MCU RECOMMENDATIONS

Section 1 – Planned microcode updates

- Provides details on Intel microcode updates currently planned or available and corresponding to Intel-SA-00233 published June 18, 2019.

- Changes from prior revision(s) will be highlighted in yellow.

Section 2 – No planned microcode updates

- Products for which Intel does not plan to release microcode updates. This includes products previously identified as such.

LEGEND:
Production Status:
- Planned – Intel is planning on releasing a MCU at a future date.
- Beta – Intel has released this production signed MCU under NDA for all customers to validate.
- Production – Intel has completed all validation and is authorizing customers to use this MCU in a production environment.

SECTION 1 – PLANNED MICROCODE UPDATES

MICROCODE UPDATE GUIDANCE (1/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Amber Lake Y	8th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-8510Y, i7-8500Y Intel® Core™ Processor i5-8310Y, i5-8210Y, i5-8200Y Intel® Core™ Processor m3-8100Y	Mobile	806E9	10	Yes	Production	0x9A	0xB4
Apollo Lake	Intel® Pentium® Processor J Series Intel® Pentium® Processor N Series Intel® Celeron® Processor J Series Intel® Celeron® Processor N Series Intel® Atom® Processor A Series Intel® Atom® Processor E3900 Series	Intel® Pentium® Processor J4205, N4200 Intel® Celeron® Processor J3355, J3455, N3350, N3450 Intel® Atom® Processor x5-A3930, x5-A3940, x7-A3950, x7-A3960 Intel® Atom® Processor x5-E3930, x5-E3940, x7-E3950	Desktop Mobile Embedded	506C9	03	Yes	Production	0x32	0x38
Apollo Lake	Intel® Atom® Processor E3900 Series	Intel® Atom® Processor x5-E3930, x5-E3940, x7-E3950	Embedded	506CA	03	Yes	Production	0x0C	0x16
Avoton/ Rangeley	Intel® Atom® Processor C Series	Intel® Atom® Processor C2758, C2750, C2738, C2730, C2718, C2558, C2550, C2538, C2530, C2518, C2516, C2508, C2358, C2350, C2338, C2316, C2308	Server	406D8	01	Yes	Planned	0x12A	TBA
Broadwell DE A1	Intel® Xeon® Processor D Family	Intel® Xeon® Processor D-1513N, D-1523N, D-1533N, D-1543N, D1553N	Server	50665	10	Yes	Production	0xE00000C	0xE00000D
Broadwell DE V1	Intel® Xeon® Processor D Family	Intel® Xeon® Processor D-1520, D-1540	Server	50662	10	Yes	Production	0x19	0x1A
Broadwell DE V2,V3	Intel® Xeon® Processor D Family	Intel® Xeon® Processor D-1518, D-1519, D-1521, D-1527, D-1528, D-1529, D-1531, D-1533, D-1537, D-1539, D-1541, D-1548 Intel® Pentium® Processor D1507, D1508, D1509, D1517, D1519	Server	50663	10	Yes	Production	0x7000016	0x7000017
Broadwell DE Y0	Intel® Xeon® Processor D Family	Intel® Xeon® Processor D-1557, D-1559, D-1567, D-1571, D-1577, D-1581, D-1587	Server	50664	10	Yes	Production	0xF000014	0xF000015

MICROCODE UPDATE GUIDANCE (2/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Broadwell E	Intel® Core™ X-series Processors	Intel® Core™ Processor Extreme Edition i7-6950K Intel® Core™ Processor i7-6800K, i7-6850, i7-6900K	Desktop	406F1	EF	No	Production	0xB000033	0xB000036
Broadwell H 43e	5th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-5700EQ, i7-5700HQ, i7-5750HQ, i7-5850EQ , i7-5850HQ, i7-5950HQ, Intel® Core™ Processor i5-5575R, i5-5675C, i5-5675R, i7-5775C, i7-5775R	Desktop Mobile Embedded	40671	22	Yes	Production	0x1E	0x20
Broadwell Server E, EP, EP4S	Intel® Xeon® Processor E5 v4 Family	Intel® Xeon® Processor v4 E5-2603, E5-2608L, E5-2609, E5-2618L, E5-2620, E5-2623, E5-2628L, E5-2630L, E5-2630, E5-2637, E5-2640, E5-2643, E5-2648L, E5-2650L, E5-2650, E5-2658, E5-2660, E5-2667, E5-2679, E5-2680, E5-2683, E5-2690, E5-2695, E5-2697A, E5-2697, E5-2698, E5-2699A, E5-2699, E5-2699R, E5-4628L	Server Embedded	406F1	EF	Yes	Production	0xB000033	0xB000036
Broadwell Server EX	Intel® Xeon® Processor E7 v4 Family	Intel® Xeon® Processor v4 E7-4809, E7-4820, E7-4830, E7-4850, E7-8855, E7-8860, E7-8867, E7-8870, E7-8880, E7-8890, E7-8891, E7-8893, E7-8894	Server	406F1	EF	Yes	Production	0xB000033	0xB000036
Broadwell U	5th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-5650U, i7-5600U, i7-5557U, i7-5550U, i7-5500U Intel® Core™ Processor i5-5350U, i5-5350, i5-5300U, i5-5287U, i5-5257U, i5-5250U, i5-5200U Intel® Core™ Processor i3-5157U, i3-5020U, i3-5015U, i3-5010U, i3-5006U, i3-5005U, i3-5010U Intel® Pentium® Processor 3805U, 3825U, 3765U, 3755U, 3215U, 3205U Intel® Celeron® 3765U	Mobile	306D4	C0	Yes	Production	0x2B	0x2D
Broadwell Xeon E3	Intel® Xeon® Processor E3 v4 Family	Intel® Xeon® Processor v4 E3-1258L, E3-1265L, E3-1278L, E3-1285, E3-1285	Server	40671	22	Yes	Production	0x1E	0x20

