IDF15
INTEL DEVELOPER FORUM

Choosing Among Intel® Architecture-Based Processors and Systems-on-Chip for Product Design

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MOBS001

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experience
what's inside™

Agenda

- Segment Review and Intel® Processors and System-on-Chips (SoCs) Review
- 2015 New Product Lines Overview
  - Intel® Atom™ x3 SoC Family
  - Intel Atom x5/x7 SoC Family
  - Intel® Core™ M, Pentium®, and Celeron® Processors
- Across Product Family Comparison
  - Form Factor, power
  - CPU
  - Graphics
  - Media
  - Display
  - Memory
- Summary and Next Steps

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- Segment Review and Intel® Processors and System-on-Chips (SoCs) Review
- 2015 New Product Lines Overview
  - Intel® Atom™ x3 SoC Family
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  - Intel® Core™ M, Pentium®, and Celeron® Processors
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  - Graphics
  - Media
  - Display
  - Memory
- Summary and Next Steps

You touch our products every day...

If a device computes and connects it will do it best on Intel.

Intel® Architecture Based Products

PHONE | TABLET | SMALL SCREEN 2 IN 1 | LARGE SCREEN 2 IN 1 | NOTEBOOK | AIO | MINI PC | DESKTOP

intel inside CORE i3 / intel inside CORE i5 / intel inside CORE i7 (Broadwell)

intel inside CORE m (Broadwell)

intel inside ATOM x5 / intel inside ATOM x7 (Cherry Trail)

intel inside CELERON / intel inside PENTIUM (Bay Trail–M/D, Braswell)

intel inside ATOM x3 (SoFIA)

Agenda

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  - Intel Atom x5/x7 SoC Family
  - Intel® Core™ M, Pentium®, and Celeron® Processors
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  - CPU
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  - Media
  - Display
  - Memory
- Summary and Next Steps

Intel® Atom™ x3 SoC (SoFIA) Family – Phone/Tablet: Entry/Value

Specifications	Intel® Atom™ x3-C3130 (3G)	Intel Atom x3-C3230RK (3G-R)	Intel Atom x3-C3445 (LTE)
Form Factor	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet
CPU	Dual core 64-bit Intel Atom x3 Up to 1.0 GHz	Quad core 64-bit Intel Atom x3 Up to 1.1 GHz	Quad core 64-bit Intel Atom x3 Up to 1.4 GHz [1]
Process	28nm	28nm	28nm
Graphics (GPU)	Mali* 400 MP2 OpenGL* ES 2.0	Mali 450 MP4 OpenGL ES2.0	Mali T720 MP2 OpenGL ES3.0 & DirectX9.3, OpenCL*
Media (Encode/Decode)	Encode: H.264 @720p30 Decode: H.264, VP8 @ 1080p30	Encode:H.264, VP8@1080p30 Decode: H.264, VP8@ up to 1080p60 HEVC (H.265) @ up to 1080p60	Encode: H.264, VP8@1080p30 Decode: H.264, VP8@1080p30 VP9/H.265 (SW) Decoder
Memory	1x32 LPDDR2 800	1x32 LPDDR2/3 1066, DDR3/DDR3L 2x16 1066	1x32 LPDDR2/3 1066
Display Resolution	1280x800@60fps	Up to 1920x 1080 @60fps	1280x800@60 fps /1920x1080>30 fps
Modem (Integrated)	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS	GSM/GPRS/EDGE, DSDS DC-HSPA+ 42/11, TD-SCDMA LTE FDD/TDD upto Cat6 300Mbps
Connectivity	Wi-Fi* 802.11bgn, Bluetooth® 4.0 LE, GPS & GLONASS, FM Radio	Wi-Fi* 802.11bgn, Bluetooth 4.0 LE, GPS & GLONASS, FM Radio	Wi-Fi* 802.11ac, Bluetooth 4.1 LE, GPS, GLONASS & Beidou, FM Radio Near Field Communications (optional feature)
Input Output	UART/SPI, I2C, I2S, SDIO	UART/SPI, I2C, I2S, SDIO	UART/SPI, I2C, I2S, SDIO
USB	USB 2.0 HS	USB 2.0 HS	USB 2.0 HS
Storage	eMMC 4.41	eMMC 4.51	eMMC 4.51
ISP / Camera (rear front)	Up to 13MP/ 5MP	Up to 13MP/ 5MP	Up to 13MP/ 5MP

Entry/Value

Note: Footnotes are documented in back up

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Intel® Atom™ x3 SoC (SoFIA) Family – Phone/Tablet: Entry/Value

Specifications	Intel® Atom™ x3-C3130 (3G)	Intel Atom x3-C3230RK (3G-R)	Intel Atom x3-C3445 (LTE)
Form Factor	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet
Graphics (GPU)	Mali* 400 MP2 OpenGL* ES 2.0	Mali 450 MP4 OpenGL ES2.0	Mali T720 MP2 OpenGL ES3.0 & DirectX9.3, OpenCL*
Media (Encode/Decode)	Encode: H.264 @720p30 Decode: H.264, VP8 @ 1080p30	Encode:H.264, VP8@1080p30 Decode: H.264, VP8@ up to 1080p60 HEVC (H.265) @ up to 1080p60	Encode: H.264, VP8@1080p30 Decode: H.264, VP8@1080p30 VP9/H.265 (SW) Decoder
Memory	1x32 LPDDR2 800	1x32 LPDDR2/3 1066, DDR3/DDR3L 2x16 1066	1x32 LPDDR2/3 1066
Display Resolution	1280x800@60fps	Up to 1920x 1080 @60fps	1280x800@60 fps /1920x1080>30 fps
Modem (Integrated)	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS	GSM/GPRS/EDGE, DSDS DC-HSPA+ 42/11, TD-SCDMA LTE FDD/TDD upto Cat6 300Mbps
Connectivity	Wi-Fi* 802.11bgn, Bluetooth® 4.0 LE, GPS & GLONASS, FM Radio	Wi-Fi* 802.11bgn, Bluetooth 4.0 LE, GPS & GLONASS, FM Radio	Wi-Fi* 802.11ac, Bluetooth 4.1 LE, GPS, GLONASS & Beidou, FM Radio Near Field Communications (optional feature)
Input Output	UART/SPI, I2C, I2S, SDIO	UART/SPI, I2C, I2S, SDIO	UART/SPI, I2C, I2S, SDIO
USB	USB 2.0 HS	USB 2.0 HS	USB 2.0 HS
Storage	eMMC 4.41	eMMC 4.51	eMMC 4.51
ISP / Camera (rear front)	Up to 13MP/ 5MP	Up to 13MP/ 5MP	Up to 13MP/ 5MP

Form Factor — Smart phone/phablet/tablet

Entry/Value

Note: Footnotes are documented in back up

PHONE | TABLET | SMALL SCREEN 2 IN 1 | LARGE SCREEN 2 IN 1 | NOTEBOOK | AIO | MINI PC | DESKTOP

Intel® Atom™ x3 SoC (SoFIA) Family – Phone/Tablet: Entry/Value

Specifications	Intel® Atom™ x3-C3130 (3G)	Intel Atom x3-C3230RK (3G-R)	Intel Atom x3-C3445 (LTE)
Form Factor	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet
Form Factor	Smart phone/phablet/tablet		
Modem	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS,		GSM/GPRS/EDGE, DSDS **DC-HSPA+ 42/11, TD-SCDMA LTE FDD/TDD upto Cat6 300Mbps**
Memory	1x32 LPDDR2 800	1x32 LPDDR2/3 1066, DDR3/DDR3L 2x16 1066	1x32 LPDDR2/3 1066
Display Resolution	1280x800@60fps	Up to 1920x 1080 @60fps	1280x800@60 fps /1920x1080>30 fps
Modem (Integrated)	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS	GSM/GPRS/EDGE, DSDS DC-HSPA+ 42/11, TD-SCDMA LTE FDD/TDD upto Cat6 300Mbps
Connectivity	Wi-Fi* 802.11bgn, Bluetooth® 4.0 LE, GPS & GLONASS, FM Radio	Wi-Fi* 802.11bgn, Bluetooth 4.0 LE, GPS & GLONASS, FM Radio	Wi-Fi* 802.11ac, Bluetooth 4.1 LE, GPS, GLONASS & Beidou, FM Radio Near Field Communications (optional feature)
Input Output	UART/SPI, I2C, I2S, SDIO	UART/SPI, I2C, I2S, SDIO	UART/SPI, I2C, I2S, SDIO
USB	USB 2.0 HS	USB 2.0 HS	USB 2.0 HS
Storage	eMMC 4.41	eMMC 4.51	eMMC 4.51
ISP / Camera (rear front)	Up to 13MP/ 5MP	Up to 13MP/ 5MP	Up to 13MP/ 5MP

Entry/Value

Note: Footnotes are documented in back up

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Intel® Atom™ x3 SoC (SoFIA) Family – Phone/Tablet: Entry/Value

Specifications	Intel® Atom™ x3-C3130 (3G)	Intel Atom x3-C3230RK (3G-R)	Intel Atom x3-C3445 (LTE)
Form Factor	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet
Modem	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS,		GSM/GPRS/EDGE, DSDS **DC-HSPA+ 42/11, TD-SCDMA LTE FDD/TDD upto Cat6 300Mbps**
Memory	1x32 LPDDR2 800	1x32 LPDDR2/3 1066, DDR3/DDR3L 2x16 1066	1x32 LPDDR2/3 1066
Display Resolution	1280x800@60fps	Up to 1920x 1080 @60fps	1280x800@60 fps /1920x1080>30 fps
Modem (Integrated)	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS	GSM/GPRS/EDGE, DSDS DC-HSPA+ 42/11, TD-SCDMA LTE FDD/TDD upto Cat6 300Mbps
Connectivity	Wi-Fi* 802.11bgn, Bluetooth® 4.0 LE, GPS & GLONASS, FM Radio	Wi-Fi* 802.11bgn, Bluetooth 4.0 LE, GPS & GLONASS, FM Radio	Wi-Fi* 802.11ac, Bluetooth 4.1 LE, GPS, GLONASS & Beidou, FM Radio Near Field Communications (optional feature)
Input Output	UART/SPI, I2C, I2S, SDIO	UART/SPI, I2C, I2S, SDIO	UART/SPI, I2C, I2S, SDIO
USB	USB 2.0 HS	USB 2.0 HS	USB 2.0 HS
Storage	eMMC 4.41	eMMC 4.51	eMMC 4.51
ISP / Camera (rear front)	Up to 13MP/ 5MP	Up to 13MP/ 5MP	Up to 13MP/ 5MP

Form Factor — Smart phone/phablet/tablet

Modem — GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS, → GSM/GPRS/EDGE, DSDS **DC-HSPA+ 42/11, TD-SCDMA LTE FDD/TDD upto Cat6 300Mbps**

Entry/Value

Note: Footnotes are documented in back up

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Intel® Atom™ x3 SoC (SoFIA) Family – Phone/Tablet: Entry/Value

Specifications	Intel® Atom™ x3-C3130 (3G)	Intel Atom x3-C3230RK (3G-R)	Intel Atom x3-C3445 (LTE)
Form Factor	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet
Form Factor	Smart phone/phablet/tablet		
Modem	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS,		GSM/GPRS/EDGE, DSDS **DC-HSPA+ 42/11, TD-SCDMA LTE FDD/TDD upto Cat6 300Mbps**
Memory	1x32 LPDDR2 800	1x32 LPDDR2/3 1066, DDR3/DDR3L 2x16 1066	1x32 LPDDR2/3 1066
Display Resolution	1280x800@60fps	Up to 1920x 1080 @60fps	1280x800@60 fps /1920x1080>30 fps
Modem (Integrated)	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS	GSM/GPRS/EDGE, DSDS DC-HSPA+ 42/11, TD-SCDMA LTE FDD/TDD upto Cat6 300Mbps
Connectivity	Wi-Fi* 802.11bgn, Bluetooth® 4.0 LE, GPS & GLONASS, FM Radio	Wi-Fi* 802.11bgn, Bluetooth 4.0 LE, GPS & GLONASS, FM Radio	Wi-Fi* 802.11ac, Bluetooth 4.1 LE, GPS, GLONASS & Beidou, FM Radio Near Field Communications (optional feature)
Input Output	UART/SPI, I2C, I2S, SDIO	UART/SPI, I2C, I2S, SDIO	UART/SPI, I2C, I2S, SDIO
USB	USB 2.0 HS	USB 2.0 HS	USB 2.0 HS
Storage	eMMC 4.41	eMMC 4.51	eMMC 4.51
ISP / Camera (rear front)	Up to 13MP/ 5MP	Up to 13MP/ 5MP	Up to 13MP/ 5MP

Entry/Value

Note: Footnotes are documented in back up

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Intel® Atom™ x3 SoC (SoFIA) Family – Phone/Tablet: Entry/Value

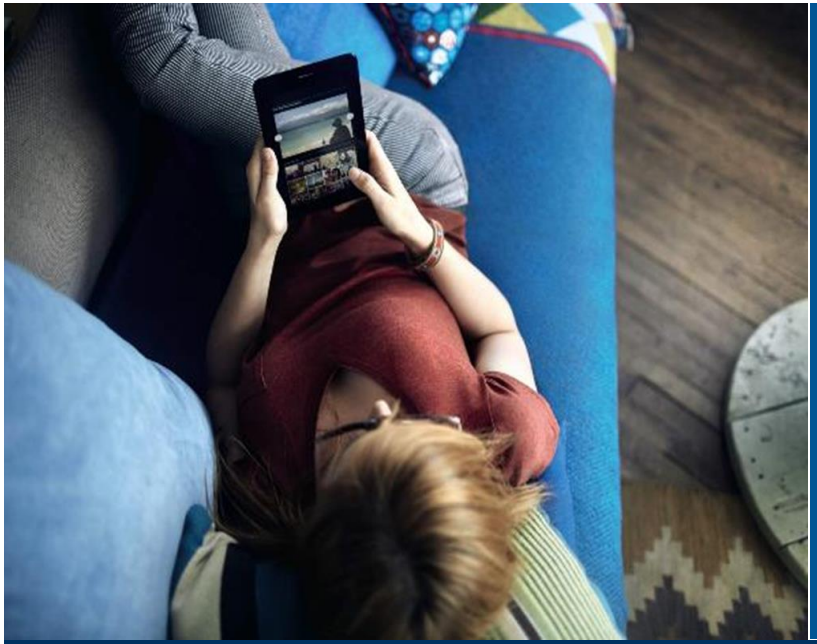
Specifications	Intel® Atom™ x3-C3130 (3G)	Intel Atom x3-C3230RK (3G-R)	Intel Atom x3-C3445 (LTE)
Form Factor	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet	SmartPhone, Phablet, tablet
Form Factor	Smart phone/phablet/tablet		
Modem	GSM/GPRS/EDGE , HSPA+ 21/5.8, DSDS,		GSM/GPRS/EDGE, DSDS **DC-HSPA+ 42/11, TD-SCDMA LTE FDD/TDD upto Cat6 300Mbps**
Memory	1x32 LPDDR2 800	1x32 LPDDR2/3 1066,	1x32 LPDDR2/3 1066
CPU	Dual core 64-bit Intel Atom x3 Up to 1.0 GHz	**Quad core** 64-bit Intel Atom x3 Up **to1.1 GHz**	Quad core 64-bit Intel Atom x3 Up to **1.4 GHz** [1]
Graphics (GPU)	Mali* 400 MP2 OpenGL* ES 2.0	**Mali 450 MP4** OpenGL ES2.0	**Mali T720 MP2 OpenGL ES3.0 & DirectX9.3, OpenCL***
Media (Encode/Decode)	Encode: H.264 @720p30 Decode: H.264, VP8@ 1080p30	Encode:H.264, **VP8@1080p30** Decode: H.264, VP8@**1080p60** **HEVC (H.265) @ up to 1080p60**	Encode: H.264, VP8@1080p30 Decode: H.264, VP8@1080p30

Entry/Value

Note: Footnotes are documented in back up

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Intel® Atom™ x3 SoC (SoFIA) Family – Phone/Tablet: Entry/Value



First Integrated Communications SoC

Intel® Atom™ processors + modem

Global availability
of market-proven Intel modems

Versions for 3G, 4G (LTE)

Designed for smartphones, phablets & tablets
Combining Intel® Architecture performance, strength in LTE and Intel® brand quality

Entry/Value

Note: Footnotes are documented in back up

PHONE | TABLET | SMALL SCREEN 2 IN 1 | LARGE SCREEN 2 IN 1 | NOTEBOOK | AIO | MINI PC | DESKTOP

Intel® Atom™ x5/x7 SoC (Cherry Trail) Family – Tablet: Mainstream/Performance

Specifications	Intel® Atom™ x5-8300	Intel Atom x5-8500	Intel Atom x7-8700
Form Factor	7” to 11.6” tablet, and 2 in 1	7” to 11.6” tablet, and 2 in 1	7” to 11.6” tablet, and 2 in 1
SDP	2W	2W	2W
CPU	Quad core 64-bit Intel Atom x5 Up to 1.84 GHz[1]	Quad core 64-bit Intel Atom x5 Up to 2.24 GHz	Quad core 64-bit Intel Atom x7 Up to 2.4 GHz
Process	14nm	14nm	14nm
Graphics (GPU)	Gen8 12EU, up to 500MHz DirectX*11.1, OpenGL* ES 3.1, OpenCL* 1.2, OpenGL 4.3, RS Compute	Gen8 12EU, up to 600 MHz DX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute	Gen8 16EU, up to 600 MHz DX11.1, OpenGL ES 3.1, OpenCL 1.2, Open GL 4.3, RS Compute
Media (Encode/Decode)	HEVC (decode), H.264, VP8	HEVC (decode), H.264, VP8	HEVC (decode), H.264, VP8
Memory	1x32, 1x64 DDR3L-RS[2] 1600, 1-2GB	2x64 LPDDR3 1600, 2-8GB	2x64 LPDDR3 1600, 2-8GB
Display Resolution	INTERNAL: 1920x1200 (MIPI-DSI or LVDS) EXTERNAL: 1920x1080 (HDMI)	INTERNAL: up to 25x16 (MIPI-DSI or eDP) EXTERNAL: up to 4k2k (HDMI)	INTERNAL: up to 25x16 (MIPI-DSI or eDP) EXTERNAL: up to 4k2k (HDMI)
Modem (Discrete)	Intel® XMM™ 7260/62 LTE Cat-6 (up to 300Mbps DL) M.2 only for x5 8300	Intel XMM 7260/62 LTE Cat-6 (up to 300Mbps DL, 50Mbps UL for modem-down)	Intel XMM 7260/62 LTE Cat-6 (up to 300M bps DL, 50Mbps UL for modem-down)
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel NFC	Intel WLAN, Intel WWAN (Intel XMM 726x), Intel® NFC	Intel WLAN, Intel WWAN (Intel XMM 726x), Intel® WiGig, Intel NFC
Input Output	6xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, SPI[5], PCIe* 2.0 x1, 1xI2C(ISH), 1xI2C (NFC)	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC, 1xSPI[5], PCIe 2.0 x2, 1x I²C[4] (ISH), 1xI2C (NFC)	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC, 1xSPI[5], PCIe 2.0 x2, 1x I²C[4] (ISH), I2C[4] (NFC)
USB	1xUSB3 OTG, 2xHSIC, 3xUSB2	1xUSB3 OTG, 3xUSB3[6] 2xSSIC, 2xHSIC	1xUSB3 OTG, 3xUSB3[6] 2xSSIC, 2xHSIC
Storage	eMMC 4.51[7]	eMMC 4.51[7]	eMMC 4.51[7]
ISP/Camera (rear/front)	Up to 8MP Intel® RealSense™ Snapshot	Up to 13MP Intel RealSense 3DCamera	Up to 13MP Intel RealSense 3DCamera

Mainstream/ Performance

Note: Footnotes are documented in back up

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Intel® Atom™ x5/x7 SoC (Cherry Trail) Family – Tablet: Mainstream/Performance

