1500 Product Family	50663	0x7000011	0x700000D	
Broadwell DE (Y0)	Intel® Xeon® Processor D-1500 Product Family	50664	N/A	0x700000A	Intel did not post a variant #2 mitigation MCU for this product
Broadwell NS	Intel® Xeon® Processor D-1500 NS Product Family	50665	N/A	N/A	Intel did not post a variant #2 mitigation MCU for this product
Broadwell	Intel® Xeon® Processor E3v4 Product Family	40671	0000001B	0x17	
Broadwell E, EP, EP4S, EX	Intel® Xeon® Processor E5v4 Product Family Intel® Xeon® Processor E7v4 Product Family	406F1	0x25, 0x23	0x22	
Kaby Lake (Xeon E3)	7th Generation Intel® Core™ Processor Family	906E9	0x80	0x5e	
Skylake (B-1)	Intel® Xeon® Scalable Processor Family	50653	0x3e	001000138	
Skylake SP	Intel® Xeon® Scalable Processor Family	50654	0x3a, 0x3c	0x39	

LEGAL NOTICES AND DISCLAIMERS

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL® PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

Intel may make changes to specifications and product descriptions at any time, without notice.

All products, dates, and figures specified are preliminary based on current expectations, and are subject to change without notice.

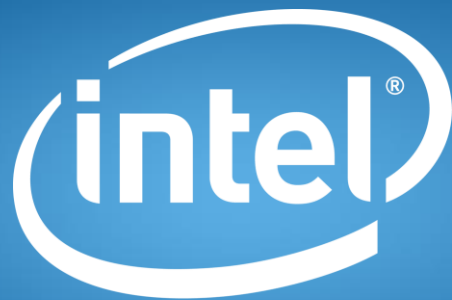
Intel, processors, chipsets, and desktop boards may contain design defects or errors known as errata, which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure. Check with your system manufacturer or retailer or learn more at <http://intel.com>.

Some results have been estimated or simulated using internal Intel analysis or architecture simulation or modeling, and provided to you for informational purposes. Any differences in your system hardware, software or configuration may affect your actual performance.

Intel and the Intel logo are trademarks of Intel Corporation in the United States and other countries.

Copyright © Intel Corporation 2017



experience
what's inside™