MICROCODE UPDATE GUIDANCE (3/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Broadwell Y	5th Generation Intel® Core™ Processor Family	Intel® Core™ Processor M-5Y71, M-5Y70, M-5Y51, M-5Y3, M-5Y10c, M-5Y10a, M-5Y10	Mobile	306D4	C0	Yes	Production	0x2B	0x2D
Cherry View	Intel® Atom® Processor X Series	Intel® Atom® Processor x7-Z8700, x5-Z8500, x5-Z8300	Mobile	406C3	01	Yes	Production	0x367	0x368
Cherry View	Intel® Atom® Processor X Series	Intel® Atom® Processor x7-Z8750, x5-Z8550, x5-Z8350, x5-Z8330	Mobile	406C4	01	Yes	Production	0x410	0x411
Coffee Lake H (6+2)	8th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i9-8950HK Intel® Core™ Processor i7-8700B, i7-8750H, i7-8850H Intel® Core™ Processor i5-8300H, i5-8400B, i5-8400H, i5-8500B	Mobile	906EA	22	Yes	Production	0x96	0xB4
Coffee Lake H (8+2)	9th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i9-9980HK, 9880H Intel® Core™ Processor i7-9850H, 9750HF Intel® Core™ Processor i5-9400H, 9300H	Mobile	906EC	22	Yes	Production	0xA2	0xAE
Coffee Lake S (6+2)	8th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-8670, i7-8670T, i7-8700, i7-8700T Intel® Core™ Processor i5-8400, i5-8400T, i5-8420, i5-8420T, i5-8500 , i5-8500T, i5-8550, i5-8600, i5-8600T, i5-8650	Desktop	906EA	22	Yes	Production	0x96	0xB4
Coffee Lake S (8+2)	9th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i9-9900K, i9-9900KF Intel® Core™ Processor i7-9700K, i7-9700KF Intel® Core™ Processor i5-9600K, i5-9600KF, i5-9400, i5-9400F	Desktop	906EC	22	Yes	Production	0xA2	0xAE
Coffee Lake S (6+2) Xeon E	Intel® Xeon® Processor E Family	Intel® Xeon® Processor E-2186G, E-2176G, E-2176M, E-2146G, E-2136, E-2126G	Server Embedded	906EA	22	Yes	Production	0x96	0xB4

MICROCODE UPDATE GUIDANCE (4/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Coffee Lake U43e	8th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-8559U Intel® Core™ Processor i5-8259U, 8269U Intel® Core™ Processor i3-8109U	Mobile	806EA	C0	Yes	Production	0x96	0xB4
Coffee Lake S (4+2)	8th Generation Intel® Core™ Processor Family Intel® Pentium® Gold Processor Series Intel® Celeron® Processor G Series	Intel® Core™ Processor i3-8000, i3-8000T, i3-8020, i3-8100, i3-8100, i3-8100H, i3-8100T, i3-8120, i3-8300, i3-8300T, i3-8350K Intel® Pentium® Gold G5400, G5400T, G5400T, G5420, G5420T, G5420T, G5500, G5500T, G5600 Intel® Celeron® Processor G4900, G4900T, G4920	Desktop	906EB	02	Yes	Production	0x8E	0xB4
Coffee Lake S (4+2) Xeon E	Intel® Xeon® Processor E Family	Intel® Xeon® Processor E-2174G, E-2144G, E-2134, E-2124, E-2124G	Server	906EA	22	Yes	Production	0x96	0xB4
Coffee Lake S (6+2) x/KBP	8th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-8700K Intel® Core™ Processor i5-8600K, i5-8650K	Desktop	906EA	22	Yes	Production	0x96	0xB4
Cougar Mountain	Intel® Puma™ Family	Intel® Puma™ 7 Home Gateway	SOC	606E1	01	No	Production	0x106	0x108
Denverton	Intel® Atom® Processor C Series	Intel® Atom® Processor C3308, C3338, C3508, C3538, C3558, C3708, C3750, C3758, C3808, C3830, C3850, C3858, C3950, C3955, C3958	Server Embedded	506F1	01	Yes	Production	0x24	0x2E
Gemini Lake	Intel® Pentium® Processor Silver Series Intel® Celeron® Processor J Series Intel® Celeron® Processor N Series	Intel® Pentium® Silver Processor J5005, N5000 Intel® Celeron® Processor J4005, J4105 Intel® Celeron® Processor N4000, N4100	Desktop Mobile Embedded	706A1	01	Yes	Production	0x28	0x2E
Gladden	Legacy Intel® Core™ Processors Legacy Intel® Pentium® Processor Legacy Intel® Celeron® Processor Intel® Xeon® Processor E3 Family	Intel® Core™ Processor i3-2115C, i3-3115C Intel® Pentium® Processor B915C, B925C Intel® Celeron® Processor 725C Intel® Xeon® Processor E3-1105C, E3-1125C, E3-1105C v2, E3-1125C v2	Embedded	306A9	12	Yes	Production	0x20	0x21