Specifications	Intel® Atom™ x5-8300	Intel Atom x5-8500	Intel Atom x7-8700
Process	14nm		
CPU	Up to 1.84 GHz[1]	Up to 2.24 GHz	Up to 2.4 GHz
Process	14nm	14nm	14nm
Graphics (GPU)	Gen8 12EU, up to 500MHz DirectX*11.1, OpenGL* ES 3.1, OpenCL* 1.2, OpenGL 4.3, RS Compute	Gen8 12EU, up to 600 MHz DX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute	Gen8 16EU, up to 600 MHz DX11.1, OpenGL ES 3.1, OpenCL 1.2, Open GL 4.3, RS Compute
Media (Encode/Decode)	HEVC (decode), H.264, VP8	HEVC (decode), H.264, VP8	HEVC (decode), H.264, VP8
Memory	1x32, 1x64 DDR3L-RS[2] 1600, 1-2GB	2x64 LPDDR3 1600, 2-8GB	2x64 LPDDR3 1600, 2-8GB
Display Resolution	INTERNAL: 1920x1200 (MIPI-DSI or LVDS) EXTERNAL: 1920x1080 (HDMI)	INTERNAL: up to 25x16 (MIPI-DSI or eDP) EXTERNAL: up to 4k2k (HDMI)	INTERNAL: up to 25x16 (MIPI-DSI or eDP) EXTERNAL: up to 4k2k (HDMI)
Modem (Discrete)	Intel® XMM™ 7260/62 LTE Cat-6 (up to 300Mbps DL) M.2 only for x5 8300	Intel XMM 7260/62 LTE Cat-6 (up to 300Mbps DL, 50Mbps UL for modem-down)	Intel XMM 7260/62 LTE Cat-6 (up to 300M bps DL, 50Mbps UL for modem-down)
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel NFC	Intel WLAN, Intel WWAN (Intel XMM 726x), Intel® NFC	Intel WLAN, Intel WWAN (Intel XMM 726x), Intel® WiGig, Intel NFC
Input Output	6xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, SPI[5], PCIe* 2.0 x1, 1xI2C(ISH), 1xI2C (NFC)	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC, 1xSPI[5], PCIe 2.0 x2, 1x I²C[4] (ISH), 1xI2C (NFC)	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC, 1xSPI[5], PCIe 2.0 x2, 1x I²C[4] (ISH), I2C[4] (NFC)
USB	1xUSB3 OTG, 2xHSIC, 3xUSB2	1xUSB3 OTG, 3xUSB3[6] 2xSSIC, 2xHSIC	1xUSB3 OTG, 3xUSB3[6] 2xSSIC, 2xHSIC
Storage	eMMC 4.51[7]	eMMC 4.51[7]	eMMC 4.51[7]
ISP/Camera (rear/front)	Up to 8MP Intel® RealSense™ Snapshot	Up to 13MP Intel RealSense 3DCamera	Up to 13MP Intel RealSense 3DCamera

Mainstream/ Performance

Note: Footnotes are documented in back up

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Intel® Atom™ x5/x7 SoC (Cherry Trail) Family – Tablet: Mainstream/Performance

Specifications	Intel® Atom™ x5-8300	Intel Atom x5-8500	Intel Atom x7-8700
Process	14nm		
CPU	Up to 1.84 GHz[1]	Up to 2.24 GHz	Up to 2.4 GHz
SDP	2W		
Graphics (GPU)	DirectX 11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute	DX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute	DX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute
Media (Encode/Decode)	HEVC (decode), H.264, VP8	HEVC (decode), H.264, VP8	HEVC (decode), H.264, VP8
Memory	1x32, 1x64 DDR3L-RS[2] 1600, 1-2GB	2x64 LPDDR3 1600, 2-8GB	2x64 LPDDR3 1600, 2-8GB
Display Resolution	INTERNAL: 1920x1200 (MIPI-DSI or LVDS) EXTERNAL: 1920x1080 (HDMI)	INTERNAL: up to 25x16 (MIPI-DSI or eDP) EXTERNAL: up to 4k2k (HDMI)	INTERNAL: up to 25x16 (MIPI-DSI or eDP) EXTERNAL: up to 4k2k (HDMI)
Modem (Discrete)	Intel® XMM™ 7260/62 LTE Cat-6 (up to 300Mbps DL) M.2 only for x5 8300	Intel XMM 7260/62 LTE Cat-6 (up to 300Mbps DL, 50Mbps UL for modem-down)	Intel XMM 7260/62 LTE Cat-6 (up to 300M bps DL, 50Mbps UL for modem-down)
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel NFC	Intel WLAN, Intel WWAN (Intel XMM 726x), Intel® NFC	Intel WLAN, Intel WWAN (Intel XMM 726x), Intel® WiGig, Intel NFC
Input Output	6xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, SPI[5], PCIe* 2.0 x1, 1xI2C(ISH), 1xI2C (NFC)	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC, 1xSPI[5], PCIe 2.0 x2, 1x I²C[4] (ISH), 1xI2C (NFC)	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC, 1xSPI[5], PCIe 2.0 x2, 1x I²C[4] (ISH), I2C[4] (NFC)
USB	1xUSB3 OTG, 2xHSIC, 3xUSB2	1xUSB3 OTG, 3xUSB3[6] 2xSSIC, 2xHSIC	1xUSB3 OTG, 3xUSB3[6] 2xSSIC, 2xHSIC
Storage	eMMC 4.51[7]	eMMC 4.51[7]	eMMC 4.51[7]
ISP/Camera (rear/front)	Up to 8MP Intel® RealSense™ Snapshot	Up to 13MP Intel RealSense 3DCamera	Up to 13MP Intel RealSense 3DCamera

Mainstream/ Performance

Note: Footnotes are documented in back up

PHONE | TABLET | SMALL SCREEN 2 IN 1 | LARGE SCREEN 2 IN 1 | NOTEBOOK | AIO | MINI PC | DESKTOP

Intel® Atom™ x5/x7 SoC (Cherry Trail) Family – Tablet: Mainstream/Performance

Specifications	Intel® Atom™ x5-8300	Intel Atom x5-8500	Intel Atom x7-8700
Process	14nm		
CPU	Up to 1.84 GHz[1]	Up to 2.24 GHz	Up to 2.4 GHz
SDP	2W		
Graphics (GPU)	DirectX* 11.1, OpenGL* ES 3.1, OpenCL* 1.2, OpenGL 4.3, RS Compute	DX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute	DX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute
CPU	Quad core 64-bit Intel Atom x5 Up to 1.84 GHz1	Quad core 64-bit Intel Atom x5 Up **to 2.24 GHz**	Quad core 64-bit Intel Atom x7 Up to **2.4 GHz**
Display	EXTERNAL: 1920x1080 (HDMI)	EXTERNAL: up to 4k2k (HDMI)	EXTERNAL: up to 4k2k (HDMI)
Modem (Discrete)	Intel® XMM™ 7260/62 LTE Cat-6 (up to 300Mbps DL) M.2 only for x5 8300	Intel XMM 7260/62 LTE Cat-6 (up to 300Mbps DL, 50Mbps UL for modem-down)	Intel XMM 7260/62 LTE Cat-6 (up to 300M bps DL, 50Mbps UL for modem-down)
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel NFC	Intel WLAN, Intel WWAN (Intel XMM 726x), Intel® NFC	Intel WLAN, Intel WWAN (Intel XMM 726x), Intel® WiGig, Intel NFC
Input Output	6xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, SPI[5], PCIe* 2.0 x1, 1xI2C(ISH), 1xI2C (NFC)	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC, 1xSPI[5], PCIe 2.0 x2, 1x I²C[4] (ISH), 1xI2C (NFC)	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC, 1xSPI[5], PCIe 2.0 x2, 1x I²C[4] (ISH), I2C[4] (NFC)
USB	1xUSB3 OTG, 2xHSIC, 3xUSB2	1xUSB3 OTG, 3xUSB3[6] 2xSSIC, 2xHSIC	1xUSB3 OTG, 3xUSB3[6] 2xSSIC, 2xHSIC
Storage	eMMC 4.51[7]	eMMC 4.51[7]	eMMC 4.51[7]
ISP/Camera (rear/front)	Up to 8MP Intel® RealSense™ Snapshot	Up to 13MP Intel RealSense 3DCamera	Up to 13MP Intel RealSense 3DCamera

Mainstream/ Performance

Note: Footnotes are documented in back up

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Intel® Atom™ x5/x7 SoC (Cherry Trail) Family – Tablet: Mainstream/Performance

Specifications	Intel® Atom™ x5-8300	Intel Atom x5-8500	Intel Atom x7-8700
Process	14nm		
CPU	Up to 1.84 GHz[1]	Up to 2.24 GHz	Up to 2.4 GHz
SDP	2W		
Graphics (GPU)	DirectX* 11.1, OpenGL* ES 3.1, OpenCL* 1.2, OpenGL 4.3, RS Compute	DX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute	DX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute
CPU	Quad core 64-bit Intel Atom x5 Up to 1.84 GHz1	Quad core 64-bit Intel Atom x5 Up **to 2.24 GHz**	Quad core 64-bit Intel Atom x7 Up to **2.4 GHz**
Graphics	Gen8 12EU, up to 500MHz DirectX*11.1, OpenGL* ES 3.1, OpenCL* 1.2, OpenGL 4.3, RS Compute	Gen8 12EU, up to **600 MHz** DirectX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute	Gen8 **16EU**, up to 600 MHz DirectX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute
Input Output	6xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, SPI[5], PCIe* 2.0 x1, 1xI2C(ISH), 1xI2C (NFC)	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC, 1xSPI[5], PCIe 2.0 x2, 1x I²C[4] (ISH), 1xI2C (NFC)	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC, 1xSPI[5], PCIe 2.0 x2, 1x I²C[4] (ISH), I2C[4] (NFC)
USB	1xUSB3 OTG, 2xHSIC, 3xUSB2	1xUSB3 OTG, 3xUSB3[6] 2xSSIC, 2xHSIC	1xUSB3 OTG, 3xUSB3[6] 2xSSIC, 2xHSIC
Storage	eMMC 4.51[7]	eMMC 4.51[7]	eMMC 4.51[7]
ISP/Camera (rear/front)	Up to 8MP Intel® RealSense™ Snapshot	Up to 13MP Intel RealSense 3DCamera	Up to 13MP Intel RealSense 3DCamera

Mainstream/ Performance

Note: Footnotes are documented in back up

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Intel® Atom™ x5/x7 SoC (Cherry Trail) Family – Tablet: Mainstream/Performance

Specifications	Intel® Atom™ x5-8300	Intel Atom x5-8500	Intel Atom x7-8700
Process	14nm		
CPU	Up to 1.84 GHz[1]	Up to 2.24 GHz	Up to 2.4 GHz
SDP	2W		
Graphics (GPU)	DirectX* 11.1, OpenGL* ES 3.1, OpenCL* 1.2, OpenGL 4.3, RS Compute	DX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute	DX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute
CPU	Quad core 64-bit Intel Atom x5 Up to 1.84 GHz1	Quad core 64-bit Intel Atom x5 Up **to 2.24 GHz**	Quad core 64-bit Intel Atom x7 Up to **2.4 GHz**
	EXTERNAL: 1920x1080 (HDMI)	EXTERNAL: up to 4k2k (HDMI)	EXTERNAL: up to 4k2k (HDMI)
Graphics	Gen8 12EU, up to 500MHz DirectX*11.1, OpenGL* ES 3.1, OpenCL* 1.2, OpenGL 4.3, RS Compute	Gen8 12EU, up to **600 MHz** DirectX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute	Gen8 **16EU**, up to 600 MHz DirectX11.1, OpenGL ES 3.1, OpenCL 1.2, OpenGL 4.3, RS Compute
	6xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, SPI[5],	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC, 1xSPI[5],	7xI2C[4], 2xHSUART, 1xSDIO, 3xI2S, 1xLPC,
Display Resolution	2 Displays INTERNAL: 1920x1200 (MIPI-DSI or LVDS) EXTERNAL: 1920x1080 (HDMI)	**3 Displays** INTERNAL: up to **25x16** (MIPI-DSI or eDP) EXTERNAL: up to **4k2k (HDMI)**	3 Displays INTERNAL: up to 25x16 (MIPI-DSI or eDP) EXTERNAL: up to 4k2k (HDMI)

Mainstream/ Performance

Note: Footnotes are documented in back up

PHONE | TABLET | SMALL SCREEN 2 IN 1 | LARGE SCREEN 2 IN 1 | NOTEBOOK | AIO | MINI PC | DESKTOP

Intel® Atom™ x5/x7 SoC (Cherry Trail) Family – Tablet: Mainstream/Performance

First Intel® Atom™ SoC on 14nm, featuring next generation microarchitecture

New user experiences: Intel® RealSense™ Technology, True Key™, Intel® Pro WiDi

64-bit CPUs and Intel® Gen 8 graphics

Full Windows® and Android* OS

Next generation LTE with Intel® XMM™ 726x supporting Cat-6 and carrier aggregation

Mainstream to premium 7” tablets to 11.6” Detachable 2 in 1s

Mainstream/ Performance

PHONE | TABLET | SMALL SCREEN 2 IN 1 | LARGE SCREEN 2 IN 1 | NOTEBOOK | AIO | MINI PC | DESKTOP

Intel® Core™, Pentium®, and Celeron® Processors – Premium Tablet/PC

Specifications	Intel® Pentium®/Celeron® Processors (Braswell)	Intel® Core™ M Processors (Broadwell -Y)	5th Gen Intel® Core™ i3/5/7 Processors (Broadwell - U)
CPU	**64-bit upto Quad Core2 Airmont microarchitecture up to 2.4GHz**	**64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to 2.9 GHz**	64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to **3.4GHz**
Process	14nm	14nm	14nm
Graphics (GPU)	Gen8 16EUs[2], up to 700 MHz DirectX*12[3], OpenGL* 4.2	Intel® **HD graphics 5300** with DirectX11.1, **OpenGL 4.2, OpenCL* 2.0, SVM**	Intel® HD graphics **5500 or 6000 or Intel® Iris™ graphics 6100** with DirectX11.1, OpenGL 4.2, OpenCL 2.0, SVM
Media (Encode/Decode)	HEVC (decode), H.264, VP8, VP9 (GPU-Accelerated)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (SW)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (GPU accelerated)
Memory	1x64/2x64 DDR3L/LPDDR3 1600, 1-16 GB	Dual channel; DDR3L 1600MHz; Up to LPDDR3 1600MHz; **16GB max**	Dual channel; DDR3L 1600MHz; up to LPDDR **1866** MHz; 16GB max
Display Resolution	3 displays: INTERNAL: up to 25x16 (eDP) EXTERNAL: up to 4k2k (HDMI) and/or DisplayPort* 2560x1600@60Hz	3 concurrent pipes: eDP / DisplayPort 25x16; HDMI 38x21	3 concurrent pipes: eDP / DisplayPort **3840x2160@60Hz**; HDMI: 4096x2304@24Hz
MODEM	Discrete	Discrete	Discrete
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel® WiGig, Intel® NFC	Intel® Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth® 4.0	Intel Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth 4.0
Input Output	7xI2C, 2xHSUART, 1xSDIO, HDAudio/I2S, 1xLPC, 1xSPI, PCIe2.0x4, I2C (NFC)	Up to 6 PCIe 2.0 ports across **12 lanes**; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI	Up to 6 PCIe 2.0 ports across 12 lanes; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI
USB	1xUSB3 OTG, 3xUSB3 , 1xUSB2, 2xSSIC, 2xHSIC	Up to **10 USB 2.0;** Up to 4 USB3 (2 muxed)	8 USB 2.0; up to 4 USB 3.0
Storage	**eMMC 4.51**, 2 SATA 6Gb/s	**Up to 4 SATA 6Gb/s**	**Up to 4 SATA 6Gb/s**

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Note 2: SKU-dependent
Note 3: Windows* 10 only PCI Express* (PCIe)

Intel® Core™, Pentium®, and Celeron® Processors – Premium Tablet/PC

Specifications	Intel® Pentium®/Celeron® Processors (Braswell)	Intel® Core™ M Processors (Broadwell -Y)	5th Gen Intel® Core™ i3/5/7 Processors (Broadwell - U)
CPU	**64-bit upto Quad Core2 Airmont microarchitecture up to 2.4GHz**	**64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to 2.9 GHz**	64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to **3.4GHz**
Process	14nm	14nm	14nm
Graphics (GPU)	Gen8 16EUs[2], up to 700 MHz DirectX*12[3], OpenGL* 4.2	Intel® **HD graphics 5300** with DirectX11.1, **OpenGL 4.2, OpenCL* 2.0, SVM**	Intel® HD graphics **5500 or 6000 or Intel® Iris™ graphics 6100** with DirectX11.1, OpenGL 4.2, OpenCL 2.0, SVM
Media (Encode/Decode)	HEVC (decode), H.264, VP8, VP9 (GPU-Accelerated)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (SW)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (GPU accelerated)
Memory	1x64/2x64 DDR3L/LPDDR3 1600, 1-16 GB	Dual channel; DDR3L 1600MHz; Up to LPDDR3 1600MHz; **16GB max**	Dual channel; DDR3L 1600MHz; up to LPDDR **1866** MHz; 16GB max
Display Resolution	3 displays: INTERNAL: up to 25x16 (eDP) EXTERNAL: up to 4k2k (HDMI) and/or DisplayPort* 2560x1600@60Hz	3 concurrent pipes: eDP / DisplayPort 25x16; HDMI 38x21	3 concurrent pipes: eDP / DisplayPort **3840x2160@60Hz**; HDMI: 4096x2304@24Hz
MODEM	Discrete	Discrete	Discrete
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel® WiGig, Intel® NFC	Intel® Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth® 4.0	Intel Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth 4.0
Input Output	7xI2C, 2xHSUART, 1xSDIO, HDAudio/I2S, 1xLPC, 1xSPI, PCIe2.0x4, I2C (NFC)	Up to 6 PCIe 2.0 ports across **12 lanes**; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI	Up to 6 PCIe 2.0 ports across 12 lanes; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI
USB	1xUSB3 OTG, 3xUSB3 , 1xUSB2, 2xSSIC, 2xHSIC	Up to **10 USB 2.0;** Up to 4 USB3 (2 muxed)	8 USB 2.0; up to 4 USB 3.0
Storage	**eMMC 4.51**, 2 SATA 6Gb/s	**Up to 4 SATA 6Gb/s**	**Up to 4 SATA 6Gb/s**

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Note 2: SKU-dependent
Note 3: Windows* 10 only PCI Express* (PCIe)

Intel® Core™, Pentium®, and Celeron® Processors – Premium Tablet/PC

Specifications	Intel® Pentium®/Celeron® Processors (Braswell)	Intel® Core™ M Processors (Broadwell -Y)	5th Gen Intel® Core™ i3/5/7 Processors (Broadwell - U)
CPU	**64-bit upto Quad Core2 Airmont microarchitecture up to 2.4GHz**	**64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to 2.9 GHz**	64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to **3.4GHz**
Process	14nm	14nm	14nm
Graphics (GPU)	Gen8 16EUs[2], up to 700 MHz DirectX*12[3], OpenGL* 4.2	Intel® **HD graphics 5300** with DirectX11.1, **OpenGL 4.2, OpenCL* 2.0, SVM**	Intel® HD graphics **5500 or 6000 or Intel® Iris™ graphics 6100** with DirectX11.1, OpenGL 4.2, OpenCL 2.0, SVM
Media (Encode/Decode)	HEVC (decode), H.264, VP8, VP9 (GPU-Accelerated)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (SW)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (GPU accelerated)
Memory	1x64/2x64 DDR3L/LPDDR3 1600, 1-16 GB	Dual channel; DDR3L 1600MHz; Up to LPDDR3 1600MHz; **16GB max**	Dual channel; DDR3L 1600MHz; up to LPDDR **1866** MHz; 16GB max
Display Resolution	3 displays: INTERNAL: up to 25x16 (eDP) EXTERNAL: up to 4k2k (HDMI) and/or DisplayPort* 2560x1600@60Hz	3 concurrent pipes: eDP / DisplayPort 25x16; HDMI 38x21	3 concurrent pipes: eDP / DisplayPort **3840x2160@60Hz**; HDMI: 4096x2304@24Hz
MODEM	Discrete	Discrete	Discrete
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel® WiGig, Intel® NFC	Intel® Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth® 4.0	Intel Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth 4.0
Input Output	7xI2C, 2xHSUART, 1xSDIO, HDAudio/I2S, 1xLPC, 1xSPI, PCIe2.0x4, I2C (NFC)	Up to 6 PCIe 2.0 ports across **12 lanes**; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI	Up to 6 PCIe 2.0 ports across 12 lanes; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI
USB	1xUSB3 OTG, 3xUSB3 , 1xUSB2, 2xSSIC, 2xHSIC	Up to **10 USB 2.0;** Up to 4 USB3 (2 muxed)	8 USB 2.0; up to 4 USB 3.0
Storage	**eMMC 4.51**, 2 SATA 6Gb/s	**Up to 4 SATA 6Gb/s**	**Up to 4 SATA 6Gb/s**

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Note 2: SKU-dependent
Note 3: Windows* 10 only PCI Express* (PCIe)

Intel® Core™, Pentium®, and Celeron® Processors – Premium Tablet/PC

Specifications	Intel® Pentium®/Celeron® Processors (Braswell)	Intel® Core™ M Processors (Broadwell -Y)	5th Gen Intel® Core™ i3/5/7 Processors (Broadwell - U)
CPU	**64-bit upto Quad Core2 Airmont microarchitecture up to 2.4GHz**	**64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to 2.9 GHz**	64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to **3.4GHz**
Process	14nm	14nm	14nm
Graphics (GPU)	Gen8 16EUs[2], up to 700 MHz DirectX*12[3], OpenGL* 4.2	Intel® **HD graphics 5300** with DirectX11.1, **OpenGL 4.2, OpenCL* 2.0, SVM**	Intel® HD graphics **5500 or 6000 or Intel® Iris™ graphics 6100** with DirectX11.1, OpenGL 4.2, OpenCL 2.0, SVM
Media (Encode/Decode)	HEVC (decode), H.264, VP8, VP9 (GPU-Accelerated)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (SW)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (GPU accelerated)
Memory	1x64/2x64 DDR3L/LPDDR3 1600, 1-16 GB	Dual channel; DDR3L 1600MHz; Up to LPDDR3 1600MHz; **16GB max**	Dual channel; DDR3L 1600MHz; up to LPDDR **1866** MHz; 16GB max
Display Resolution	3 displays: INTERNAL: up to 25x16 (eDP) EXTERNAL: up to 4k2k (HDMI) and/or DisplayPort* 2560x1600@60Hz	3 concurrent pipes: eDP / DisplayPort 25x16; HDMI 38x21	3 concurrent pipes: eDP / DisplayPort **3840x2160@60Hz**; HDMI: 4096x2304@24Hz
MODEM	Discrete	Discrete	Discrete
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel® WiGig, Intel® NFC	Intel® Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth® 4.0	Intel Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth 4.0
Input Output	7xI2C, 2xHSUART, 1xSDIO, HDAudio/I2S, 1xLPC, 1xSPI, PCIe2.0x4, I2C (NFC)	Up to 6 PCIe 2.0 ports across **12 lanes**; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI	Up to 6 PCIe 2.0 ports across 12 lanes; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI
USB	1xUSB3 OTG, 3xUSB3 , 1xUSB2, 2xSSIC, 2xHSIC	Up to **10 USB 2.0;** Up to 4 USB3 (2 muxed)	8 USB 2.0; up to 4 USB 3.0
Storage	**eMMC 4.51**, 2 SATA 6Gb/s	**Up to 4 SATA 6Gb/s**	**Up to 4 SATA 6Gb/s**

Note 2: SKU-dependent
Note 3: Windows* 10 only PCI Express* (PCIe)

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Intel® Core™, Pentium®, and Celeron® Processors – Premium Tablet/PC

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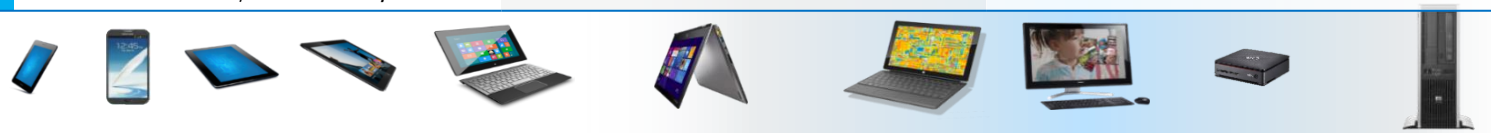
CPU	**64-bit upto Quad Core2 Airmont microarchitecture up to 2.4GHz**	**64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to 2.9 GHz**	64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to **3.4GHz**
Process	14nm	14nm	14nm
Graphics (GPU)	Gen8 16EUs[2], up to 700 MHz DirectX*12[3], OpenGL* 4.2	Intel® **HD graphics 5300** with DirectX11.1, **OpenGL 4.2, OpenCL* 2.0, SVM**	Intel® HD graphics **5500 or 6000 or Intel® Iris™ graphics 6100** with DirectX11.1, OpenGL 4.2, OpenCL 2.0, SVM
Media (Encode/Decode)	HEVC (decode), H.264, VP8, VP9 (GPU-Accelerated)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (SW)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (GPU accelerated)
Memory	1x64/2x64 DDR3L/LPDDR3 1600, 1-16 GB	Dual channel; DDR3L 1600MHz; Up to LPDDR3 1600MHz; **16GB max**	Dual channel; DDR3L 1600MHz; up to LPDDR **1866** MHz; 16GB max
Display Resolution	3 displays: INTERNAL: up to 25x16 (eDP) EXTERNAL: up to 4k2k (HDMI) and/or DisplayPort* 2560x1600@60Hz	3 concurrent pipes: eDP / DisplayPort 25x16; HDMI 38x21	3 concurrent pipes: eDP / DisplayPort **3840x2160@60Hz**; HDMI: 4096x2304@24Hz
MODEM	Discrete	Discrete	Discrete
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel® WiGig, Intel® NFC	Intel® Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth® 4.0	Intel Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth 4.0
Input Output	7xI2C, 2xHSUART, 1xSDIO, HDAudio/I2S, 1xLPC, 1xSPI, PCIe2.0x4, I2C (NFC)	Up to 6 PCIe 2.0 ports across **12 lanes**; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI	Up to 6 PCIe 2.0 ports across 12 lanes; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI
USB	1xUSB3 OTG, 3xUSB3 , 1xUSB2, 2xSSIC, 2xHSIC	Up to **10 USB 2.0;** Up to 4 USB3 (2 muxed)	8 USB 2.0; up to 4 USB 3.0
Storage	**eMMC 4.51**, 2 SATA 6Gb/s	**Up to 4 SATA 6Gb/s**	**Up to 4 SATA 6Gb/s**

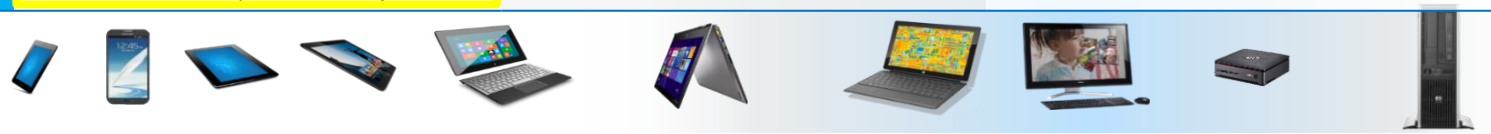


PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Note 2: SKU-dependent
Note 3: Windows* 10 only PCI Express* (PCIe)

Intel® Core™, Pentium®, and Celeron® Processors – Premium Tablet/PC

Specifications	Intel® Pentium®/Celeron® Processors (Braswell)	Intel® Core™ M Processors (Broadwell -Y)	5th Gen Intel® Core™ i3/5/7 Processors (Broadwell - U)
CPU	**64-bit upto Quad Core2 Airmont microarchitecture up to 2.4GHz**	**64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to 2.9 GHz**	64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to **3.4GHz**
Process	14nm	14nm	14nm
Graphics (GPU)	Gen8 16EUs[2], up to 700 MHz DirectX*12[3], OpenGL* 4.2	Intel® **HD graphics 5300** with DirectX11.1, **OpenGL 4.2, OpenCL* 2.0, SVM**	Intel® HD graphics **5500 or 6000 or Intel® Iris™ graphics 6100** with DirectX11.1, OpenGL 4.2, OpenCL 2.0, SVM
Media (Encode/Decode)	HEVC (decode), H.264, VP8, VP9 (GPU-Accelerated)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (SW)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (GPU accelerated)
Memory	1x64/2x64 DDR3L/LPDDR3 1600, 1-16 GB	Dual channel; DDR3L 1600MHz; Up to LPDDR3 1600MHz; **16GB max**	Dual channel; DDR3L 1600MHz; up to LPDDR **1866** MHz; 16GB max
Display Resolution	3 displays: INTERNAL: up to 25x16 (eDP) EXTERNAL: up to 4k2k (HDMI) and/or DisplayPort* 2560x1600@60Hz	3 concurrent pipes: eDP / DisplayPort 25x16; HDMI 38x21	3 concurrent pipes: eDP / DisplayPort **3840x2160@60Hz**; HDMI: 4096x2304@24Hz
MODEM	Discrete	Discrete	Discrete
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel® WiGig, Intel® NFC	Intel® Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth® 4.0	Intel Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth 4.0
Input Output	7xI2C, 2xHSUART, 1xSDIO, HDAudio/I2S, 1xLPC, 1xSPI, PCIe2.0x4, I2C (NFC)	Up to 6 PCIe 2.0 ports across **12 lanes**; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI	Up to 6 PCIe 2.0 ports across 12 lanes; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI
USB	1xUSB3 OTG, 3xUSB3 , 1xUSB2, 2xSSIC, 2xHSIC	Up to **10 USB 2.0;** Up to 4 USB3 (2 muxed)	8 USB 2.0; up to 4 USB 3.0
Storage	**eMMC 4.51**, 2 SATA 6Gb/s	**Up to 4 SATA 6Gb/s**	**Up to 4 SATA 6Gb/s**



PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Note 2: SKU-dependent
Note 3: Windows* 10 only PCI Express* (PCIe)

Intel® Core™, Pentium®, and Celeron® Processors – Premium Tablet/PC

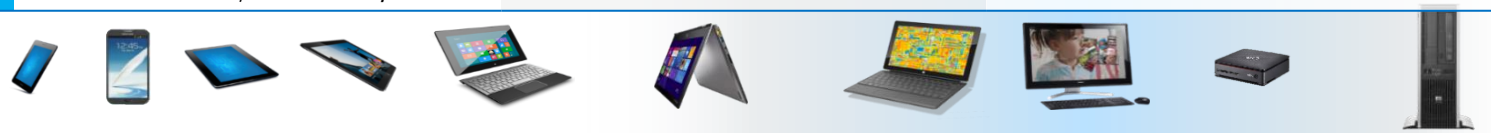
Specifications	Intel® Pentium®/Celeron® Processors (Braswell)	Intel® Core™ M Processors (Broadwell -Y)	5th Gen Intel® Core™ i3/5/7 Processors (Broadwell - U)
CPU	**64-bit upto Quad Core2 Airmont microarchitecture up to 2.4GHz**	**64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to 2.9 GHz**	64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to **3.4GHz**
Process	14nm	14nm	14nm
Graphics (GPU)	Gen8 16EUs[2], up to 700 MHz DirectX*12[3], OpenGL* 4.2	Intel® **HD graphics 5300** with DirectX11.1, **OpenGL 4.2, OpenCL* 2.0, SVM**	Intel® HD graphics **5500 or 6000 or Intel® Iris™ graphics 6100** with DirectX11.1, OpenGL 4.2, OpenCL 2.0, SVM
Media (Encode/Decode)	HEVC (decode), H.264, VP8, VP9 (GPU-Accelerated)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (SW)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (GPU accelerated)
Memory	1x64/2x64 DDR3L/LPDDR3 1600, 1-16 GB	Dual channel; DDR3L 1600MHz; Up to LPDDR3 1600MHz; **16GB max**	Dual channel; DDR3L 1600MHz; up to LPDDR **1866** MHz; 16GB max
Display Resolution	3 displays: INTERNAL: up to 25x16 (eDP) EXTERNAL: up to 4k2k (HDMI) and/or DisplayPort* 2560x1600@60Hz	3 concurrent pipes: eDP / DisplayPort 25x16; HDMI 38x21	3 concurrent pipes: eDP / DisplayPort **3840x2160@60Hz**; HDMI: 4096x2304@24Hz
MODEM	Discrete	Discrete	Discrete
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel® WiGig, Intel® NFC	Intel® Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth® 4.0	Intel Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth 4.0
Input Output	7xI2C, 2xHSUART, 1xSDIO, HDAudio/I2S, 1xLPC, 1xSPI, PCIe2.0x4, I2C (NFC)	Up to 6 PCIe 2.0 ports across **12 lanes**; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI	Up to 6 PCIe 2.0 ports across 12 lanes; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI
USB	1xUSB3 OTG, 3xUSB3 , 1xUSB2, 2xSSIC, 2xHSIC	Up to **10 USB 2.0;** Up to 4 USB3 (2 muxed)	8 USB 2.0; up to 4 USB 3.0
Storage	**eMMC 4.51**, 2 SATA 6Gb/s	**Up to 4 SATA 6Gb/s**	**Up to 4 SATA 6Gb/s**

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Note 2: SKU-dependent
Note 3: Windows* 10 only PCI Express* (PCIe)

Intel® Core™, Pentium®, and Celeron® Processors – Premium Tablet/PC

Specifications	Intel® Pentium®/Celeron® Processors (Braswell)	Intel® Core™ M Processors (Broadwell -Y)	5th Gen Intel® Core™ i3/5/7 Processors (Broadwell - U)
Process / Chipset	14nm **SOC**	14nm **Processor + PCH**	
Process	14nm	14nm	14nm
Graphics (GPU)	Gen8 16EUs[2], up to 700 MHz DirectX*12[3], OpenGL* 4.2	Intel® **HD graphics 5300** with DirectX11.1, **OpenGL 4.2, OpenCL* 2.0, SVM**	Intel® HD graphics **5500 or 6000 or Intel® Iris™ graphics 6100** with DirectX11.1, OpenGL 4.2, OpenCL 2.0, SVM
Media (Encode/Decode)	HEVC (decode), H.264, VP8, VP9 (GPU-Accelerated)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (SW)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (GPU accelerated)
Memory	1x64/2x64 DDR3L/LPDDR3 1600, 1-16 GB	Dual channel; DDR3L 1600MHz; Up to LPDDR3 1600MHz; **16GB max**	Dual channel; DDR3L 1600MHz; up to LPDDR **1866** MHz; 16GB max
Display Resolution	3 displays: INTERNAL: up to 25x16 (eDP) EXTERNAL: up to 4k2k (HDMI) and/or DisplayPort* 2560x1600@60Hz	3 concurrent pipes: eDP / DisplayPort 25x16; HDMI 38x21	3 concurrent pipes: eDP / DisplayPort **3840x2160@60Hz**; HDMI: 4096x2304@24Hz
MODEM	Discrete	Discrete	Discrete
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel® WiGig, Intel® NFC	Intel® Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth® 4.0	Intel Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth 4.0
Input Output	7xI2C, 2xHSUART, 1xSDIO, HDAudio/I2S, 1xLPC, 1xSPI, PCIe2.0x4, I2C (NFC)	Up to 6 PCIe 2.0 ports across **12 lanes**; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI	Up to 6 PCIe 2.0 ports across 12 lanes; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI
USB	1xUSB3 OTG, 3xUSB3 , 1xUSB2, 2xSSIC, 2xHSIC	Up to **10 USB 2.0;** Up to 4 USB3 (2 muxed)	8 USB 2.0; up to 4 USB 3.0
Storage	**eMMC 4.51**, 2 SATA 6Gb/s	**Up to 4 SATA 6Gb/s**	**Up to 4 SATA 6Gb/s**



PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Note 2: SKU-dependent
Note 3: Windows* 10 only PCI Express* (PCIe)

Intel® Core™, Pentium®, and Celeron® Processors – Premium Tablet/PC

Specifications	Intel® Pentium®/Celeron® Processors (Braswell)	Intel® Core™ M Processors (Broadwell -Y)	5th Gen Intel® Core™ i3/5/7 Processors (Broadwell - U)
Process / Chipset	14nm **SOC**	14nm **Processor + PCH**	
CPU	**64-bit upto Quad Core² Airmont microarchitecture up to 2.4GHz**	**64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to 2.9 GHz**	64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to **3.4GHz**
Media (Encode/Decode)	HEVC (decode), H.264, VP8, VP9 (GPU-Accelerated)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (SW)	VP8 decode in HW, VP9 (GPU-Accelerated), and HEVC (GPU accelerated)
Memory	1x64/2x64 DDR3L/LPDDR3 1600, 1-16 GB	Dual channel; DDR3L 1600MHz; Up to LPDDR3 1600MHz; **16GB max**	Dual channel; DDR3L 1600MHz; up to LPDDR **1866** MHz; 16GB max
Display Resolution	3 displays: INTERNAL: up to 25x16 (eDP) EXTERNAL: up to 4k2k (HDMI) and/or DisplayPort* 2560x1600@60Hz	3 concurrent pipes: eDP / DisplayPort 25x16; HDMI 38x21	3 concurrent pipes: eDP / DisplayPort **3840x2160@60Hz**; HDMI: 4096x2304@24Hz
MODEM	Discrete	Discrete	Discrete
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel® WiGig, Intel® NFC	Intel® Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth® 4.0	Intel Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth 4.0
Input Output	7xI2C, 2xHSUART, 1xSDIO, HDAudio/I2S, 1xLPC, 1xSPI, PCIe2.0x4, I2C (NFC)	Up to 6 PCIe 2.0 ports across **12 lanes**; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI	Up to 6 PCIe 2.0 ports across 12 lanes; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI
USB	1xUSB3 OTG, 3xUSB3 , 1xUSB2, 2xSSIC, 2xHSIC	Up to **10 USB 2.0;** Up to 4 USB3 (2 muxed)	8 USB 2.0; up to 4 USB 3.0
Storage	**eMMC 4.51**, 2 SATA 6Gb/s	**Up to 4 SATA 6Gb/s**	**Up to 4 SATA 6Gb/s**

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

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CPU	**64-bit upto Quad Core² Airmont microarchitecture up to 2.4GHz**	**64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to 2.9 GHz**	64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to **3.4GHz**
Graphics (GPU)	Intel® HD graphics, up to 16 EUs, up to 700 MHz DirectX*12², OpenGL* 4.2	Intel® **HD graphics 5300** with DirectX11.1, OpenGL 4.2, OpenCL* 2.0, **SVM**	Intel® **HD graphics 5500 or 6000** Intel® **Iris™ graphics 6100** with DirectX11.1, OpenGL 4.2, OpenCL 2.0, SVM
Display Resolution	3 displays: INTERNAL: up to 25x16 (eDP) EXTERNAL: up to 4k2k (HDMI) and/or DisplayPort* 2560x1600@60Hz	25x16; HDMI 38x21	**3840x2160@60Hz**; HDMI: 4096x2304@24Hz
MODEM	Discrete	Discrete	Discrete
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel® WiGig, Intel® NFC	Intel® Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth® 4.0	Intel Wireless-AC 7265 2x2 802.11b/g/n/ac 80MHz + Bluetooth 4.0
Input Output	7xI2C, 2xHSUART, 1xSDIO, HDAudio/I2S, 1xLPC, 1xSPI, PCIe2.0x4, I2C (NFC)	Up to 6 PCIe 2.0 ports across **12 lanes**; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI	Up to 6 PCIe 2.0 ports across 12 lanes; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI
USB	1xUSB3 OTG, 3xUSB3 , 1xUSB2, 2xSSIC, 2xHSIC	Up to **10 USB 2.0;** Up to 4 USB3 (2 muxed)	8 USB 2.0; up to 4 USB 3.0
Storage	**eMMC 4.51**, 2 SATA 6Gb/s	**Up to 4 SATA 6Gb/s**	**Up to 4 SATA 6Gb/s**