MICROCODE UPDATE GUIDANCE (5/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Haswell Desktop	4th Generation Intel® Core™ Processor Family Intel® Pentium® Processor Family	Intel® Core™ Processor i7-4765T, i7-4770, i7-4770K, i7-4770S, i7-4770T, i7-4770TE, i7-4771, i7-4790S Intel® Core™ Processor i5-4402E, i5-4410E, i5-4430, i5-4430S, i5-4440, i5-4440S, i5-4570, i5-4570S, i5-4570T, i5-4570TE, i5-4590S, i5-4590T, i5-4670, i5-4670K, i5-4670S, i5-4670T Intel® Core™ Processor i3-4100E, i3-4102E, i3-4110E, i3-4112E, i3-4130, i3-4130T, i3-4330, i3-4330T, i3-4330TE, i3-4340, i3-4340TE, i3-4350T Intel® Pentium® Processor G3220, G3220T, G3320TE, G3420, G3430 Intel® Celeron® Processor 2000E, 2002E, G1820, G1820TE	Desktop Embedded	306C3	32	Yes	Production	0x25	0x27
Haswell E	Intel® Core™ X-series Processors	Intel® Core™ Processor Extreme Edition i7-5960X Intel® Core™ Processor i7-5820K, i7-5930K	Desktop	306F2	6F	Yes	Production	0x41	0x43
Haswell H	4th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-4700EC, i7-4700HQ, i7-4702EC, i7-4702HQ, i7-4710HQ, i7-4712HQ, i7-4720HQ, i7-4722HQ, i7-4750HQ, i7-4760HQ, i7-4770HQ, i7-4850HQ, i7-4870HQ, i7-4950HQ, i7-4960HQ, i7-4980HQ Intel® Core™ Processor i5-4210H, i5-4402EC	Mobile	40661	32	Yes	Production	0x1A	0x1B
Haswell M	4th Generation Intel® Core™ Processor Family Intel® Pentium® Processor Family Intel® Celeron® Processor Family	Intel® Core™ Processor Extreme Edition i7-4930MX Intel® Core™ Processor i7-4700EQ, i7-4700MQ, i7-4702MQ, i7-4710MQ, i7-4712MQ, i7-4800MQ, i7-4900MQ Intel® Core™ Processor i5-4210M, i5-4400E, i5-4422E Intel® Core™ Processor i3-4100M, i3-4110M Intel® Pentium® 3560M Intel® Celeron® 2970M	Mobile	306C3	32	Yes	Production	0x25	0x27
Haswell R	4th Generation Intel® Core™ Processor Family Intel® Pentium® Processor Family	Intel® Core™ Processor i7-4770R Intel® Core™ Processor i5-4570R, i5-4670R	Desktop	40661	32	Yes	Production	0x1A	0x1B

MICROCODE UPDATE GUIDANCE (6/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Haswell Server EP, EP4S	Intel® Xeon® Processor E5 v3 Family	Intel® Xeon® Processor v3 E5-1428L, E5-1603, E5-1607, E5-1620, E5-1630, E5-1650, E5-1660, E5-1680, E5-2408L, E5-2418L, E5-2428L, E5-2438L, E5-2603, E5-2608L, E5-2608L, E5-2609, E5-2618L, E5-2620, E5-2623, E5-2628L, E5-2630, E5-2630L, E5-2637, E5-2640, E5-2643, E5-2648L, E5-2650, E5-2650L, E5-2658, E5-2660, E5-2667, E5-2670, E5-2680, E5-2683, E5-2685, E5-2687W, E5-2690, E5-2695, E5-2697, E5-2698, E5-2699, E5-4610, E5-4620, E5-4627, E5-4640, E5-4648, E5-4650, E5-4655, E5-4660, E5-4667, E5-4669	Server	306F2	6F	Yes	Production	0x41	0x43
Haswell Server EX	Intel® Xeon® Processor E7 v3 Family	Intel® Xeon® Processor v3 E7-4809, E7-4820, E7-4830, E7-4850, E7-8860, E7-8867, E7-8870, E7-8880L, E7-8880, E7-8890, E7-8891, E7-8893	Server	306F4	80	Yes	Production	0x13	0x14
Haswell U	4th Generation Intel® Core™ Processor Family Intel® Pentium® Processor Family	Intel® Core™ Processor i7-4500U, i7-4510U, i7-4550U, i7-4558U, i7-4578U, i7-4600U, i7-4650U Intel® Core™ Processor i5-4200U, i5-4210U, i5-4250U, i5-4258U, i5-4260U, i5-4278U, i5-4288U, i5-4300U, i5-4308U, i5-4350U Intel® Core™ Processor i3-4005U, i3-4010U, i3-4025U, i3-4030U, i3-4100U, i3-4120U, i3-4158U Intel® Pentium® Processor 3556U, 3558U, 3665U Intel® Celeron® Processor 2955U, 2957U, 2980U, 2981U	Mobile	40651	72	Yes	Production	0x24	0x25
Haswell Xeon E3	Intel® Xeon® Processor E3 v3 Family	Intel® Xeon® Processor v3 E3-1220, E3-1220L, E3-1221, E3-1225, E3-1226, E3-1230, E3-1230L, E3-1231, E3-1240, E3-1240L, E3-1241, E3-1245, E3-1246, E3-1265L, E3-1268L, E3-1268LV3, E3-1270, E3-1271, E3-1275, E3-1275L, E3-1276, E3-1280, E3-1281, E3-1285, E3-1285L, E3-1286, E3-1286L	Server Embedded	306C3	32	Yes	Production	0x25	0x27