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

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CPU	**64-bit upto Quad Core² Airmont microarchitecture up to 2.4GHz**	**64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to 2.9 GHz**	64-bit Dual Core Broadwell microarchitecture with Intel® Hyper-Threading Technology and Intel® Turbo Boost Technology up to **3.4GHz**
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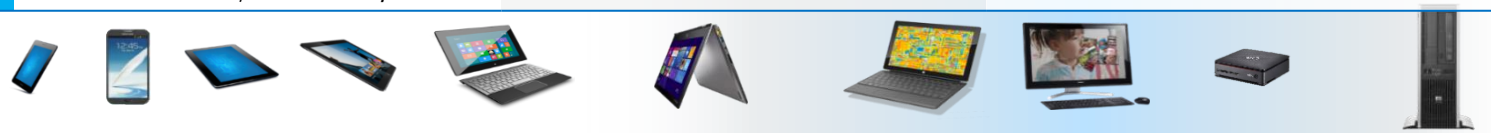
Connectivity	Intel® WLAN, WWAN (M.2 modules), Intel WiGig, Intel® NFC	802.11b/g/n/ac 80MHz + Bluetooth® 4.0	80MHz + Bluetooth 4.0
Input Output	7xI2C, 2xHSUART, 1xSDIO, HDAudio/I2S, 1xLPC, 1xSPI, PCIe2.0x4, I2C (NFC)	Up to 6 PCIe 2.0 ports across **12 lanes**; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI	Up to 6 PCIe 2.0 ports across 12 lanes; 2 I2C, 2 UART, 1 SDIO, 1 I2S, 2 SPI
USB	1xUSB3 OTG, 3xUSB3 , 1xUSB2, 2xSSIC, 2xHSIC	Up to **10 USB 2.0;** Up to 4 USB3 (2 muxed)	8 USB 2.0; up to 4 USB 3.0
Storage	**eMMC 4.51**, 2 SATA 6Gb/s	**Up to 4 SATA 6Gb/s**	**Up to 4 SATA 6Gb/s**



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Display Resolution	3 displays: INTERNAL: up to 25x16 (eDP) EXTERNAL: up to 4k2k (HDMI) DisplayPort* 2560x1600@60Hz	3 concurrent pipes: eDP / DisplayPort 25x16; HDMI 38x21	3 concurrent pipes: eDP / **DisplayPort 3840x2160@60Hz;** HDMI: 4096x2304@24Hz
Input Output	PCIe 2.0 x4	Up to **6 PCIe 2.0 ports across 12 lanes**	Up to 6 PCIe 2.0 ports across 12 lanes
USB	1xUSB 3.0 OTG, 3xUSB 3.0 , 1xUSB 2.0, **2xSSIC, 2xHSIC**	Up to **10 USB 2.0**; **Up to 4 USB 3.0 (2 muxed)**	**8 USB 2.0; up to 4 USB 3.0**
Storage	eMMC 4.51, 2 SATA 6Gb/s	Up to **4 SATA 6Gb/s**	Up to 4 SATA 6Gb/s

PHONE TABLET SMALL SCREEN 2 IN 1 LARGE SCREEN 2 IN 1 NOTEBOOK AIO MINI PC DESKTOP

Note 2: SKU-dependent
Note 3: Windows* 10 only PCI Express* (PCIe)

5th Generation Intel® Core™ Processor

Performance to Power Amazing Experiences

Great PC and Graphics Performance

with

Even Longer Battery Life

Intel® Core™ i7-5600U processor vs. Intel Core i7-4600U processor platform during local HD video playback-[2]

powering

intel REALSENSE TECHNOLOGY
3D Camera

NO PASSWORDS

DRAGON ASSISTANT

intel WiDi Wireless Display
Intel® Wireless Display

More Natural and Immersive Experiences

Transform Your Computing Experience with 5th Generation Intel Core Processors

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

Footnote and Configuration detail in Backup Appendix A

Agenda

- Segment Review and Intel® Processors and System-on-Chips (SoCs) Review
- 2015 New Product Lines Overview
  - Intel® Atom™ x3 SoC Family
  - Intel Atom x5/x7 SoC Family
  - Intel® Core™ M, Pentium®, and Celeron® Processors
- Across Product Family Comparison
  - Form Factor, power
  - CPU
  - Graphics
  - Media
  - Display
  - Memory
- Summary and Next Steps

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

Cross-family Comparison – Form Factors, SDP, TDP

Specifications	Intel® Atom® x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Form Factor	Phone Phablet Tablet	Phone Phablet Tablet	7” to 11.6” tablet Small Screen 2 in 1	7” to 11.6” tablet Small Screen 2 in 1	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Small Screen 2 in 1 Large Screen 2 in 1 Notebook AIO Mini PC Desktop	Premium tablets, Small Screen 2 in 1	Large Screen 2 in 1, Notebook, Portable AIO
SDP/ TDP	2w SDP	2w SDP	2w SDP	2w SDP	4.5w SDP 7.5/10w TDP	3/4w SDP 6w TDP	4.5w TDP	15w, 28w TDP
Integrated Modem	Yes	No	No	No	No	No	No	No

CPU Features

Specifications	Intel® Atom™ x3-C3445 (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail - M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Core Architecture	Airmont	Silvermont	Silvermont	Airmont	Silvermont	Airmont	5th Generation	5th Generation
OS	Android* Linux*	Android	Windows* Android	Windows Android	Windows Linux* Chrome	Windows Linux Chrome	Windows Linux Chrome	Windows Linux Chrome
64 bit support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruction Extensions	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	AVX2 SSE4.1/4.2	AVX2 SSE4.1/4.2
Intel VT-x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel VT-d	No	No	No	No	No	No	Yes	Yes
Intel® Hyper-Threading Technology	No	No	No	No	No	No	Yes	Yes
Intel® vPRO™ Technology	No	No	No	No	No	No	Yes	Yes

Intel® Virtualization Technology for IA-32, Intel® 64 and Intel® Architecture (Intel® VT-x)
Intel® Virtualization Technology for Directed I/O (Intel® VT-d)

Intel® Streaming SIMD Extensions 4.1/4.2 (Intel® SSE 4.1/4.2)
Intel® Advanced Vector Extensions 2 (Intel® AVX2)

CPU Features

Specifications	Intel® Atom™ x3-C3445 (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail - M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Core Architecture	Airmont	Silvermont	Silvermont	Airmont	Silvermont	Airmont	5th Generation	5th Generation
OS	Android* Linux*	Android	Windows* Android	Windows Android	Windows Linux* Chrome	Windows Linux Chrome	Windows Linux Chrome	Windows Linux Chrome
64 bit support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruction Extensions	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	AVX2 SSE4.1/4.2	AVX2 SSE4.1/4.2
Intel VT-x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel VT-d	No	No	No	No	No	No	Yes	Yes
Intel® Hyper-Threading Technology	No	No	No	No	No	No	Yes	Yes
Intel® vPRO™ Technology	No	No	No	No	No	No	Yes	Yes

Intel® Virtualization Technology for IA-32, Intel® 64 and Intel® Architecture (Intel® VT-x)
Intel® Virtualization Technology for Directed I/O (Intel® VT-d)

Intel® Streaming SIMD Extensions 4.1/4.2 (Intel® SSE 4.1/4.2)
Intel® Advanced Vector Extensions 2 (Intel® AVX2)

CPU Features

Specifications	Intel® Atom™ x3-C3445 (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail - M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Core Architecture	Airmont	Silvermont	Silvermont	Airmont	Silvermont	Airmont	5th Generation	5th Generation
OS	Android* Linux*	Android	Windows* Android	Windows Android	Windows Linux* Chrome	Windows Linux Chrome	Windows Linux Chrome	Windows Linux Chrome
64 bit support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruction Extensions	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	AVX2 SSE4.1/4.2	AVX2 SSE4.1/4.2
Intel VT-x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel VT-d	No	No	No	No	No	No	Yes	Yes
Intel® Hyper-Threading Technology	No	No	No	No	No	No	Yes	Yes
Intel® vPRO™ Technology	No	No	No	No	No	No	Yes	Yes

Intel® Virtualization Technology for IA-32, Intel® 64 and Intel® Architecture (Intel® VT-x)
Intel® Virtualization Technology for Directed I/O (Intel® VT-d)

Intel® Streaming SIMD Extensions 4.1/4.2 (Intel® SSE 4.1/4.2)
Intel® Advanced Vector Extensions 2 (Intel® AVX2)

CPU Features

Specifications	Intel® Atom™ x3-C3445 (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail - M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Core Architecture	Airmont	Silvermont	Silvermont	Airmont	Silvermont	Airmont	5th Generation	5th Generation
OS	Android* Linux*	Android	Windows* Android	Windows Android	Windows Linux* Chrome	Windows Linux Chrome	Windows Linux Chrome	Windows Linux Chrome
64 bit support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruction Extensions	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	AVX2 SSE4.1/4.2	AVX2 SSE4.1/4.2
Intel VT-x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel VT-d	No	No	No	No	No	No	Yes	Yes
Intel® Hyper-Threading Technology	No	No	No	No	No	No	Yes	Yes
Intel® vPRO™ Technology	No	No	No	No	No	No	Yes	Yes

Intel® Virtualization Technology for IA-32, Intel® 64 and Intel® Architecture (Intel® VT-x)
Intel® Virtualization Technology for Directed I/O (Intel® VT-d)

Intel® Streaming SIMD Extensions 4.1/4.2 (Intel® SSE 4.1/4.2)
Intel® Advanced Vector Extensions 2 (Intel® AVX2)

CPU Features

Specifications	Intel® Atom™ x3-C3445 (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail - M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Core Architecture	Airmont	Silvermont	Silvermont	Airmont	Silvermont	Airmont	5th Generation	5th Generation
OS	Android* Linux*	Android	Windows* Android	Windows Android	Windows Linux* Chrome	Windows Linux Chrome	Windows Linux Chrome	Windows Linux Chrome
64 bit support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruction Extensions	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	AVX2 SSE4.1/4.2	AVX2 SSE4.1/4.2
Intel VT-x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel VT-d	No	No	No	No	No	No	Yes	Yes
Intel® Hyper-Threading Technology	No	No	No	No	No	No	Yes	Yes
Intel® vPRO™ Technology	No	No	No	No	No	No	Yes	Yes

Intel® Virtualization Technology for IA-32, Intel® 64 and Intel® Architecture (Intel® VT-x)
Intel® Virtualization Technology for Directed I/O (Intel® VT-d)

Intel® Streaming SIMD Extensions 4.1/4.2 (Intel® SSE 4.1/4.2)
Intel® Advanced Vector Extensions 2 (Intel® AVX2)

CPU Features

Specifications	Intel® Atom™ x3-C3445 (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail - M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Core Architecture	Airmont	Silvermont	Silvermont	Airmont	Silvermont	Airmont	5th Generation	5th Generation
OS	Android* Linux*	Android	Windows* Android	Windows Android	Windows Linux* Chrome	Windows Linux Chrome	Windows Linux Chrome	Windows Linux Chrome
64 bit support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruction Extensions	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	AVX2 SSE4.1/4.2	AVX2 SSE4.1/4.2
Intel VT-x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel VT-d	No	No	No	No	No	No	Yes	Yes
Intel® Hyper-Threading Technology	No	No	No	No	No	No	Yes	Yes
Intel® vPRO™ Technology	No	No	No	No	No	No	Yes	Yes

Intel® Virtualization Technology for IA-32, Intel® 64 and Intel® Architecture (Intel® VT-x)
Intel® Virtualization Technology for Directed I/O (Intel® VT-d)

Intel® Streaming SIMD Extensions 4.1/4.2 (Intel® SSE 4.1/4.2)
Intel® Advanced Vector Extensions 2 (Intel® AVX2)

CPU Features

Specifications	Intel® Atom™ x3-C3445 (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail - M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Core Architecture	Airmont	Silvermont	Silvermont	Airmont	Silvermont	Airmont	5th Generation	5th Generation
OS	Android* Linux*	Android	Windows* Android	Windows Android	Windows Linux* Chrome	Windows Linux Chrome	Windows Linux Chrome	Windows Linux Chrome
64 bit support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruction Extensions	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	AVX2 SSE4.1/4.2	AVX2 SSE4.1/4.2
Intel VT-x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel VT-d	No	No	No	No	No	No	Yes	Yes
Intel® Hyper-Threading Technology	No	No	No	No	No	No	Yes	Yes
Intel® vPRO™ Technology	No	No	No	No	No	No	Yes	Yes

Intel® Virtualization Technology for IA-32, Intel® 64 and Intel® Architecture (Intel® VT-x)
Intel® Virtualization Technology for Directed I/O (Intel® VT-d)

Intel® Streaming SIMD Extensions 4.1/4.2 (Intel® SSE 4.1/4.2)
Intel® Advanced Vector Extensions 2 (Intel® AVX2)

CPU Features

Specifications	Intel® Atom™ x3-C3445 (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail - M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Core Architecture	Airmont	Silvermont	Silvermont	Airmont	Silvermont	Airmont	5th Generation	5th Generation
OS	Android* Linux*	Android	Windows* Android	Windows Android	Windows Linux* Chrome	Windows Linux Chrome	Windows Linux Chrome	Windows Linux Chrome
64 bit support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruction Extensions	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	AVX2 SSE4.1/4.2	AVX2 SSE4.1/4.2
Intel VT-x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel VT-d	No	No	No	No	No	No	Yes	Yes
Intel® Hyper-Threading Technology	No	No	No	No	No	No	Yes	Yes
Intel® vPRO™ Technology	No	No	No	No	No	No	Yes	Yes

Intel® Virtualization Technology for IA-32, Intel® 64 and Intel® Architecture (Intel® VT-x)
Intel® Virtualization Technology for Directed I/O (Intel® VT-d)

Intel® Streaming SIMD Extensions 4.1/4.2 (Intel® SSE 4.1/4.2)
Intel® Advanced Vector Extensions 2 (Intel® AVX2)

CPU Features

Specifications	Intel® Atom™ x3-C3445 (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail - M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Core Architecture	Airmont	Silvermont	Silvermont	Airmont	Silvermont	Airmont	5th Generation	5th Generation
OS	Android* Linux*	Android	Windows* Android	Windows Android	Windows Linux* Chrome	Windows Linux Chrome	Windows Linux Chrome	Windows Linux Chrome
64 bit support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruction Extensions	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	SSE4.1/4.2	AVX2 SSE4.1/4.2	AVX2 SSE4.1/4.2
Intel VT-x	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel VT-d	No	No	No	No	No	No	Yes	Yes
Intel® Hyper-Threading Technology	No	No	No	No	No	No	Yes	Yes
Intel® vPRO™ Technology	No	No	No	No	No	No	Yes	Yes

Intel® Virtualization Technology for IA-32, Intel® 64 and Intel® Architecture (Intel® VT-x)
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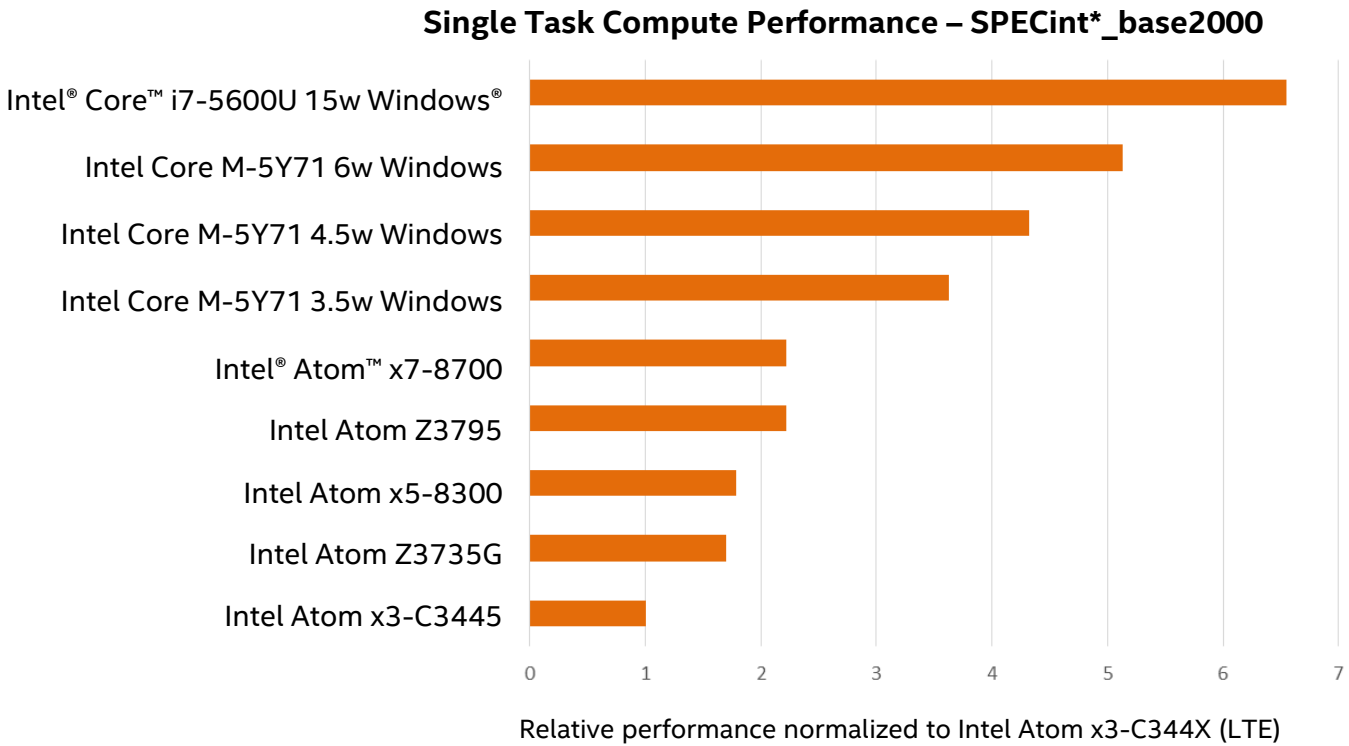
Intel® Streaming SIMD Extensions 4.1/4.2 (Intel® SSE 4.1/4.2)
Intel® Advanced Vector Extensions 2 (Intel® AVX2)

Cross Product Comparison
Single Task Compute Performance – SPECint*_base2000 Estimates



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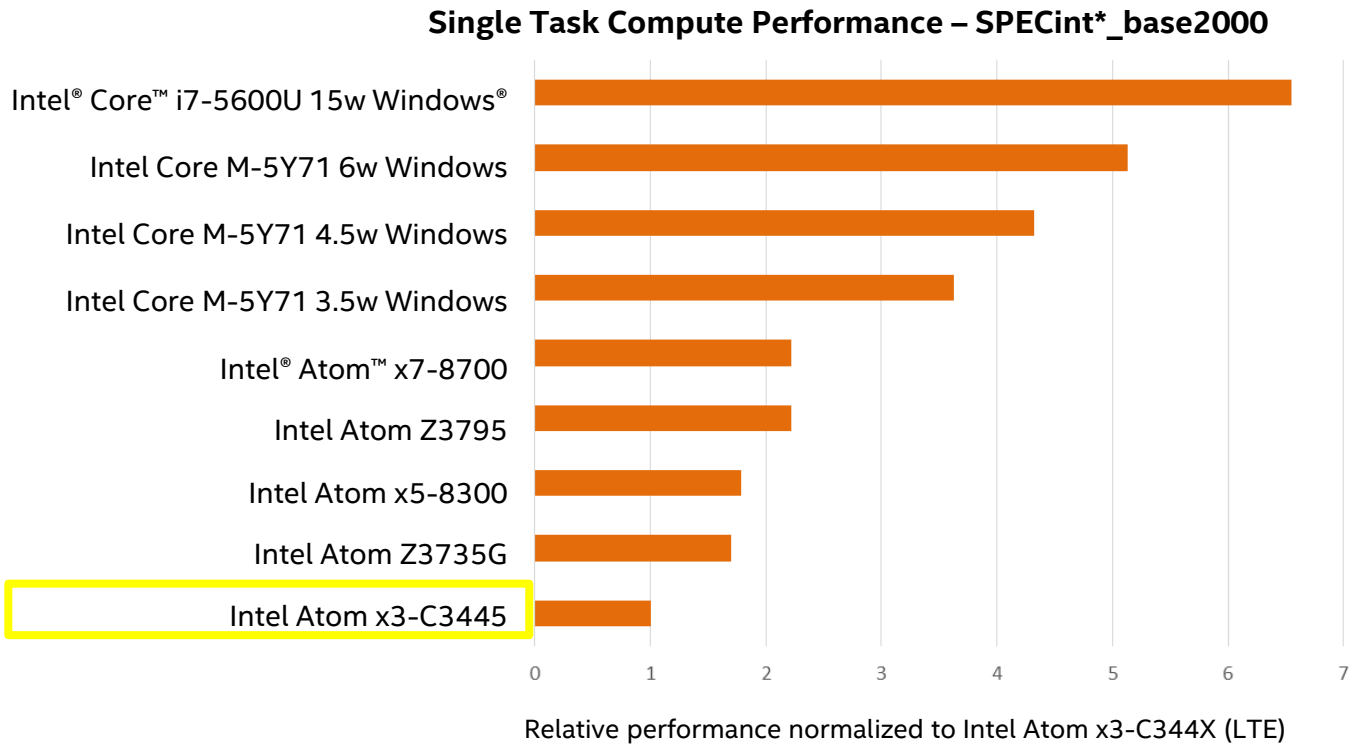