MICROCODE UPDATE GUIDANCE (7/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Haswell Y	4th Generation Intel® Core™ Processor Family Intel® Pentium® Processor Family	Intel® Core™ Processor i7-4610Y Intel® Core™ Processor i5-4200Y, i5-4202Y, i5-4210Y, i5-4220Y, i5-4300Y, i5-4302Y Intel® Core™ Processor i3-4010Y, i3-4012Y, i3-4020Y, i3-4030Y Intel® Pentium® Processor 3560Y, 3561Y	Mobile	40651	72	Yes	Production	0x24	0x25
Ivy Bridge	3rd Generation Intel® Core™ Processor Family Intel® Pentium® Processor Family Intel® Celeron® Processor Family	Intel® Core™ Processor Extreme Edition i7-3920XM, i7-3940XM Intel® Celeron® Processor 1000M, 1005M, 1007U, 1017U, 1019Y, 1020E, 1020M, 1037U, 1047UE, 927UE, G1610, G1610T, G1620, G1620T, G1630 Intel® Core™ Processor i7-3517U, i7-3517UE, i7-3520M, i7-3537U, i7-3540M, i7-3555LE, i7-3610QE, i7-3610QM, i7-3612QE, i7-3612QM, i7-3612QM, i7-3615QE, i7-3615QM, i7-3630QM, i7-3632QM, i7-3632QM, i7-3635QM, i7-3667U, i7-3687U, i7-3689Y, i7-3720QM, i7-3740QM, i7-3770, i7-3770K, i7-3770S, i7-3770T, i7-3820QM, i7-3840QM Intel® Core™ Processor i5-3210M, i5-3210M, i5-3230M, i5-3230M, i5-3317U, i5-3320M, i5-3330, i5-3330S, i5-3337U, i5-3339Y, i5-3340, i5-3340M, i5-3340S, i5-3350P, i5-3360M, i5-3380M, i5-3427U, i5-3437U, i5-3439Y, i5-3450, i5-3450S, i5-3470, i5-3470S, i5-3470T, i5-3475S, i5-3550, i5-3550S, i5-3570, i5-3570K, i5-3570S, i5-3570T, i5-3610ME Intel® Core™ Processor i3-3110M, i3-3120M, i3-3120ME, i3-3130M, i3-3210, i3-3217U, i3-3217UE, i3-3220, i3-3220T, i3-3225, i3-3227U, i3-3229Y, i3-3240, i3-3240T, i3-3245, i3-3250, i3-3250T Intel® Pentium® Processor 1405 v2, 2020M, 2030M, 2117U, 2127U, 2129Y, A1018, G2010, G2020, G2020T, G2030, G2030T, G2100T, G2120, G2120T, G2130, G2140	Mobile	306A9	12	Yes	Production	0x20	0x21

MICROCODE UPDATE GUIDANCE (8/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Ivy Bridge E	Intel® Core™ X-series Processors	Intel® Core™ Processor Extreme Edition i7-4960X Intel® Core™ Processor i7-4820K, i7-4930K	Desktop	306E4	ED	Yes	Production	0x42D	0x42E
Ivy Bridge Server EN, EP, EP4S	Intel® Xeon® Processor E5 v2 Family	Intel® Xeon® Processor v2 E5-1428L, E5-1620, E5-1650, E5-1660, E5-2403, E5-2407, E5-2418L, E5-2420, E5-2428L, E5-2430, E5-2430L, E5-2440, E5-2448L, E5-2450, E5-2450L, E5-2470, E5-2603, E5-2609, E5-2618L, E5-2620, E5-2628L, E5-2630, E5-2630L, E5-2637, E5-2640, E5-2643, E5-2648L, E5-2650, E5-2650L, E5-2658, E5-2660, E5-2667, E5-2670, E5-2680, E5-2687W, E5-2690, E5-2695, E5-2697, E5-4603, E5-4607, E5-4610, E5-4620, E5-4624L, E5-4627, E5-4640, E5-4650, E5-4657L	Server	306E4	ED	Yes	Production	0x42D	0x42E
Ivy Bridge Server EX	Intel® Xeon® Processor E7 v2 Family	Intel® Xeon® Processor v2 E7-2850, 2870, 2880, 2890, 4809, 4820, 4830, 4850, 4860, 4870, 4880, 4890, 8893, 8891, 8890, 8880L, 8880, 8870, 8857, 8850	Server	306E7	ED	Yes	Production	0x714	0x715
Ivy Bridge Xeon E3	Intel® Xeon® Processor E3 v2 Family	Intel® Xeon® Processor v2 E3-1220, E3-1220L, E3-1225, E3-1230, E3-1235, E3-1240, E3-1245, E3-1265L, E3-1270, E3-1275, E3-1280, E3-1290	Server	306A9	12	Yes	Production	0x20	0x21
Kaby Lake G	8th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-8705G, i7-8706G, i7-8709G, i7-8809G Intel® Core™ Processor i5-8305G	Mobile	906E9	2A	Yes	Production	0x8E	0xB4
Kaby Lake H	7th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-7700HQ, i7-7820EQ, i7-7820HK, i7-7820HQ, i7-7920HQ Intel® Core™ Processor i5-7300HQ, i5-7440EQ, i5-7440HQ, i5-7442EQ Intel® Core™ i3-7100H	Mobile Embedded	906E9	2A	Yes	Production	0x8E	0xB4
Kaby Lake Refresh U 4+2	8th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-8550U, i7-8650U Intel® Core™ Processor i5-8250U, i5-8350U Intel® Core™ Processor i3-7020U, i3-8130U	Mobile	806EA	C0	Yes	Production	0x96	0xB4

MICROCODE UPDATE GUIDANCE (9/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Kaby Lake S	7th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-7700, i7-7700K, i7-7700T Intel® Core™ Processor i5-7400, i5-7400T, i5-7500, i5-7500T, i5-7600, i5-7600K, i5-7600T Intel® Core™ Processor i3-7100E, i3-7101E, i3-7101TE, i3-7102E, i3-7120, i3-7120T, i3-7320T, i3-7340 Intel® Celeron® Processor G3930E, G3930TE	Desktop Embedded	906E9	2A	Yes	Production	0x8E	0xB4
Kaby Lake U	7th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-7500U, i7-7510U, i7-7600U Intel® Core™ Processor i5-7200U, i5-7210U, i5-7300U, i5-7500U Intel® Core™ Processor i3-7007U, i3-7100U, i3-7110U, i3-7130U, Intel® Pentium® Processor 4415U Intel® Celeron® Processor 3865U, 3965U	Mobile	806E9	C0	Yes	Production	0x8E	0xB4
Kaby Lake U23e	7th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-7560U, i7-7567U, i7-7660U, Intel® Core™ Processor i5-7260U, i5-7267U, i5-7287U, i5-7360U Intel® Core™ Processor i3-7167U	Mobile	806E9	C0	Yes	Production	0x8E	0xB4
Kaby Lake X	Intel® Core™ X-series Processors	Intel® Core™ Processor i7-7740X Intel® Core™ Processor i5-7640X	Desktop	906E9	2A	Yes	Production	0x8E	0xB4
Kaby Lake Xeon E3	Intel® Xeon® Processor E3 v6 Family	Intel® Xeon® Processor v6 E3-1220, E3-1225, E3-1230, E3-1240, E3-1245, E3-1270, E3-1275, E3-1280, E3-1501L, E3-1501M, E3-1505L, E3-1505M, E3-1535M	Server	906E9	2A	Yes	Production	0x8E	0xB4
Kaby Lake Y	7th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-7Y75 Intel® Core™ Processor i5-7Y54, i5-7Y57 Intel® Core™ Processor M3-7Y30, M3-7Y30 Intel® Pentium® Processor 4410Y, 4415Y Intel® Celeron® Processor 3965Y	Mobile	806E9	C0	Yes	Production	0x8E	0xB4