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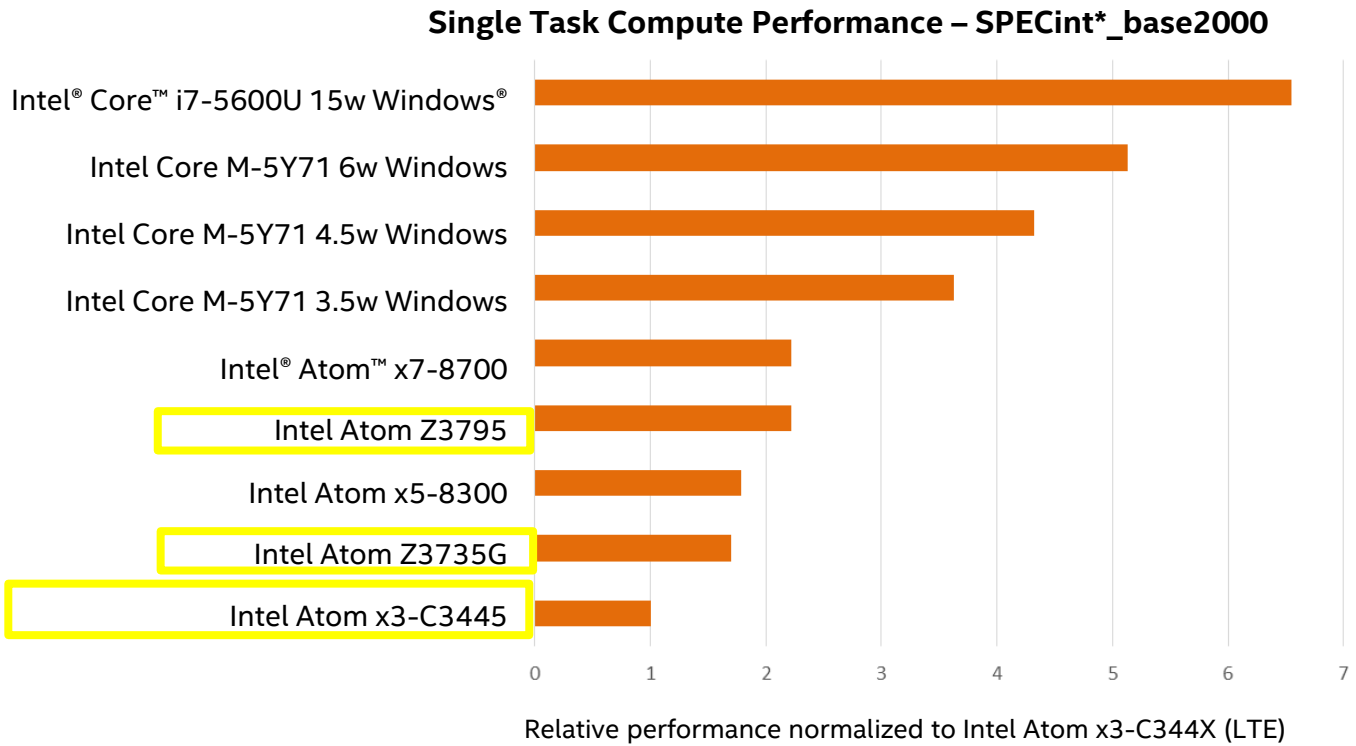

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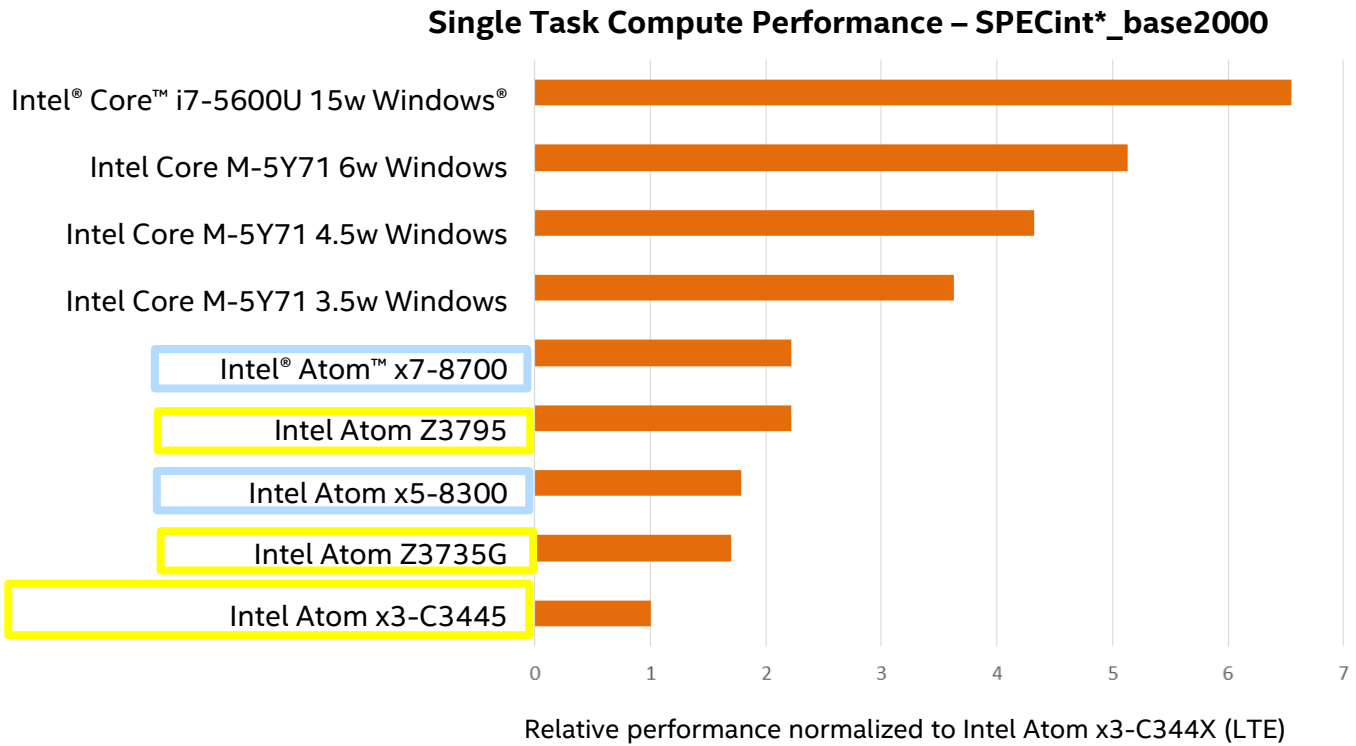

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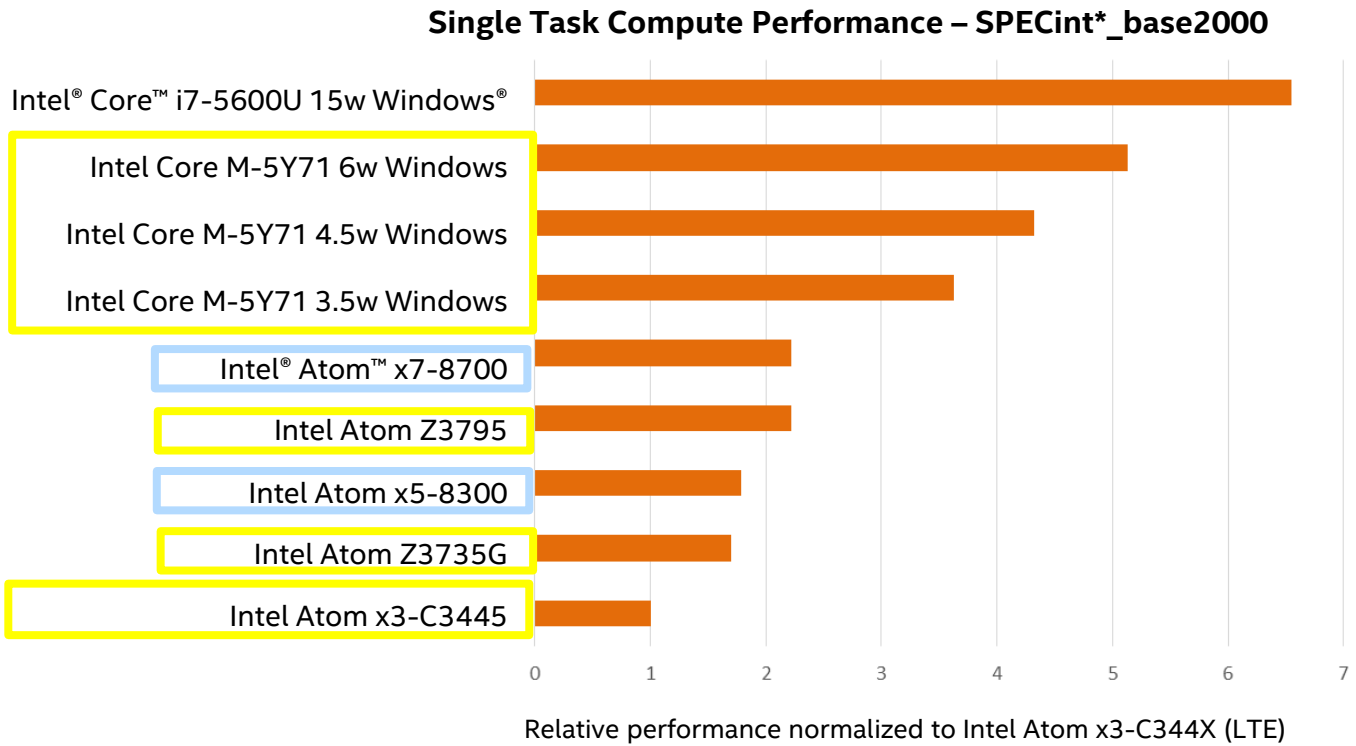

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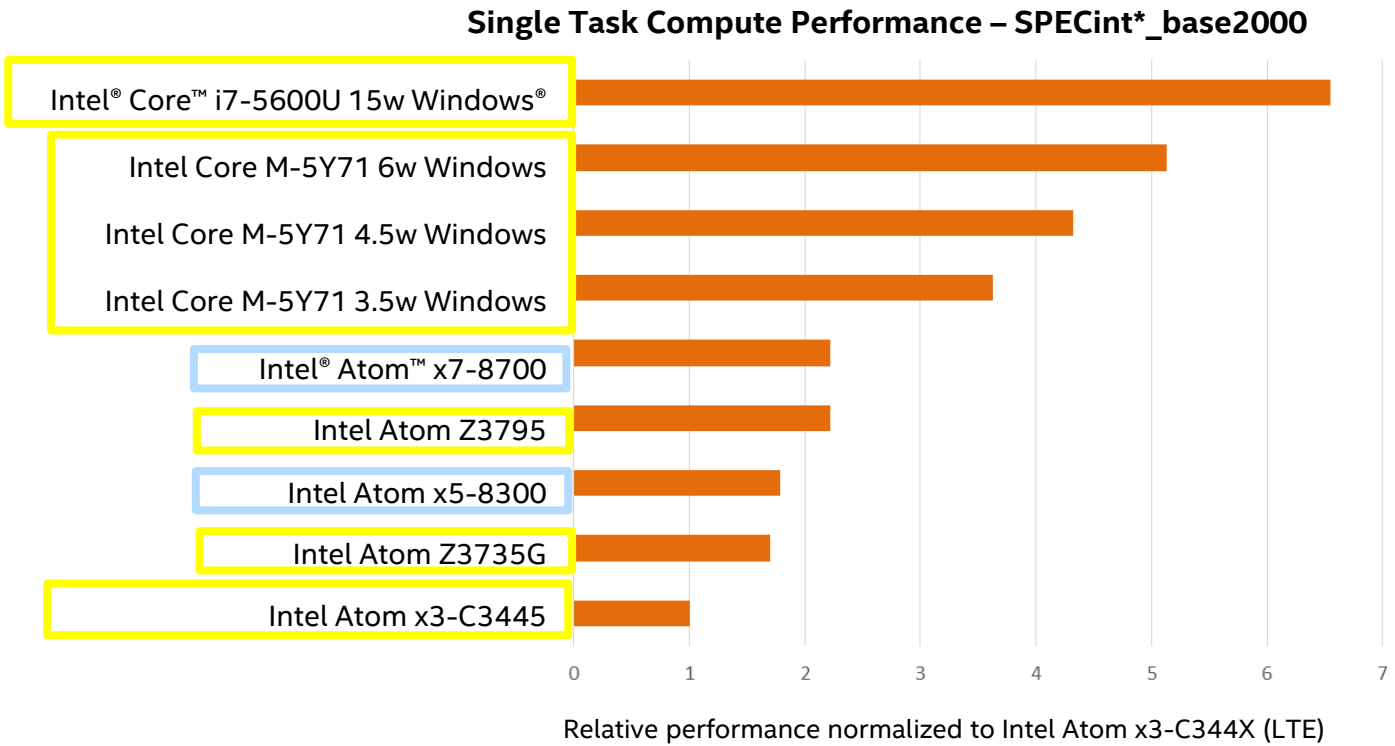

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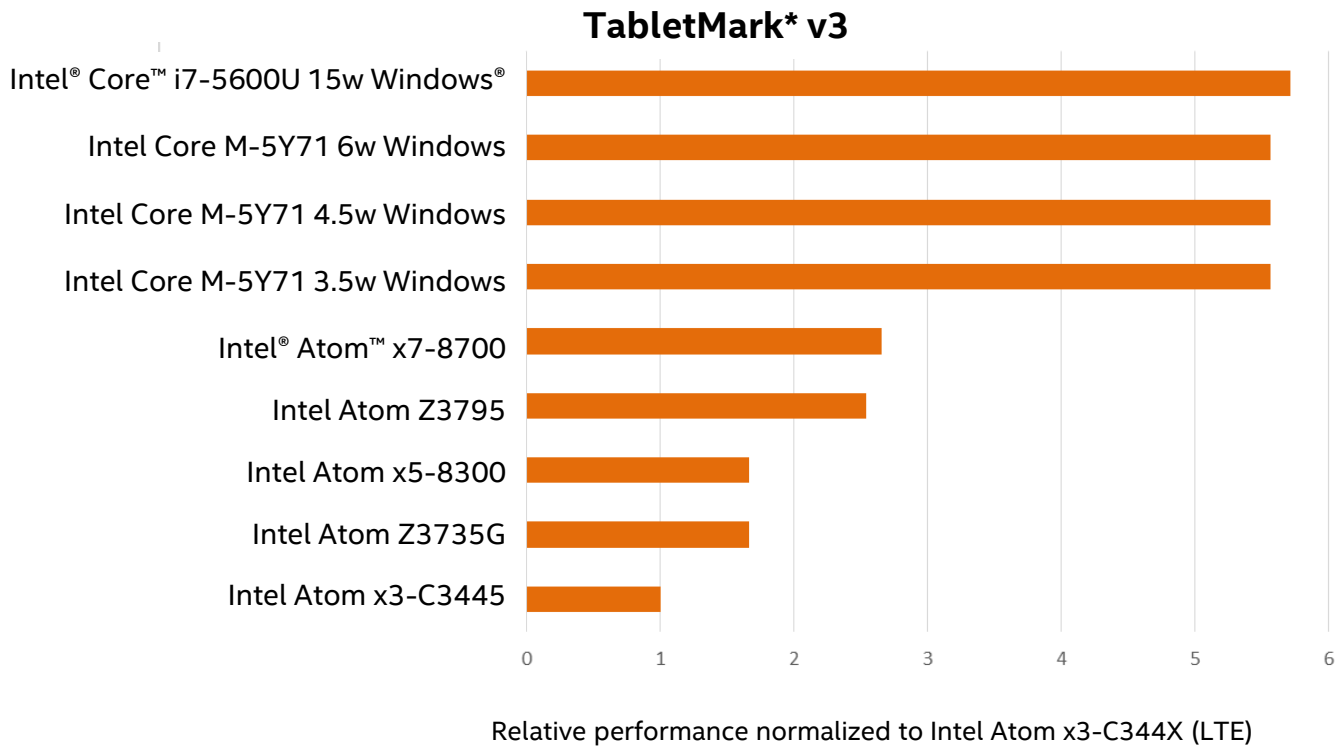
Cross Product Comparison –
Performance for Light Productivity Usages



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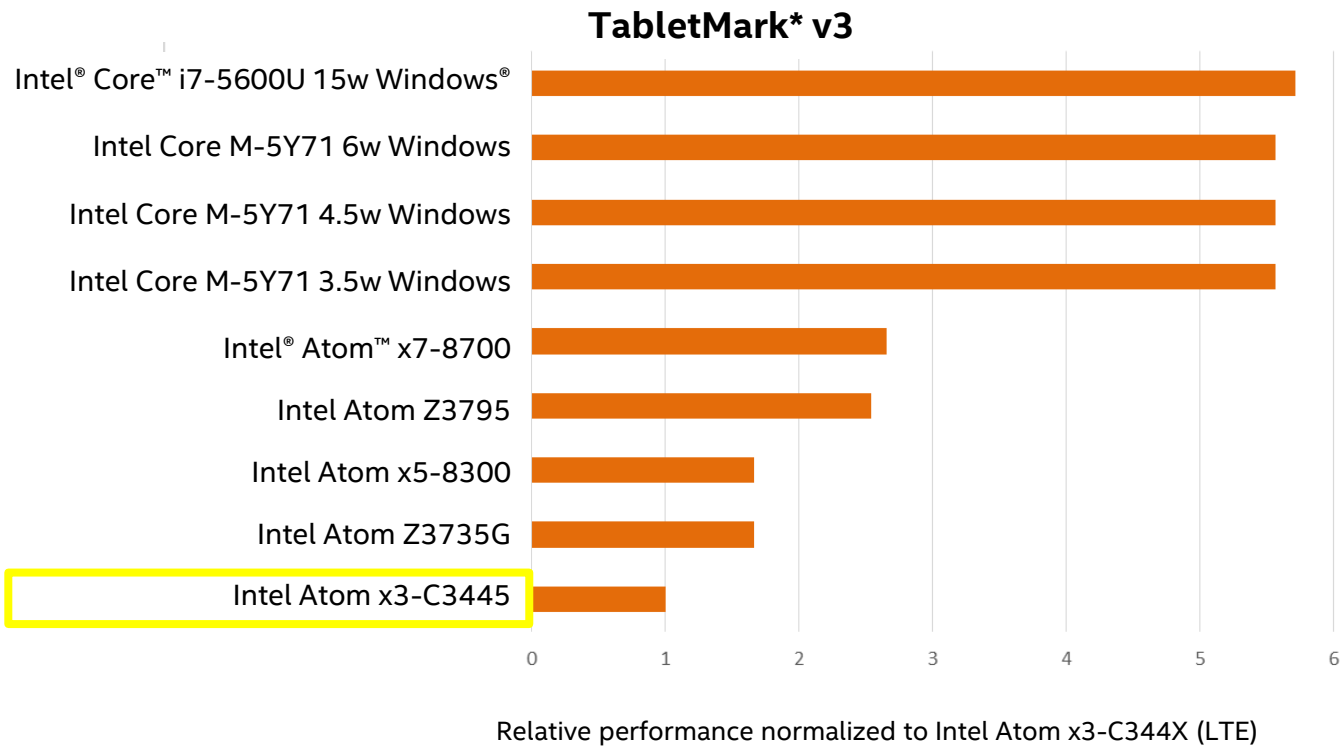

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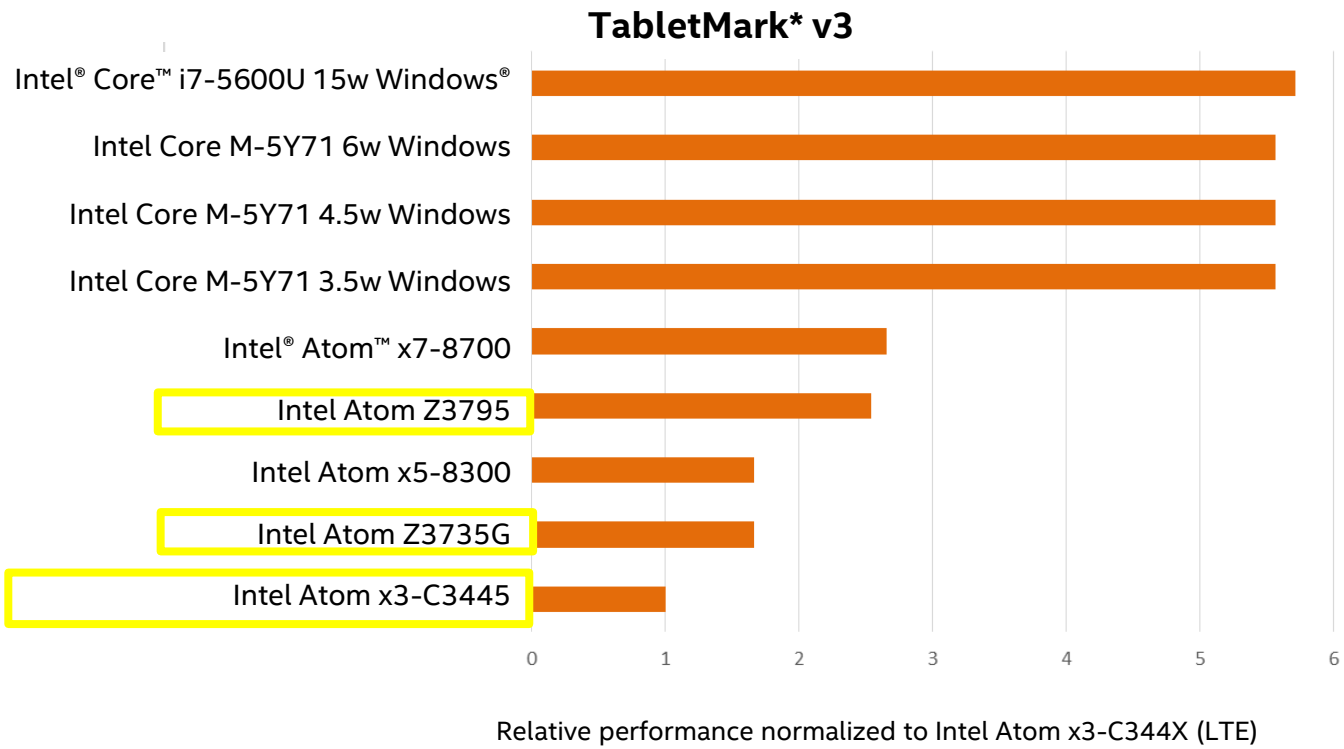

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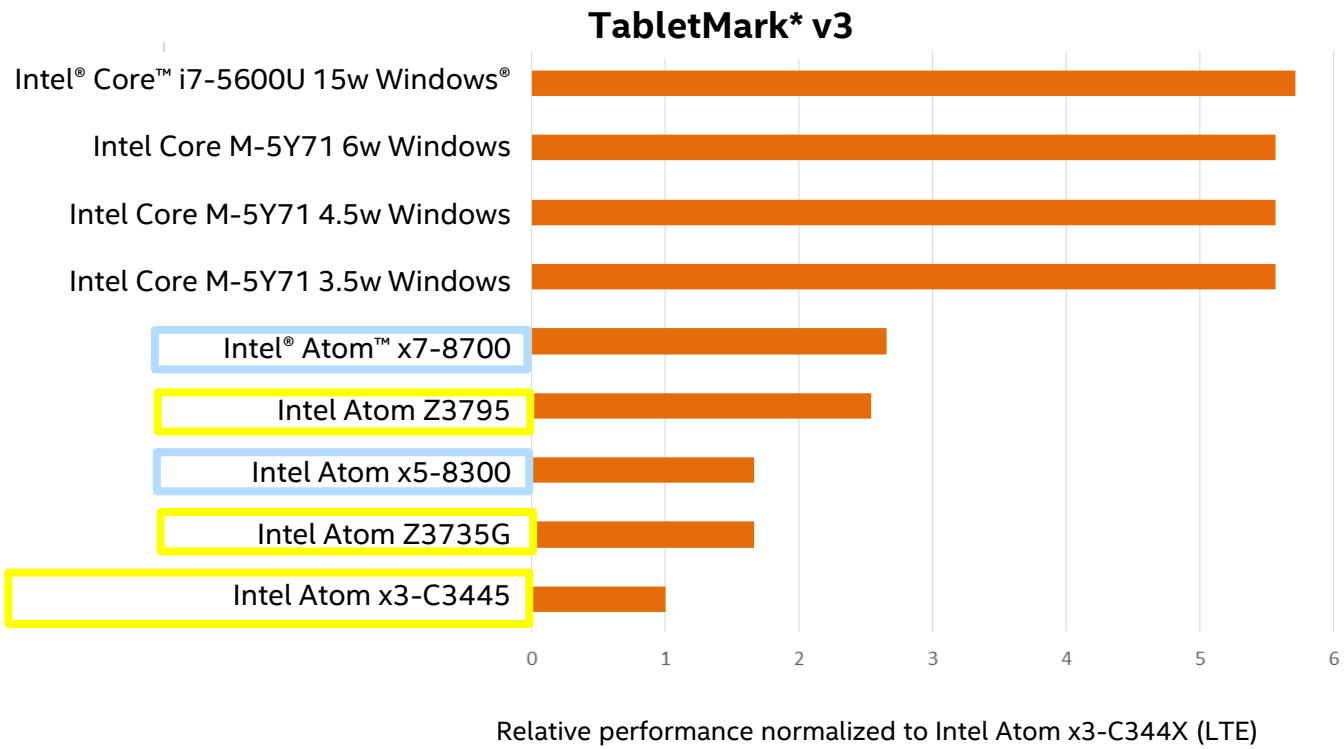

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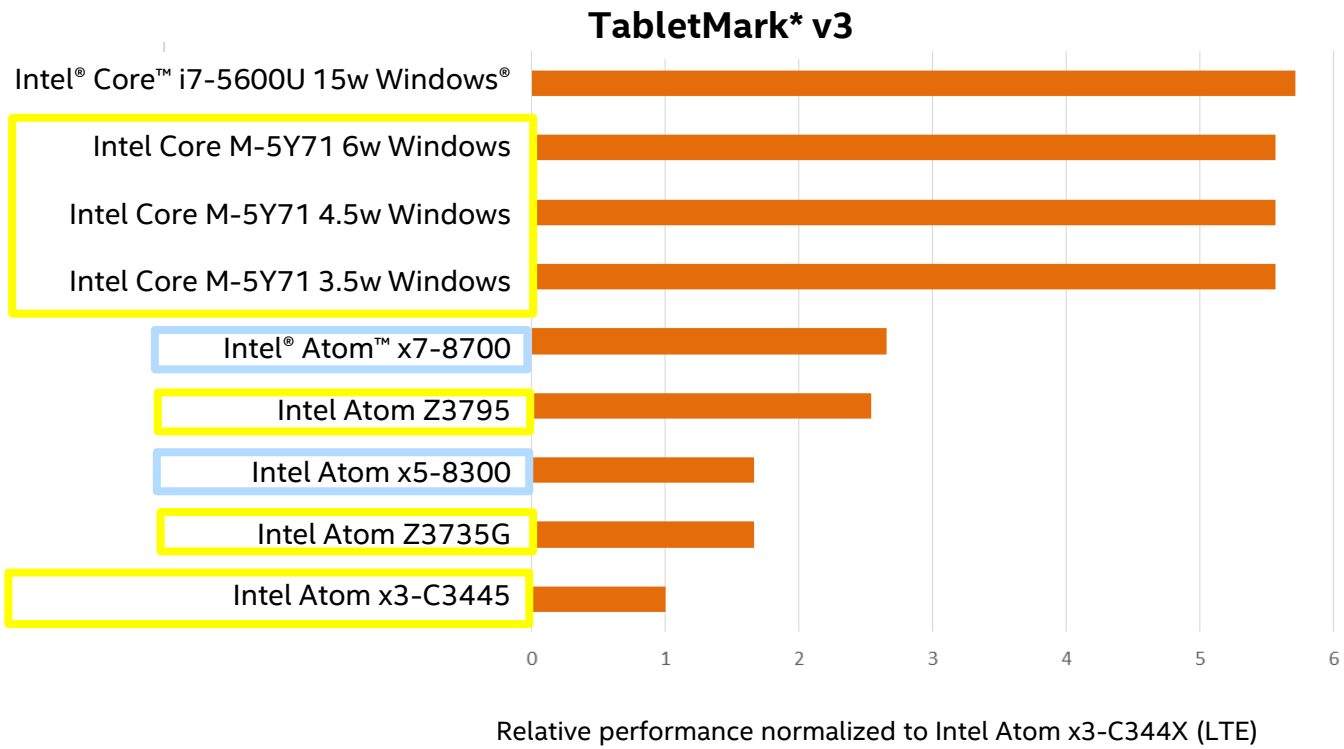

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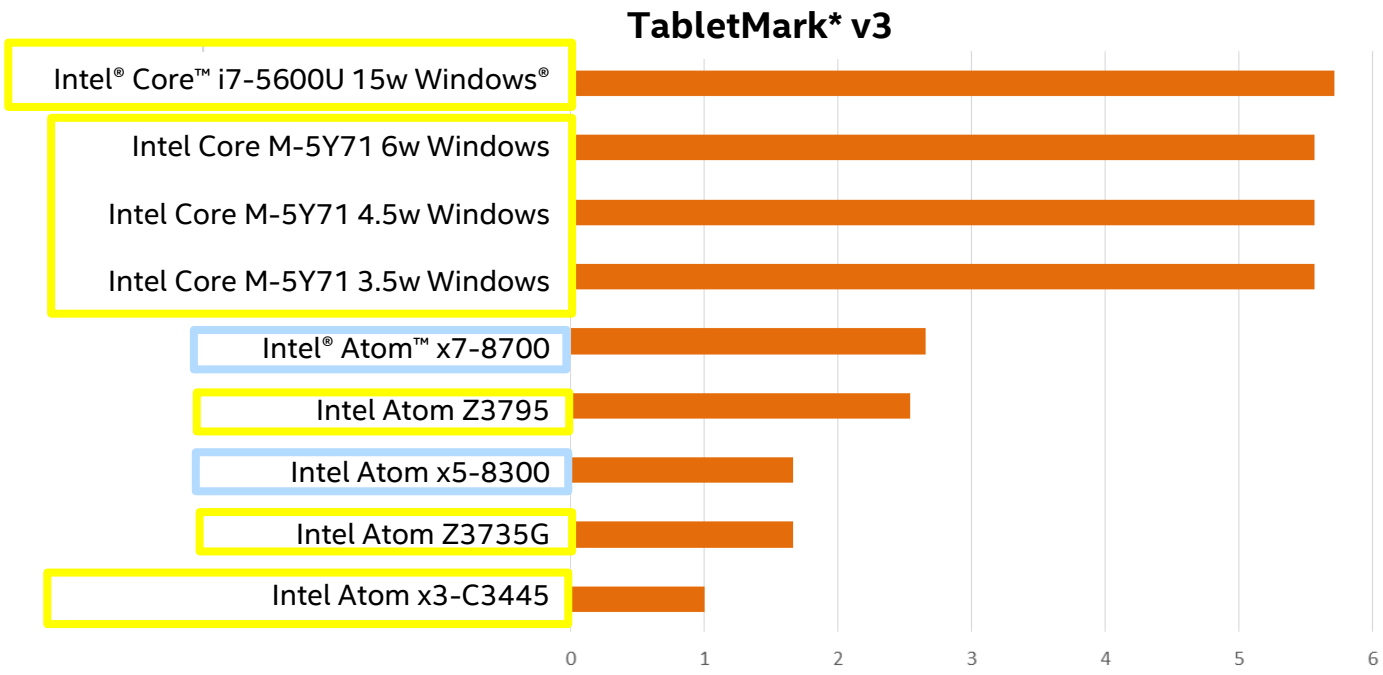

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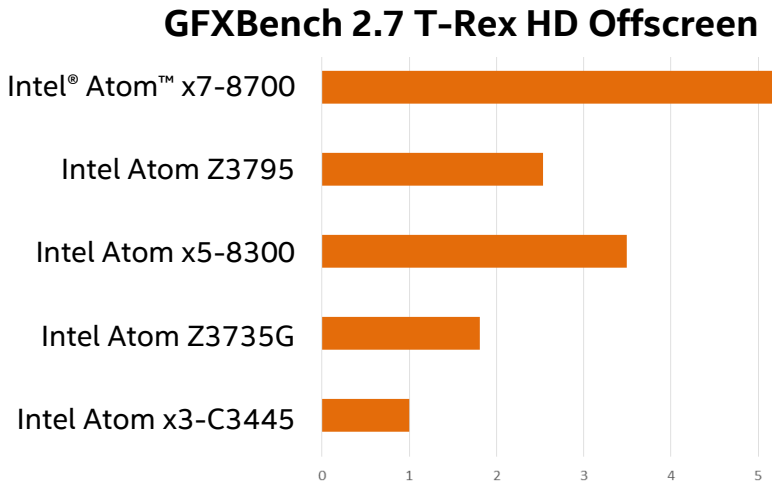
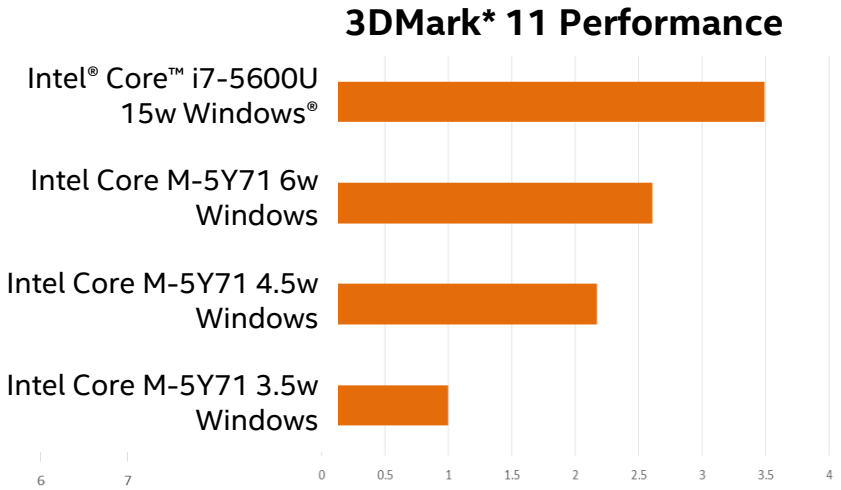
Cross Product Comparison –
3D Gaming Performance



Relative performance normalized to Intel Atom x3-C3445



Relative performance normalized to Intel Core M-5Y70

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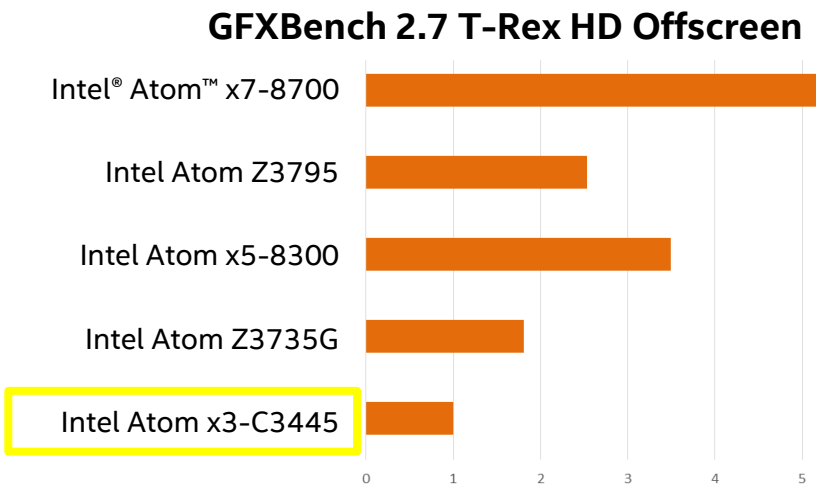

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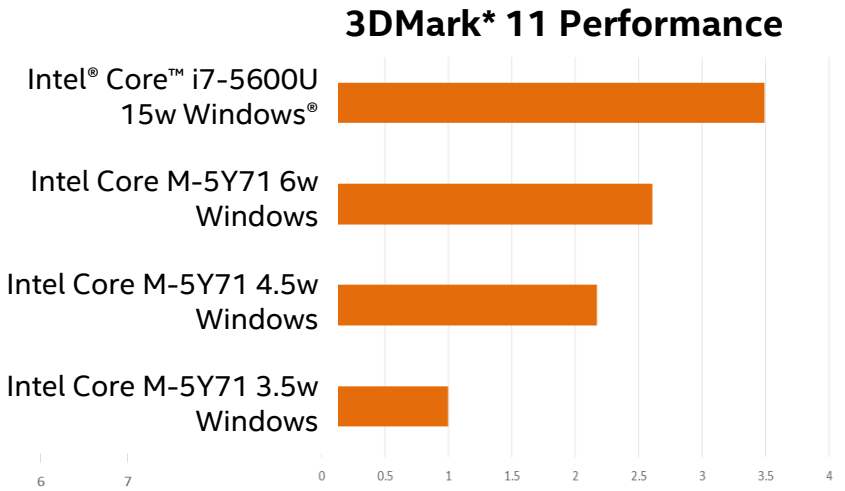

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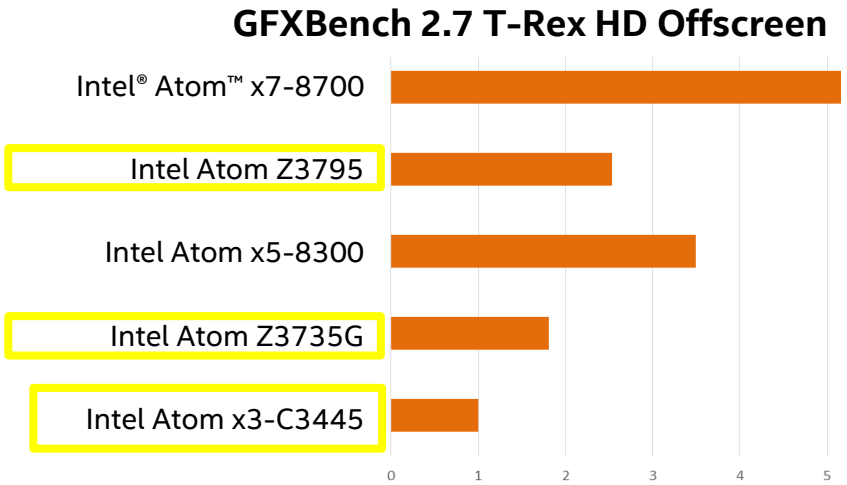
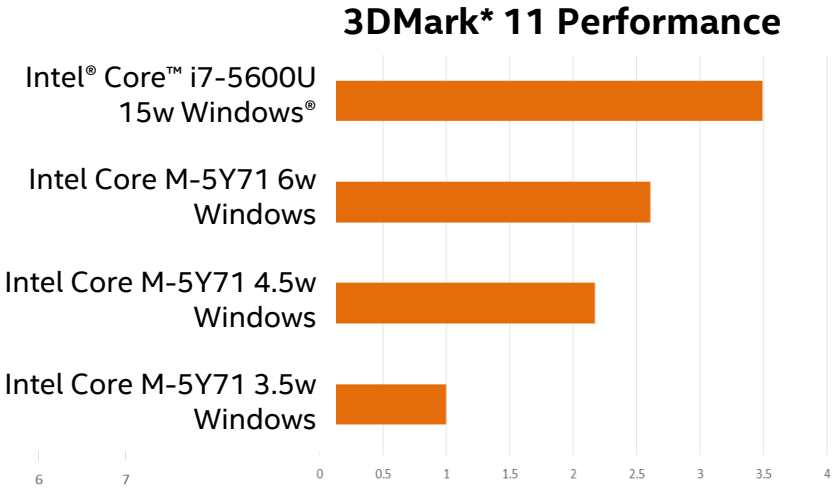