MICROCODE UPDATE GUIDANCE (10/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Sandy Bridge	Legacy Intel® Core™ Processors	Intel® Core™ Processor Extreme Edition i7-2920XM, i7-2960XM Intel® Core™ Processor i7-2600, i7-2600K, i7-2600S, i7-2610UE, i7-2617M, i7-2620M, i7-2629M, i7-2630QM, i7-2635QM, i7-2637M, i7-2640M, i7-2649M, i7-2655LE, i7-2657M, i7-2670QM, i7-2675QM, i7-2677M, i7-2700K, i7-2710QE, i7-2715QE, i7-2720QM, i7-2760QM, i7-2820QM, i7-2860QM Intel® Core™ Processor i5-2300, i5-2310,i5-2320, i5-2380P, i5-2390T, i5-2400, i5-2400S, i5-2405S, i5-2410M, i5-2430M, i5-2435M, i5-2450M, i5-2450P, i5-2467M, i5-2500, i5-2500K, i5-2500S, i5-2500T, i5-2510E, i5-2515E, i5-2520M, i5-2537M, i5-2540M, i5-2550K, i5-2557M Intel® Core™ Processor i3-2100, i3-2100T, i3-2102, i3-2105, i3-2120, i3-2120T, i3-2125, i3-2130, i3-2310E, i3-2310M, i3-2312M, i3-2328M, i3-2330E, i3-2330M, i3-2332M, i3-2340UE, i3-2348M, i3-2350M, i3-2357M, i3-2365M, i3-2367M, i3-2370M, i3-2375M, i3-2377M Intel® Pentium® Processor 957, 967, 977, 987, 997, B940, B950, B960, B970, B980, G620, G620T, G622, G630, G630T, G632, G640, G640T, G645, G645T, G840, G850, G860, G860T, G870 Intel® Celeron® Processor 787, 797, 807, 807UE, 827E, 847, 847E, 857, 867, 877, 887, B710, B720, B800, B810, B810E, B815, B820, B830, B840, G440, G460, G465, G470, G530, G530T, G540, G540T, G550, G550T, G555	Desktop Mobile Embedded	206A7	12	Yes	Production	0x2E	0x2F
Sandy Bridge E	Intel® Core™ X-series Processors	Intel® Core™ Processor Extreme Edition i7-3960X, i7-3970X Intel® Core™ Processor i7-3820, 3930K	Desktop	206D7	6D	Yes	Production	0x714	0x718

MICROCODE UPDATE GUIDANCE (11/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Sandy Bridge Server EN/EP/EP4S	Intel® Xeon® Processor E5 Family	Intel® Xeon® Processor E5-2620, E5-2630, E5-2630L, E5-2640, E5-2650, E5-2650L, E5-2660, E5-2667, E5-2670, E5-2680, E5-2690	Server	206D6	6D	Yes	Production	0x61D	0x61F
Sandy Bridge Server EN/EP/EP4S	Intel® Xeon® Processor E5 Family	Intel® Xeon® Processor E5-1428L, E5-1620, E5-1650, E5-1660, E5-2403, E5-2407, E5-2418L, E5-2420, E5-2428L, E5-2430, E5-2430L, E5-2440, E5-2448L, E5-2450, E5-2450L, E5-2470, E5-2603, E5-2609, E5-2620, E5-2630, E5-2630L, E5-2637, E5-2640, E5-2643, E5-2648L, E5-2650, E5-2650L, E5-2658, E5-2660, E5-2665, E5-2667, E5-2670, E5-2680, E5-2687W, E5-2690, E5-4603, E5-4607, E5-4610, E5-4617, E5-4620, E5-4640, E5-4650, E5-4650L Intel® Pentium® Processor 1405	Server Embedded	206D7	6D	Yes	Production	0x714	0x718
Sandy Bridge Xeon E3	Intel® Xeon® Processor E3 Family	Intel® Xeon® Processor E3-1120, E3-1120L, E3-1225, E3-1230, E3-1235, E3-1240, E3-1245, E3-1260L, E3-1265L, E3-1270, E3-1275, E3-1280, E3-1285, E3-1290	Server	206A7	12	Yes	Production	0x2E	0x2F
Skylake D, Bakerville	Intel® Xeon® Processor D Family	Intel® Xeon® Processor D-2123IT, D-2141I, D-2142IT, D-2143IT, D-2145NT, D-2146NT, D-2161I, D-2163IT, D-2166NT, D-2173IT, D-2177NT, D-2183IT, D-2187NT	Server	50654	B7	Yes	Production	0x200005A	0x200005E
Skylake H	6th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-6700HQ, i7-6770HQ, i7-6820HK, i7-6820HQ, i7-6870HQ, i7-6920HQ, i7-6970HQ Intel® Core™ Processor i5-6300HQ, i5-6350HQ, i5-6440HQ Intel® Core™ Processor i3-6100H	Mobile	506E3	36	Yes	Production	0xC6	0xCC