Relative performance normalized to Intel Atom x3-C3445



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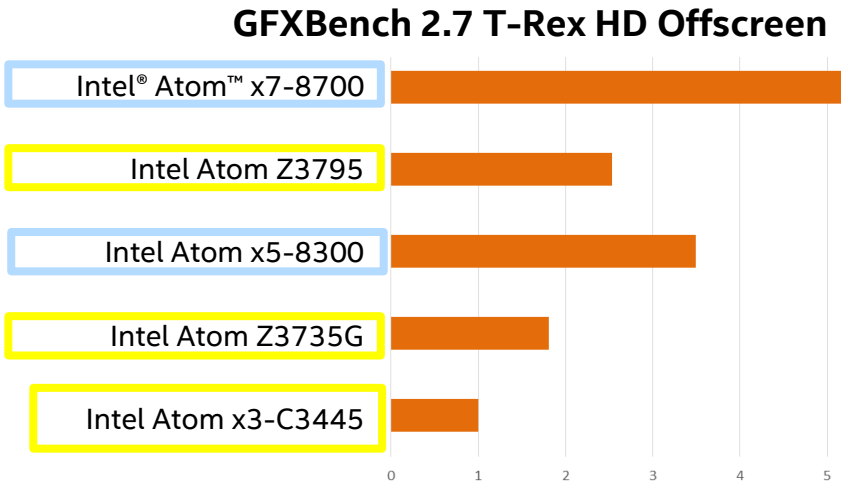

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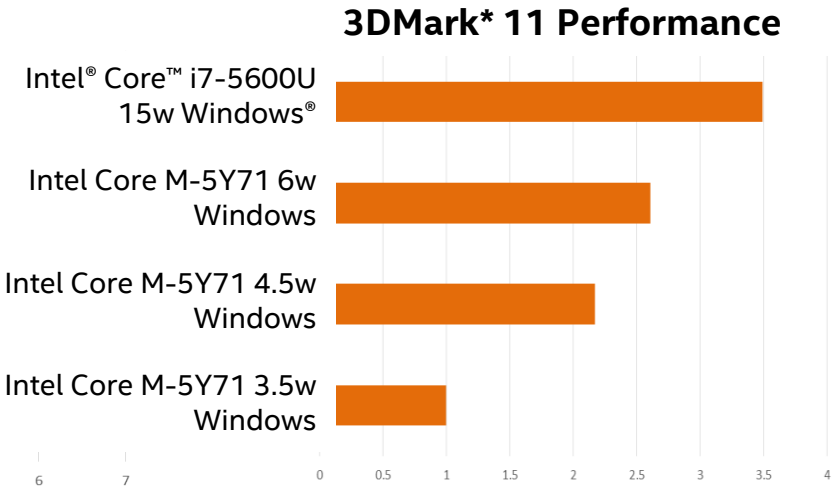

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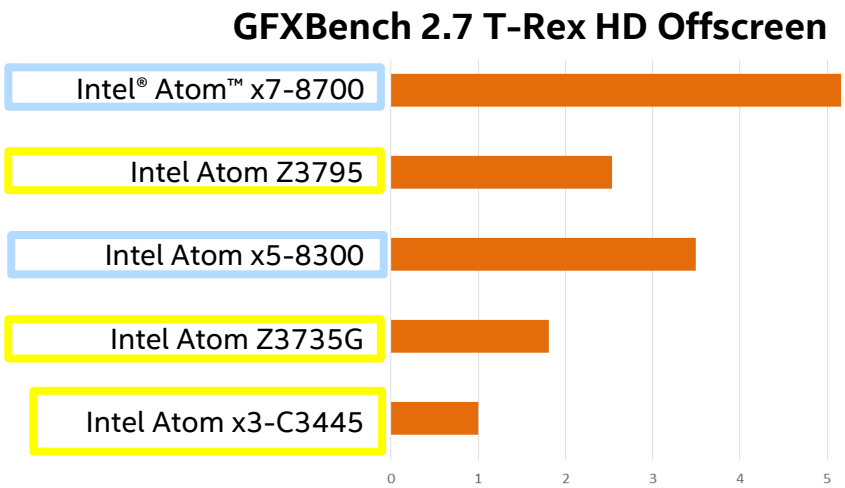

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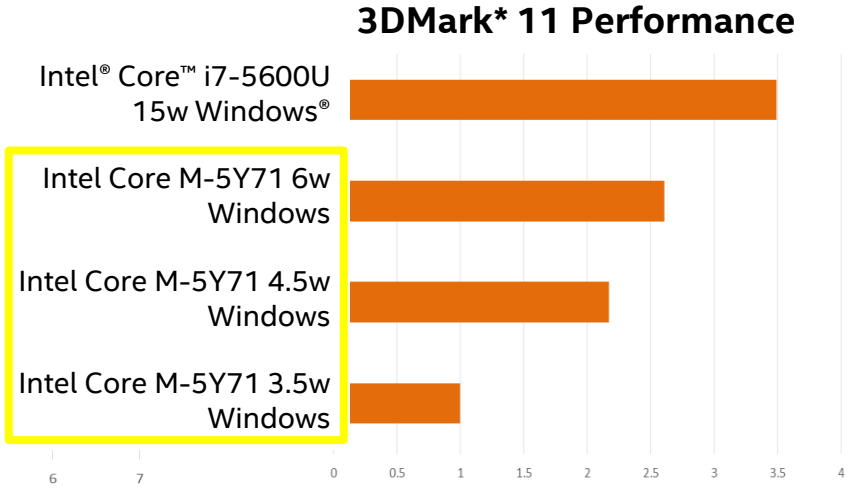

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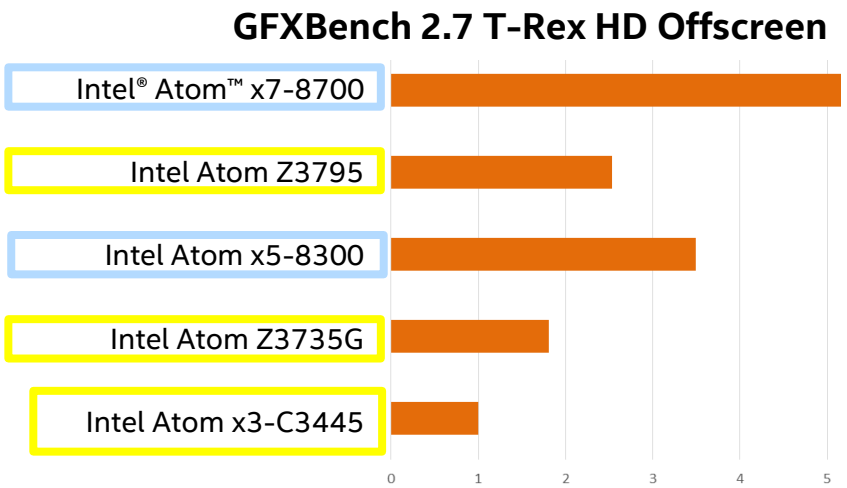

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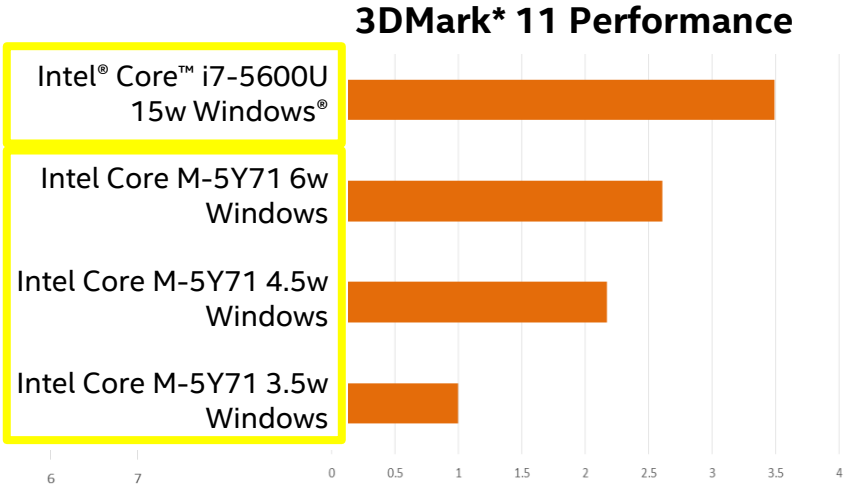

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3. Results have been estimated or simulated using internal Intel analysis or architecture simulation or modeling, and provided to you for informational purposes. Any differences in your system hardware, software or configuration may affect your actual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

Media – Decode and Encode

	Specifications	Intel® Atom™ x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700[1] (Bay Trail-T)	Intel Atom x5/x7[1] (Cherry Trail)	Intel® Pentium®/ Celeron®[1] (Bay Trail-M/D)	Intel Pentium/ Celeron[1] (Braswell)	Intel® Core™ M-5Y00[1] (Broadwell-Y)	Intel® Core™ i3/5/7[1] (Broadwell-U)
Decode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MPG2	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	Yes[5]	Yes[3]	No	Yes	No	Yes	No	Yes[3,4]
	VP9	Yes[5]	Yes[3]	No	Yes[2]	No	Yes[2]	Yes[3]	Yes[3]
Encode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MVC	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	No	No	No	Yes[3]	No	Yes[3]	Yes[3]	Yes[3]
	VP9	No	No	No	Yes[2]	No	Yes[2]	Yes[2]	Yes[2]

[1] GEN is assumed to operated at its RPn Turbo frequency
[2] software solution; [3] hybrid solution; [4] 10bit hybrid solution; [5] plan to be handled in software

Media – Decode and Encode

	Specifications	Intel® Atom™ x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700[1] (Bay Trail-T)	Intel Atom x5/x7[1] (Cherry Trail)	Intel® Pentium®/ Celeron®[1] (Bay Trail-M/D)	Intel Pentium/ Celeron[1] (Braswell)	Intel® Core™ M-5Y00[1] (Broadwell-Y)	Intel® Core™ i3/5/7[1] (Broadwell-U)
Decode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MPG2	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	1080p30	1080p60	**2x 4Kp30**	**4x** 4Kp30	8x 1080p30	**4x 4Kp30**	4x 4Kp30	**6x** 4Kp30
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	Yes[5]	1080p30, 5Mbps[3]	No	4Kp30	No	4Kp30	No	4Kp30[3,4]
	VP9	Yes[5]	Yes[3]	No	Yes[2]	No	Yes[2]	Yes[3]	Yes[3]
Encode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	1080p30	**1080p60**	1080p60	**4Kp30**	4x 1080p30	**4Kp30**	4Kp30	**4Kp60**
	MVC	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	No	No	No	Yes[3]	No	Yes[3]	Yes[3]	Yes[3]
	VP9	No	No	No	Yes[2]	No	Yes[2]	Yes[2]	Yes[2]

[1] GEN is assumed to operated at its RPn Turbo frequency
[2] software solution; [3] hybrid solution; [4] 10bit hybrid solution; [5] plan to be handled in software

Media – Decode and Encode

	Specifications	Intel® Atom™ x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700[1] (Bay Trail-T)	Intel Atom x5/x7[1] (Cherry Trail)	Intel® Pentium®/ Celeron®[1] (Bay Trail-M/D)	Intel Pentium/ Celeron[1] (Braswell)	Intel® Core™ M-5Y00[1] (Broadwell-Y)	Intel® Core™ i3/5/7[1] (Broadwell-U)
Decode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MPG2	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	1080p30	1080p60	**2x 4Kp30**	**4x** 4Kp30	8x 1080p30	**4x 4Kp30**	4x 4Kp30	**6x** 4Kp30
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	Yes[5]	1080p30, 5Mbps[3]	No	4Kp30	No	4Kp30	No	4Kp30[3,4]
	VP9	Yes[5]	Yes[3]	No	Yes[2]	No	Yes[2]	Yes[3]	Yes[3]
Encode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	1080p30	**1080p60**	1080p60	**4Kp30**	4x 1080p30	**4Kp30**	4Kp30	**4Kp60**
	MVC	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	No	No	No	Yes[3]	No	Yes[3]	Yes[3]	Yes[3]
	VP9	No	No	No	Yes[2]	No	Yes[2]	Yes[2]	Yes[2]

[1] GEN is assumed to operated at its RPn Turbo frequency
[2] software solution; [3] hybrid solution; [4] 10bit hybrid solution; [5] plan to be handled in software

Media – Decode and Encode

	Specifications	Intel® Atom™ x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700[1] (Bay Trail-T)	Intel Atom x5/x7[1] (Cherry Trail)	Intel® Pentium®/ Celeron®[1] (Bay Trail-M/D)	Intel Pentium/ Celeron[1] (Braswell)	Intel® Core™ M-5Y00[1] (Broadwell-Y)	Intel® Core™ i3/5/7[1] (Broadwell-U)
Decode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MPG2	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	1080p30	1080p60	**2x 4Kp30**	**4x** 4Kp30	8x 1080p30	**4x 4Kp30**	4x 4Kp30	**6x** 4Kp30
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	Yes[5]	1080p30, 5Mbps[3]	No	4Kp30	No	4Kp30	No	4Kp30[3,4]
	VP9	Yes[5]	Yes[3]	No	Yes[2]	No	Yes[2]	Yes[3]	Yes[3]
Encode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	1080p30	**1080p60**	1080p60	**4Kp30**	4x 1080p30	**4Kp30**	4Kp30	**4Kp60**
	MVC	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	No	No	No	Yes[3]	No	Yes[3]	Yes[3]	Yes[3]
	VP9	No	No	No	Yes[2]	No	Yes[2]	Yes[2]	Yes[2]

[1] GEN is assumed to operated at its RPn Turbo frequency
[2] software solution; [3] hybrid solution; [4] 10bit hybrid solution; [5] plan to be handled in software

Media – Decode and Encode

	Specifications	Intel® Atom™ x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700[1] (Bay Trail-T)	Intel Atom x5/x7[1] (Cherry Trail)	Intel® Pentium®/ Celeron®[1] (Bay Trail-M/D)	Intel Pentium/ Celeron[1] (Braswell)	Intel® Core™ M-5Y00[1] (Broadwell-Y)	Intel® Core™ i3/5/7[1] (Broadwell-U)
Decode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MPG2	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	1080p30	1080p60	**2x 4Kp30**	**4x** 4Kp30	8x 1080p30	**4x 4Kp30**	4x 4Kp30	**6x** 4Kp30
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	Yes[5]	1080p30, 5Mbps[3]	No	4Kp30	No	4Kp30	No	4Kp30[3,4]
	VP9	Yes[5]	Yes[3]	No	Yes[2]	No	Yes[2]	Yes[3]	Yes[3]
Encode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	1080p30	**1080p60**	1080p60	**4Kp30**	4x 1080p30	**4Kp30**	4Kp30	**4Kp60**
	MVC	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	No	No	No	Yes[3]	No	Yes[3]	Yes[3]	Yes[3]
	VP9	No	No	No	Yes[2]	No	Yes[2]	Yes[2]	Yes[2]

[1] GEN is assumed to operated at its RPn Turbo frequency
[2] software solution; [3] hybrid solution; [4] 10bit hybrid solution; [5] plan to be handled in software

Media – Decode and Encode

	Specifications	Intel® Atom™ x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700[1] (Bay Trail-T)	Intel Atom x5/x7[1] (Cherry Trail)	Intel® Pentium®/ Celeron®[1] (Bay Trail-M/D)	Intel Pentium/ Celeron[1] (Braswell)	Intel® Core™ M-5Y00[1] (Broadwell-Y)	Intel® Core™ i3/5/7[1] (Broadwell-U)
Decode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MPG2	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	1080p30	1080p60	**2x 4Kp30**	**4x** 4Kp30	8x 1080p30	**4x 4Kp30**	4x 4Kp30	**6x** 4Kp30
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	Yes[5]	1080p30, 5Mbps[3]	No	4Kp30	No	4Kp30	No	4Kp30[3,4]
	VP9	Yes[5]	Yes[3]	No	Yes[2]	No	Yes[2]	Yes[3]	Yes[3]
Encode	JPEG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	H.264	1080p30	**1080p60**	1080p60	**4Kp30**	4x 1080p30	**4Kp30**	4Kp30	**4Kp60**
	MVC	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	VP8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HEVC	No	No	No	Yes[3]	No	Yes[3]	Yes[3]	Yes[3]
	VP9	No	No	No	Yes[2]	No	Yes[2]	Yes[2]	Yes[2]

[1] GEN is assumed to operated at its RPn Turbo frequency
[2] software solution; [3] hybrid solution; [4] 10bit hybrid solution; [5] plan to be handled in software

Display Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
# of Displays	1	1	2	**3**	2	**3**	2[2]	3
MIPI	12x8p60	25x16p60	25x16p60	**25x16**p60	No	No	No	No
Embedded DisplayPort*	No	No	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 **4kx2kp60**	eDP1.3 **4kx2kp60**
HDMI*	No	HDMI1.4 19x10p60	HDMI1.4 19x10p60	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60
DisplayPort	No	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	**DP1.2** 4k2kp60	**DP1.2** 4k2kp60
Intel® Wireless Display	720p30 (Miracast*)	720p30	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	19x10p60 25x16p30 HDCP2.2	19x10p60 25x16p30 HDCP2.2

1: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on BDW. 2: one display at 38x21@60Hz, 2nd display capped to 25x16, no 3rd display, additional cooling required, see Platform Design Guide CDI# 514849 for more details. 3: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on Intel Atom x5/x7.
4: is not yet official SKU, requires slightly higher power consumption..

Display Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
# of Displays	1	1	2	**3**	2	**3**	2[2]	3
MIPI	12x8p60	25x16p60	25x16p60	**25x16**p60	No	No	No	No
Embedded DisplayPort*	No	No	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 **4kx2kp60**	eDP1.3 **4kx2kp60**
HDMI*	No	HDMI1.4 19x10p60	HDMI1.4 19x10p60	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60
DisplayPort	No	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	**DP1.2** 4k2kp60	**DP1.2** 4k2kp60
Intel® Wireless Display	720p30 (Miracast*)	720p30	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	19x10p60 25x16p30 HDCP2.2	19x10p60 25x16p30 HDCP2.2

1: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on BDW. 2: one display at 38x21@60Hz, 2nd display capped to 25x16, no 3rd display, additional cooling required, see Platform Design Guide CDI# 514849 for more details. 3: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on Intel Atom x5/x7.
4: is not yet official SKU, requires slightly higher power consumption..

Display Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
# of Displays	1	1	2	**3**	2	**3**	2[2]	3
MIPI	12x8p60	25x16p60	25x16p60	**25x16**p60	No	No	No	No
Embedded DisplayPort*	No	No	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 **4kx2kp60**	eDP1.3 **4kx2kp60**
HDMI*	No	HDMI1.4 19x10p60	HDMI1.4 19x10p60	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60
DisplayPort	No	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	**DP1.2** 4k2kp60	**DP1.2** 4k2kp60
Intel® Wireless Display	720p30 (Miracast*)	720p30	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	19x10p60 25x16p30 HDCP2.2	19x10p60 25x16p30 HDCP2.2

1: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on BDW. 2: one display at 38x21@60Hz, 2nd display capped to 25x16, no 3rd display, additional cooling required, see Platform Design Guide CDI# 514849 for more details. 3: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on Intel Atom x5/x7.
4: is not yet official SKU, requires slightly higher power consumption..