MICROCODE UPDATE GUIDANCE (12/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Skylake S	6th Generation Intel® Core™ Processor Family	Intel® Core™ Processor i7-6700, i7-6700K, i7-6700T, i7-6700TE, i7-6820EQ, i7-6822EQ Intel® Core™ Processor i5-6400, i5-6400T, i5-6440EQ, i5-6442EQ, i5-6500, i5-6500T, i5-6500TE, i5-6600, i5-6600K, i5-6600T Intel® Core™ Processor i3-6100, i3-6100E, i3-6100T, i3-6100TE, i3-6102E, i3-6120, i3-6120T, i3-6300, i3-6300T, i3-6320, i3-6320T Intel® Pentium® Processor G4400, G4400T, G4400TE, G4420, G4420T, G4500, G4500T, G4520, G4520T, G4540 Intel® Celeron® Processor G3900, G3900E, G3900T, G3900TE, G3902E, G3920, G3920T, G3940	Desktop Embedded	506E3	36	Yes	Production	0xC6	0xCC
Skylake Server	Intel® Xeon® Scalable Processors	Intel® Xeon® Platinum Processor 8153, 8156, 8158, 8160, 8160F, 8160M, 8160T, 8164, 8168, 8170, 8170M, 8176, 8176F, 8176M, 8180, 8180M Intel® Xeon® Gold Processor 5115, 5118, 5119T, 5120, 5120T, 5122, 6126, 6126F, 6126T, 6128, 6130, 6130F, 6130T, 6132, 6134, 6134M, 6136, 6138, 6138F, 6138T, 6140, 6140M, 6142, 6142F, 6142M, 6144, 6146, 6148, 6148F, 6150, 6152, 6154 Intel® Xeon® Silver Processor 4108, 4109T, 4110, 4112, 4114, 4114T, 4116, 4116T Intel® Xeon® Bronze Processor 3104, 3106	Server	50654	B7	Yes	Production	0x200004D	0x200005E
Skylake U	6th Generation Intel® Core™ Processors	Intel® Core™ Processor i7-6500U, i7-6510U, i7-6600U Intel® Core™ Processor i5-6200U, i5-6210U, i5-6300U, i5-6310U Intel® Core™ Processor i3-6100U, i3-6110U Intel® Pentium® Processor 4405U, 4415U Intel® Celeron® Processor 3855U, 3865U, 3955U, 3965U	Mobile	406E3	C0	Yes	Production	0xC6	0xCC

MICROCODE UPDATE GUIDANCE (13/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Skylake U23e	6th Generation Intel® Core™ Processor Family	Intel® Core™ Processor I7-6560U, I7-6567U, I7-6650U, I7-6660U Intel® Core™ Processor I5-6260U, I5-6267U, I5-6287U, I5-6360U Intel® Core™ Processor I3-6167U	Mobile	406E3	C0	Yes	Production	0xC6	0xCC
Skylake W	Intel® Xeon® Processor W Family	Intel® Xeon® Processor W-2123, W-2125, W-2133, W-2135, W-2145, W-2155, W-2195, W-2175	Server	50654	B7	Yes	Production	0x200005A	0x200005E
Skylake X	Intel® Core™ X-series Processors	Intel® Core™ Extreme Edition Processor i9-7980XE Intel® Core™ X-series Processor i9-7900X, i9-7920X, i9-7940X, i9-7960X Intel® Core™ X-series Processor i7-7800X, i7-7820X	Desktop	50654	B7	Yes	Production	0x200005A	0x200005E
Skylake Xeon E3	Intel® Xeon® Processor E3 v5 Family	Intel® Xeon® Processor v5 E3-1220, E3-1225, E3-1230, E3-1235L, E3-1240, E3-1240L, E3-1245, E3-1260L, E3-1268L, E3-1270, E3-1275, E3-1280, E3-1505L, E3-1505M, E3-1515M, E3-1535M, E3-1545M, E3-1558L, E3-1565L, E3-1575M, E3-1578L, E3-1585, E3-1585L	Server Embedded	506E3	36	Yes	Production	0xC6	0xCC
Skylake Y	6th Generation Intel® Core™ Processor Family	Intel® Core™ Processor m7-6Y75 Intel® Core™ Processor m5-6Y54, m5-6Y57 Intel® Core™ Processor m3-6Y30 Intel® Pentium® Processor 4405Y	Mobile	406E3	C0	Yes	Production	0xC6	0xCC
Valley View	Intel® Atom® Processor Z Series	Intel® Atom® Processor Z3770, Z3740, Z3770D, Z3740D, Z3770, Z3740, Z3680, Z3770D, Z3740D	Desktop Embedded Mobile	30673	02	Yes	Planned	0x326	TBA

MICROCODE UPDATE GUIDANCE (14/14)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID	OS Update Capable	Production Status	Pre-Mitigation Production MCU	New Production MCU Rev
Valley View	Intel® Celeron® Processor J Series Intel® Celeron® Processor N Series Intel® Pentium® Processor J Series Intel® Pentium® Processor N Series	Intel® Pentium® Processor J2900, J2850 Intel® Pentium® Processor N3520, N3510 Intel® Celeron® Processor J1900, J1850, J1800, J1750 Intel® Celeron® Processor N2920, N2910, N2820, N2815, N2810, N2806, N2805	Desktop Embedded Mobile	30673	0C	Yes	Planned	0x326	TBA
Valley View	Intel® Atom® Processor Z Series	Intel® Atom® Processor Z3745, Z3745D, Z3735D, Z3735E, Z3735F, Z3735G, Z3736F, Z3736G, Z3775, Z3775D, Z3785, Z3795	Desktop Embedded Mobile	30678	02	Yes	Production	0x836	0x838
Valley View	Intel® Celeron® Processor N Series Intel® Pentium® Processor N Series	Intel® Pentium® Processor N3540, N3530 Intel® Celeron® Processor N2940, N2930, N2840, N2830, N2808, N2807	Desktop Embedded Mobile	30678	0C	Yes	Production	0x836	0x838
Valley View	Intel® Atom® Processor E3800 Product Family	Intel® Atom® Processor E3845, E3827, E3826, E3825, E3815, E3805	Desktop Embedded Mobile	30679	0F	Yes	Production	0x836	0x90C
Whiskey Lake U	8th Generation Intel® Core™ Processors	Intel® Core™ Processor i7-8565U Intel® Core™ Processor i5-8265U Intel® Core™ Processor i3-8145U Intel® Core™ Processor 4205U, 5405U	Mobile	806EB	D0	Yes	Production	0xAE	0xB8
Whiskey Lake U	8th Generation Intel® Core™ Processors	Intel® Core™ Processor i7-8565U, i7-8665U Intel® Core™ Processor i5-8365U, i5-8265U	Mobile	806EC	94	Yes	Production	0XB2	0xB8
XMM 7272	Intel® Mobile Communications Platforms	Intel® XMM™ 7272 Modem	Mobile	60650	01	No	Planned	0x15	TBA

SECTION 2 – NO PLANNED MICROCODE UPDATES

PRODUCTS NOT PLANNED (1/4)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID
Anniedale/Moorefield	Intel® Atom® Processor Z Series	Intel® Atom® Processor Z3530, Z3560, Z3570, Z3580, Z3590	Mobile	506A0	01
Arrandale	Legacy Intel® Core™ Processors	Intel® Core™ Processor i7-620M, i7-620LM, i7-620UM, i7-640LM, i7-640UM Intel® Core™ Processor i5-430M, i5-520M, i5-520UM, i5-540M Intel® Core™ Processor i3-330M, i3-350M Intel® Celeron® Processor P4500, P4505	Mobile	20652	12
Arrandale	Legacy Intel® Core™ Processors	Intel® Core™ Processor i7-610E, i7-620LE, i7-620LM, i7-620M, i7-620UE, i7-620UM, i7-640LM, i7-640M, i7-640UM, i7-660LM, i7-660UE, i7-660UM, i7-680UM Intel® Core™ Processor i5-430M, i5-430UM, i5-450M, i5-460M, i5-470UM, i5-480M, i5-520E, i5-520M, i5-520UM, i5-540M, i5-540UM, i5-560M, i5-560UM, i5-580M Intel® Core™ Processor i3-330E, i3-330M, i3-330UM, i3-350M, i3-370M, i3-380M, i3-380UM, i3-390M Intel® Pentium® Processor P6000, P6100, P6200, P6300, U5400, U5600 Intel® Celeron® Processor P4500, P4505, P4600, U3400, U3405, U3600	Mobile Embedded	20655	92
Bloomfield	Legacy Intel® Core™ Processors	Intel® Core™ Processor Extreme Edition i7-965 Intel® Core™ Processor i7-920, 940	Desktop	106A4	03
Bloomfield	Legacy Intel® Core™ Processors	Intel® Core™ Processor Extreme Edition i7-975 Intel® Core™ Processor i7-920, 930, 950, 960	Desktop	106A5	03
Bloomfield Xeon	Legacy Intel® Xeon® Processors	Intel® Xeon® Processor W3520, W3530, W3540, W3550, W3565, W3570, W3580	Server	106A5	03
Broxton	Intel® Atom® Processor T Series	Intel® Atom® Processor T5500, T5700	Embedded	506C2	01
Clarkdale	Legacy Intel® Core™ Processors Legacy Intel® Pentium® Processor	Intel® Core™ Processor i5-650, 660, 661, 670 Intel® Core™ Processor i3-530, 540, 550, 560 Intel® Pentium® Processor G6950	Desktop	20652	12
Clarkdale	Legacy Intel® Core™ Processors Legacy Intel® Pentium® Processor	Intel® Core™ Processor i5-650, 655K, 660, 661, 670, 680 Intel® Core™ Processor i3-530, 540 Intel® Pentium® Processor G6950, G6951, G6960	Desktop	20655	92

PRODUCTS NOT PLANNED (2/4)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID
Clarkdale Xeon	Legacy Intel® Xeon® Processors	Intel® Xeon® Processor L3406	Server	20652	12
Clarksfield	Legacy Intel® Core™ Processors	Intel® Core™ Extreme Processor i7-920XM, 940XM Intel® Core™ Processor i7-720QM, 740QM, 820QM, 840QM	Mobile	106E5	13
Gulftown	Legacy Intel® Core™ Processors	Intel® Core™ i7-970, 980 Intel® Core™ Processor Extreme Edition i7-980X, 990X Intel® Xeon® Processor W3690	Desktop	206C2	03
Harpertown Xeon C0	Legacy Intel® Xeon® Processors	Intel® Xeon® Processor L5408, L5410, L5420 Intel® Xeon® Processor E5405,E5410,E5420,E5430, E5440, E5450, E5462, E5472 Intel® Xeon® Processor X5450, X5460, X5470, X5472, X5482	Server	10676	40
Harpertown Xeon E0	Legacy Intel® Xeon® Processors	Intel® Xeon® Processor L5408, L5410, L5420, L5430 Intel® Xeon® Processor E5405,E5410,E5420,E5430, E5440, E5450, E5462, E5472 Intel® Xeon® Processor X5450, X5460, X5470, X5492	Server	1067A	44
Jasper Forest	Legacy Intel® Celeron® Processors Legacy Intel® Xeon® Processors	Intel® Celeron® Processor P1053 Intel® Xeon® Processor EC3528, EC3529, EC5509, EC5539, EC5549, LC3518, LC3528, LC5518, LC5528	Embedded	106E4	09
Knights Landing	Intel® Xeon Phi™ x200 Product Family	Intel® Xeon Phi™ 7210, 7210F, 7230, 7230F, 7250, 7250F, 7290, 7290F	Server	50671	78
Knights Mill	Intel® Xeon Phi™ 72x5 Processor Family	Intel® Xeon Phi™ 7235, 7285, 7295	Server	80650	08
Lynnfield	Legacy Intel® Core™ Processors	Intel® Core™ Processor i7-860, 860S, 870, 870S, 875K, 880 Intel® Core™ Processor i5-750, 750S, 760	Desktop	106E5	13