Display Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
# of Displays	1	1	2	**3**	2	**3**	2[2]	3
MIPI	12x8p60	25x16p60	25x16p60	**25x16**p60	No	No	No	No
Embedded DisplayPort*	No	No	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 **4kx2kp60**	eDP1.3 **4kx2kp60**
HDMI*	No	HDMI1.4 19x10p60	HDMI1.4 19x10p60	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60
DisplayPort	No	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	**DP1.2** 4k2kp60	**DP1.2** 4k2kp60
Intel® Wireless Display	720p30 (Miracast*)	720p30	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	19x10p60 25x16p30 HDCP2.2	19x10p60 25x16p30 HDCP2.2

1: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on BDW. 2: one display at 38x21@60Hz, 2nd display capped to 25x16, no 3rd display, additional cooling required, see Platform Design Guide CDI# 514849 for more details. 3: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on Intel Atom x5/x7.
4: is not yet official SKU, requires slightly higher power consumption..

Display Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
# of Displays	1	1	2	**3**	2	**3**	2[2]	3
MIPI	12x8p60	25x16p60	25x16p60	**25x16**p60	No	No	No	No
Embedded DisplayPort*	No	No	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 **4kx2kp60**	eDP1.3 **4kx2kp60**
HDMI*	No	HDMI1.4 19x10p60	HDMI1.4 19x10p60	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60
DisplayPort	No	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	**DP1.2** 4k2kp60	**DP1.2** 4k2kp60
Intel® Wireless Display	720p30 (Miracast*)	720p30	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	19x10p60 25x16p30 HDCP2.2	19x10p60 25x16p30 HDCP2.2

1: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on BDW. 2: one display at 38x21@60Hz, 2nd display capped to 25x16, no 3rd display, additional cooling required, see Platform Design Guide CDI# 514849 for more details. 3: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on Intel Atom x5/x7.
4: is not yet official SKU, requires slightly higher power consumption..

Display Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
# of Displays	1	1	2	**3**	2	**3**	2[2]	3
MIPI	12x8p60	25x16p60	25x16p60	**25x16**p60	No	No	No	No
Embedded DisplayPort*	No	No	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 25x16p60	eDP1.3 25x16p60 4kx2kp60[4]	eDP1.3 **4kx2kp60**	eDP1.3 **4kx2kp60**
HDMI*	No	HDMI1.4 19x10p60	HDMI1.4 19x10p60	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30	HDMI1.4 **4kx2kp30** HDMI2.0[3] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60	HDMI1.4 4kx2kp30, HDMI2.0[1] 4k2kp60
DisplayPort	No	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	DP1.1 25x16p60	**DP1.2** 4k2kp60	**DP1.2** 4k2kp60
Intel® Wireless Display	720p30 (Miracast*)	720p30	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	720p30 HDCP2.2	**19x10p60 25x16p30** HDCP2.2	19x10p60 25x16p30 HDCP2.2	19x10p60 25x16p30 HDCP2.2

1: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on BDW. 2: one display at 38x21@60Hz, 2nd display capped to 25x16, no 3rd display, additional cooling required, see Platform Design Guide CDI# 514849 for more details. 3: HDMI 2.0 Support via DP to HDMI 2.0 Converter is not yet official on Intel Atom x5/x7.
4: is not yet official SKU, requires slightly higher power consumption..

Memory Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Memory Type	LPDDR2/3	LPDDR3	LPDDR3/ DDR3L	LPDDR3/ DDR3L	DDR3L	DDR3L/ LPDDR3[1]	LPDDR3/ DDR3L	LPDDR3/ DDR3L
Connector/ Memory Down	Memory Down	CoPOP	Memory Down	Memory Down	Memory Down, SoDIMM	Memory Down, SoDIMM	Memory Down	Memory Down, SoDIMM
SM Voltage	1.2v	1.2v	1.2v/ 1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v
Speed (MT/s)	1066	1600	1066/ 1333	1066[2]&1600	1066/1333	1066[2]& 1333/1600	1333/1600	1333/1600
Channels	1x32	2x32	1x64 2x64	1x32 1x64 2x32[1] 2x64	1x64 2x64	1x64 2x32[1] 2x64	1x64 2x64	1x64 2x64
Capacity (GB)	1,2	1,2,4	1,2,4,8	1, 1.5[3], 2, 3[3], 4, 8, 16[3]	2,4,8	1, 2,4,8,16	2,4,8,16	2,4,8,16

1: support via white paper. 2: Dynamically configured low frequency gear if DDR power saving feature is enabled by the platform configuration. 3: memory parts not Intel Platform Memory Organization's official suggested DRAM part list, may not be validated on Intel reference validation platform boards.

Memory Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Memory Type	LPDDR2/3	LPDDR3	LPDDR3/ DDR3L	LPDDR3/ DDR3L	DDR3L	DDR3L/ LPDDR3[1]	LPDDR3/ DDR3L	LPDDR3/ DDR3L
Connector/ Memory Down	Memory Down	CoPOP	Memory Down	Memory Down	Memory Down, SoDIMM	Memory Down, SoDIMM	Memory Down	Memory Down, SoDIMM
SM Voltage	1.2v	1.2v	1.2v/ 1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v
Speed (MT/s)	1066	1600	1066/ 1333	1066[2]&1600	1066/1333	1066[2]& 1333/1600	1333/1600	1333/1600
Channels	1x32	2x32	1x64 2x64	1x32 1x64 2x32[1] 2x64	1x64 2x64	1x64 2x32[1] 2x64	1x64 2x64	1x64 2x64
Capacity (GB)	1,2	1,2,4	1,2,4,8	1, 1.5[3], 2, 3[3], 4, 8, 16[3]	2,4,8	1, 2,4,8,16	2,4,8,16	2,4,8,16

1: support via white paper. 2: Dynamically configured low frequency gear if DDR power saving feature is enabled by the platform configuration. 3: memory parts not Intel Platform Memory Organization's official suggested DRAM part list, may not be validated on Intel reference validation platform boards.

Memory Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Memory Type	LPDDR2/3	LPDDR3	LPDDR3/ DDR3L	LPDDR3/ DDR3L	DDR3L	DDR3L/ LPDDR3[1]	LPDDR3/ DDR3L	LPDDR3/ DDR3L
Connector/ Memory Down	Memory Down	CoPOP	Memory Down	Memory Down	Memory Down, SoDIMM	Memory Down, SoDIMM	Memory Down	Memory Down, SoDIMM
SM Voltage	1.2v	1.2v	1.2v/ 1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v
Speed (MT/s)	1066	1600	1066/ 1333	1066[2]&1600	1066/1333	1066[2]& 1333/1600	1333/1600	1333/1600
Channels	1x32	2x32	1x64 2x64	1x32 1x64 2x32[1] 2x64	1x64 2x64	1x64 2x32[1] 2x64	1x64 2x64	1x64 2x64
Capacity (GB)	1,2	1,2,4	1,2,4,8	1, 1.5[3], 2, 3[3], 4, 8, 16[3]	2,4,8	1, 2,4,8,16	2,4,8,16	2,4,8,16

1: support via white paper. 2: Dynamically configured low frequency gear if DDR power saving feature is enabled by the platform configuration. 3: memory parts not Intel Platform Memory Organization's official suggested DRAM part list, may not be validated on Intel reference validation platform boards.

Memory Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Memory Type	LPDDR2/3	LPDDR3	LPDDR3/ DDR3L	LPDDR3/ DDR3L	DDR3L	DDR3L/ LPDDR3[1]	LPDDR3/ DDR3L	LPDDR3/ DDR3L
Connector/ Memory Down	Memory Down	CoPOP	Memory Down	Memory Down	Memory Down, SoDIMM	Memory Down, SoDIMM	Memory Down	Memory Down, SoDIMM
SM Voltage	1.2v	1.2v	1.2v/ 1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v
Speed (MT/s)	1066	1600	1066/ 1333	1066[2]&1600	1066/1333	1066[2]& 1333/1600	1333/1600	1333/1600
Channels	1x32	2x32	1x64 2x64	1x32 1x64 2x32[1] 2x64	1x64 2x64	1x64 2x32[1] 2x64	1x64 2x64	1x64 2x64
Capacity (GB)	1,2	1,2,4	1,2,4,8	1, 1.5[3], 2, 3[3], 4, 8, 16[3]	2,4,8	1, 2,4,8,16	2,4,8,16	2,4,8,16

1: support via white paper. 2: Dynamically configured low frequency gear if DDR power saving feature is enabled by the platform configuration. 3: memory parts not Intel Platform Memory Organization's official suggested DRAM part list, may not be validated on Intel reference validation platform boards.

Memory Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Memory Type	LPDDR2/3	LPDDR3	LPDDR3/ DDR3L	LPDDR3/ DDR3L	DDR3L	DDR3L/ LPDDR3[1]	LPDDR3/ DDR3L	LPDDR3/ DDR3L
Connector/ Memory Down	Memory Down	CoPOP	Memory Down	Memory Down	Memory Down, SoDIMM	Memory Down, SoDIMM	Memory Down	Memory Down, SoDIMM
SM Voltage	1.2v	1.2v	1.2v/ 1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v
Speed (MT/s)	1066	1600	1066/ 1333	1066[2]&1600	1066/1333	1066[2]& 1333/1600	1333/1600	1333/1600
Channels	1x32	2x32	1x64 2x64	1x32 1x64 2x32[1] 2x64	1x64 2x64	1x64 2x32[1] 2x64	1x64 2x64	1x64 2x64
Capacity (GB)	1,2	1,2,4	1,2,4,8	1, 1.5[3], 2, 3[3], 4, 8, 16[3]	2,4,8	1, 2,4,8,16	2,4,8,16	2,4,8,16

1: support via white paper. 2: Dynamically configured low frequency gear if DDR power saving feature is enabled by the platform configuration. 3: memory parts not Intel Platform Memory Organization's official suggested DRAM part list, may not be validated on Intel reference validation platform boards.

Memory Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Memory Type	LPDDR2/3	LPDDR3	LPDDR3/ DDR3L	LPDDR3/ DDR3L	DDR3L	DDR3L/ LPDDR3[1]	LPDDR3/ DDR3L	LPDDR3/ DDR3L
Connector/ Memory Down	Memory Down	CoPOP	Memory Down	Memory Down	Memory Down, SoDIMM	Memory Down, SoDIMM	Memory Down	Memory Down, SoDIMM
SM Voltage	1.2v	1.2v	1.2v/ 1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v
Speed (MT/s)	1066	1600	1066/ 1333	1066[2]&1600	1066/1333	1066[2]& 1333/1600	1333/1600	1333/1600
Channels	1x32	2x32	1x64 2x64	1x32 1x64 2x32[1] 2x64	1x64 2x64	1x64 2x32[1] 2x64	1x64 2x64	1x64 2x64
Capacity (GB)	1,2	1,2,4	1,2,4,8	1, 1.5[3], 2, 3[3], 4, 8, 16[3]	2,4,8	1, 2,4,8,16	2,4,8,16	2,4,8,16

1: support via white paper. 2: Dynamically configured low frequency gear if DDR power saving feature is enabled by the platform configuration. 3: memory parts not Intel Platform Memory Organization's official suggested DRAM part list, may not be validated on Intel reference validation platform boards.

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Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Memory Type	LPDDR2/3	LPDDR3	LPDDR3/ DDR3L	LPDDR3/ DDR3L	DDR3L	DDR3L/ LPDDR3[1]	LPDDR3/ DDR3L	LPDDR3/ DDR3L
Connector/ Memory Down	Memory Down	CoPOP	Memory Down	Memory Down	Memory Down, SoDIMM	Memory Down, SoDIMM	Memory Down	Memory Down, SoDIMM
SM Voltage	1.2v	1.2v	1.2v/ 1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v
Speed (MT/s)	1066	1600	1066/ 1333	1066[2]&1600	1066/1333	1066[2]& 1333/1600	1333/1600	1333/1600
Channels	1x32	2x32	1x64 2x64	1x32 1x64 2x32[1] 2x64	1x64 2x64	1x64 2x32[1] 2x64	1x64 2x64	1x64 2x64
Capacity (GB)	1,2	1,2,4	1,2,4,8	1, 1.5[3], 2, 3[3], 4, 8, 16[3]	2,4,8	1, 2,4,8,16	2,4,8,16	2,4,8,16

1: support via white paper. 2: Dynamically configured low frequency gear if DDR power saving feature is enabled by the platform configuration. 3: memory parts not Intel Platform Memory Organization's official suggested DRAM part list, may not be validated on Intel reference validation platform boards.

Memory Scalability

Specifications	Intel Atom x3-C344X (SoFIA-LTE)	Intel Atom Z3500 (Moorefield)	Intel Atom Z3700 (Bay Trail-T)	Intel Atom x5/x7 (Cherry Trail)	Intel® Pentium®/ Celeron® (Bay Trail-M/D)	Intel Pentium/ Celeron (Braswell)	Intel® Core™ M-5Y00 (Broadwell-Y)	Intel® Core™ i3/5/7 (Broadwell-U)
Memory Type	LPDDR2/3	LPDDR3	LPDDR3/ DDR3L	LPDDR3/ DDR3L	DDR3L	DDR3L/ LPDDR3[1]	LPDDR3/ DDR3L	LPDDR3/ DDR3L
Connector/ Memory Down	Memory Down	CoPOP	Memory Down	Memory Down	Memory Down, SoDIMM	Memory Down, SoDIMM	Memory Down	Memory Down, SoDIMM
SM Voltage	1.2v	1.2v	1.2v/ 1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v	1.2v/1.35v
Speed (MT/s)	1066	1600	1066/ 1333	1066[2]&1600	1066/1333	1066[2]& 1333/1600	1333/1600	1333/1600
Channels	1x32	2x32	1x64 2x64	1x32 1x64 2x32[1] 2x64	1x64 2x64	1x64 2x32[1] 2x64	1x64 2x64	1x64 2x64
Capacity (GB)	1,2	1,2,4	1,2,4,8	1, 1.5[3], 2, 3[3], 4, 8, 16[3]	2,4,8	1, 2,4,8,16	2,4,8,16	2,4,8,16

1: support via white paper. 2: Dynamically configured low frequency gear if DDR power saving feature is enabled by the platform configuration. 3: memory parts not Intel Platform Memory Organization's official suggested DRAM part list, may not be validated on Intel reference validation platform boards.

Agenda

- Segment Review and Intel® Processors and System-on-Chips (SoCs) Review
- 2015 New Product Lines Overview
  - Intel® Atom™ x3 SoC Family
  - Intel Atom x5/x7 SoC Family
  - Intel® Core™ M, Pentium®, and Celeron® Processors
- Across Product Family Comparison
  - Form Factor, power
  - CPU
  - Graphics
  - Media
  - Display
  - Memory
- Summary and Next Steps

Summary

Consumer Drivers of Choice

Price, Brand, Performance, Screen Size

Next Level Preference Drivers

Modems, Advanced Camera(s), Weight, Screen Quality, Battery Life, App Availability, Advanced Voice Command

PHONE

TABLET

SMALL SCREEN 2 IN 1

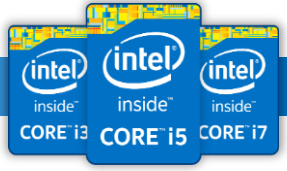
LARGE SCREEN 2 IN 1

NOTEBOOK

AIO

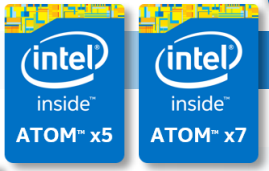
MINI PC

DESKTOP

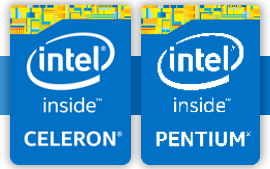


(Broadwell)

(Broadwell)



(Cherry Trail)



(Bay Trail–M/D, Braswell)

(SoFIA)

Additional Sources of Information

- A PDF of this presentation is available from our Technical Session Catalog: www.intel.com/idfsessionsSF. This URL is also printed on the top of Session Agenda Pages in the Pocket Guide.

- Come and see our demos in the Intel Computing Innovation Exhibit located on the 2nd floor concourse.

Other Technical Sessions

Session ID	Title	Day	Time	Room
✓ MOBS001	Choosing Among Intel® Architecture Based Processors and Systems-on-Chip for Product Design	Wed	11:00	2004
MOBS002	Mobile Innovation: Products, Experiences and Opportunities for Tablets, Phablets and Smartphones	Wed	2:30	2004

✓ = DONE

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Rev. 4/14/15

Backup

Footnotes

Pages 8 and 9: Intel® Atom™ x3 SoC family
1. Intel® Atom™ x3-C344X processor max sustained clock frequency is 1.2 GHz for all four cores. Burst Mode enables up to a max clock frequency of 1.4 GHz for relatively short peak loads for max 2 CPU cores simultaneously within specific temperature ranges. Availability and frequency of Burst Mode varies depending on, but not limited to, type of workload, hardware, software, number of active cores, power consumption, processor temperature, and system configuration as determined by your device OEM. For details on specific implementations depending on device configuration, please refer to your device manufacturers specifications.

Pages 11 and 12: Intel® Atom™ x5/x7 SoC family
1. Max. CPU Burst Frequency for 1 or 2 Cores. Max. CPU Burst Frequency for 3 or 4 cores bursting simultaneously is 1.60GHz
2. Additionally, LPDDR3 can be supported on customer designs if needed
3. Simultaneous display resolution capabilities may differ
4. General Purpose I2C
5. SPI on x8300 and x8500 is multiplexed with other pins. SPI availability is implementation dependent
6. USB 3.0 backward compatible to USB 2.0
7. eMMC 5.0 storage devices can be used and are compatible with the eMMC 4.51 storage controller included in Intel Atom x5/x7

Appendix A – Page 16

Footnote:

Resolution supported via HDMI @24Hz

Source: Intel: Based on local video playback. 40WHr battery. Comparing the Intel® Core™i7-5600U processor to prior generation Intel® Core™i7-4600U processor. Configuration below.

Source: Intel: 3DMark* IceStorm Unlimited v 1.2. Comparing the Intel® Core™i7-5600U processor to prior generation Intel® Core™i7-4600U processor. Configuration below.

Source: Intel: Cyberlink* MediaEspresso* to convert HD. Comparing the Intel® Core™i7-5600U processor to prior generation Intel® Core™i7-4600U processor. Configuration below.

Configurations:

Intel® Core™ i7-5600U Processor (up to 3.20GHz, 4T/2C, 4M Cache) on Intel Reference Platform. Graphics: Intel® HD Graphics 5500 (driver v.10.18.10.3960) Memory: 8 GB (2x4GB) Dual Channel DDR3L-1600. SDD: Intel® 180GB OS: Windows* 8.1 build 9600. System power management policy: DC Balanced for battery life measurements, AC Balanced for performance measurements. Wireless: On and connected. Battery size assumption: 40WHr.

Intel® Core™ i7-4600U Processor (up to 3.30GHz, 4T/2C, 4M Cache) On Intel Reference Platform. Graphics: Intel® HD Graphics 4400 (driver v. 10.18.10.3316) Memory: 8 GB (2x4GB) Dual Channel LPDDR3-1600 SDD: Intel® 160GB OS: Windows* 8 Pro build 9200. System power management policy: DC Balanced for battery life measurements, AC Balanced for performance measurements. Wireless: On and connected. Battery size assumption: 40WHr.

Intel® Core™ i5-5300U Processor (up to 2.90GHz, 4T/2C, 3M Cache) On Intel Reference Platform. Graphics: Intel® HD Graphics 5500 (driver v. 10.18.10.3960) Memory: 8 GB (2x4GB) Dual Channel DDR3L-1600 SDD: Intel® 180GB OS: Windows* 8.1 build 9600. System power management policy: DC Balanced for battery life measurements, AC Balanced for performance measurements. Wireless: On and connected. Battery size assumption: 40WHr.

Intel® Core™ i5-520UM Processor (up to 1.866GHz, 4T/2C, 3M Cache) in a modified Acer* Aspire* One 1830T-3721. Graphics: Intel HD Graphics (driver v10.18.10.3621). Memory: 8GB (2X4GB) DDR3-1333 clocked at DDR3-800, HDD: Seagate 500GB SATA HDD. OS: Windows* 7 Ultimate build 7601. System power management policy: DC Balanced for battery life measurements, AC Balanced for performance measurements. Wireless: On and connected. Battery size: 62WHr.