PRODUCTS NOT PLANNED (3/4)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID
Lynnfield Xeon	Legacy Intel® Xeon® Processors	Intel® Xeon® Processor L3426 Intel® Xeon® Processor X3430, X3440, X3450, X3460, X3470, X3480	Server	106E5	13
Tangier/Merrifield	Intel® Atom™ Processor Z Series	Intel® Atom® Processor Z3460, Z3480	Mobile	406A8	01
Tangier/Merrifield	Intel® Atom™ Processor Z Series	Intel® Atom® Processor Z3460, Z3480	Mobile	406A9	01
Nehalem EP, Nehalem WS	Legacy Intel® Xeon® Processors	Intel® Xeon® Processor E5502, E5503, E5504, E5506, E5507, E5520, E5530, E5540 Intel® Xeon® Processor L5506, L5508, L5518, L5520, L5530 Intel® Xeon® Processor W5580, W5590 Intel® Xeon® Processor X5550, X5560, X5570	Server Embedded	106A5	03
Nehalem EX	Legacy Intel® Xeon® Processors	Intel® Xeon® Processor E6510, E6540, E7520, E7530, E7540, L7545, L7555, X6550, X7542, X7550, X7560	Server	206E6	04
Penryn/QC	Legacy Intel® Celeron® Processors Legacy Intel® Core™ Processors Legacy Intel® Pentium® Processors	Intel® Core™2 Extreme Processor X9000, X9100 Intel® Core™2 Quad Processor Q9000, Q9100 Intel® Core™2 Duo Processor T6400, T6500, T6670, T8100, T8300, T9300, T9400, T9500, T9550, T9600, T9800, T9900, SU9300, SU9400, SU9600, SP9300, SP9400, SP9600, SL9380, SL9400, SL9600, SL9300, P7350, P7370, P7450, P7550, P7570, P8400, P8600, P8700, P8800, P9500, P9600, P9700 Intel® Core™2 Solo Processor SU3500, ULV SU3500, ULV SU3300 Intel® Pentium® Processor T4200, T4300, T4400, T4500 Intel® Celeron® Processor 900, 925, SU2300, T3100, T3300, T3500, ULV 763 Intel® Celeron® M Processor ULV 722, ULV 723, ULV 743	Mobile Embedded	1067A	B1
Westmere EP, WS	Legacy Intel® Xeon® Processors	Intel® Xeon® Processor E5603, E5606, E5607, E5620, E5630, E5640, E5645, E5649 Intel® Xeon® Processor L5609, L5618, L5630, L5638, L5640 Intel® Xeon® Processor W3670, W3680 Intel® Xeon® Processor X5647, X5650, X5660, X5667, X5670, X5672, X5675, X5677, X5680, X5687, X5690	Server	206C2	03
Westmere EX (EGL, WSM)	Intel® Xeon® Processor E7 Family	Intel® Xeon® Processor E7-2803, 2820, 2830, 2850, 2860, 2870, 4807, 4820, 4830, 4850, 4860, 4870, 8830, 8837, 8850, 8860, 8867L, 8870	Server	206F2	05

PRODUCTS NOT PLANNED (4/4)

Code Name	Product Collection	Product Names	Vertical Segment	CPUID	Platform ID
Wolfdale C0, M0	Legacy Intel® Core™ Processors	Intel® Core™ 2 Duo Processor E7200, E7300, E8190, E8200, E8300, E8400, E8500	Desktop	10676	91
Wolfdale E0, R0	Legacy Intel® Celeron® Processors Legacy Intel® Core™ Processors Legacy Intel® Pentium® Processors	Intel® Core™ 2 Duo Processor E7400, E7500, E8400, E8500, E8600 Intel® Pentium® Processor E5200, E5300, E5400, E5500, E5700, E5800, E6300, E6500, E6500K, E6600, E6700, E6800 Intel® Celeron® Processor E3200, E3300, E3400, E3500	Desktop	1067A	B1
Wolfdale Xeon C0	Legacy Intel® Xeon® Processors	Intel® Xeon® Processor E3110, E5205, E5220, L5240, X5260, X5272	Server	10676	04
Wolfdale Xeon E0	Legacy Intel® Xeon® Processors	Intel® Xeon® Processor E3110, E3120, E5205, E5220, L3110, L5215, L5240, X5260, X5270, X5272	Server	1067A	44
Yorkfield	Legacy Intel® Core™ Processors	Intel® Core™2 Extreme Processor QX9650, QX9770, QX9775 Intel® Core™2 Quad Processor Q8200, Q8200S, Q8400, Q8400S, Q9300, Q9400, Q9400S, Q9450, Q9500, Q9505, Q9505S, Q9550, Q9550S, Q9650	Desktop	10677	10
Yorkfield Xeon	Legacy Intel® Xeon® Processors	Intel® Xeon® Processor L3360, X3320, X3330, X3350, X3360, X3370, X3380	Server	10677	10

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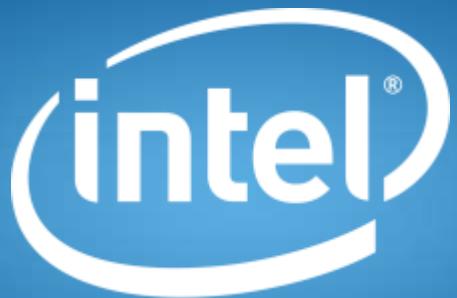
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