

COMPARISON OF 13-INCH CLASS LAPTOPS

For comparison to the Dell™ XPS™ 13 laptop, we identified 13-inch-class laptops that are currently shipping from the following vendors: Acer®, Apple®, ASUS®, Fujitsu®, HP, Lenovo®, Samsung®, and Toshiba®. Figures 1 through 3 compare the systems, which have a 13.3 inch screen size unless otherwise noted, using publically available data at each vendor’s respective website. We gathered this data at the links provided on 06/09/2015 (click on model names to follow them) and report only what each vendor disclosed on their sites. Dell provided us with information about the Dell XPS 13 9343 laptop.

According to vendor-provided data, compared to laptops we gathered information about in Figures 1 through 3, the Dell XPS 13 9343:

- is the smallest 13-inch laptop¹
- is 17.5 percent smaller than the MacBook Air® (13-inch)

Brand	Model	Thickness		Dimensions		Total area (sq. inches)	Weight	
		mm	inches	mm	inches		Lbs.	Kg.
Dell	XPS 13 9343	9–15	0.33–0.6	304 × 200	11.98 × 7.88	94.4024	2.60	1.18
Acer	Aspire® S7 (S7-392-7863)		0.51		12.7 × 8.8	111.76	2.87	
Acer	Aspire R 13 (R7-371T-57SN)		0.7		13.5 × 9.1	122.85	3.31	
Acer	Aspire V (V3-371-596F)		0.77		12.9 × 9	116.1	3.31	
Apple	MacBook Air® (13-inch)	3–17	0.11–0.68	325 × 227	12.8 × 8.94	114.432	2.96	1.35
Apple	MacBook Pro® (13-inch with Retina Display)	18	0.71	314 × 219	12.35 × 8.62	106.457	3.48	1.58
ASUS	Zenbook UX301LA	15.5		325 × 226				1.4
ASUS	Zenbook UX305FA		0.5		12.8 × 8.9	113.92	2.6	
ASUS	Zenbook UX303LN		0.7-0.8		12.7 × 8.8	111.76	3.2	
ASUS	Zenbook UX303LA		0.7-0.8		12.7 × 8.8	111.76	3.2	

¹ Used in this report, the smallest refers to the total surface area of the laptop.



Brand	Model	Thinness		Dimensions		Total area (sq. inches)	Weight	
		mm	inches	mm	inches		Lbs.	Kg.
Fujitsu	LIFEBOOK® E734		0.078–1.06		12.64 x 8.98	113.5072	<ul style="list-style-type: none"> • 3.73 (w/ Weight Saver) • 3.95 (w/ optical drive) • 4.17 (w/ 2nd battery) 	
Fujitsu	LIFEBOOK T935		0.67-0.76		12.64 x 9.52	120.3328	3.5	1.59
Fujitsu	LIFEBOOK T902		0.098-1.28		13.15 x 9.60	126.24	<ul style="list-style-type: none"> • 4.69 (w/ weight saver) • 5.05 (w/ optical drive) • 5.31 (w/ bay battery) 	
Fujitsu	LIFEBOOK T904		0.67-0.76		12.64 x 9.52	120.3328	<ul style="list-style-type: none"> • Weight may vary depending on actual configuration (including battery pack) 	
HP	ProBook 430 G2 Notebook PC	<ul style="list-style-type: none"> • 20-21 (front to rear, non-touch) • 21.3-22.5 (front to rear, touch) 	<ul style="list-style-type: none"> • 0.79-0.83 (front to rear, non-touch) • 0.84-0.89 (front to rear, touch) 	<ul style="list-style-type: none"> • 326 x 233.5 (front to rear, non-touch) • 326 x 234 (front to rear, touch) 	<ul style="list-style-type: none"> • 12.83 x 9.19 (front to rear, non-touch) • 12.83 x 9.21 (front to rear, touch) 	117.9077 (non-touch)	3.31 (Lowest weight configuration. Weight will vary by configuration)	1.5 (Lowest weight configuration. Weight will vary by configuration)
HP	Pavilion x360 - 13-a010dx Touch Laptop		0.305 - 0.88		13.12 x 9.003	118.11936	3.97	

Brand	Model	Thickness		Dimensions		Total area (sq. inches)	Weight	
		mm	inches	mm	inches		Lbs.	Kg.
HP	Pavilion x2 - 13-r100dx Laptop		<ul style="list-style-type: none"> 0.53 (tablet) 0.36 (base) 		<ul style="list-style-type: none"> 12.9 x 8.56 (tablet) 12.9 x 10.01 (base) 	<ul style="list-style-type: none"> 110.424 (tablet) 129.129 (base) 	<ul style="list-style-type: none"> 2.45 (tablet) 1.94 (base) 	
HP	Stream - 13-c002dx Touch Laptop		0.81		13.12 x 9.02	118.3424	3.86	
HP	ENVY x2 - 13t Touch Laptop		<ul style="list-style-type: none"> 0.54 (tablet) 0.76 (tablet and base) 		<ul style="list-style-type: none"> 13.99 x 8.48" (tablet) 14.07 x 8.57 (tablet and base) 	<ul style="list-style-type: none"> 118.6352 (tablet) 120.5799 (tablet and base) 	<ul style="list-style-type: none"> 2.81 (tablet) 4.05 (tablet and base) 	
Lenovo	LaVie Z		0.67		12.56 x 8.35	104.876	Starting at 1.87 lbs.	
Lenovo	Yoga™ 2 Pro Laptop		0.61		12.99 x 8.66	112.4934	3.1	
Lenovo	Yoga 3 Pro		0.5		13 x 9	117	2.62	
Lenovo	Yoga 2 Laptop (13 inch)		0.68		13 x 8.71	113.23	<ul style="list-style-type: none"> 3.43 3.65 w/hybrid hard drive 	
Samsung	Series 9 Premium Ultrabook NP900X3D-A03US		0.51		12.3 x 8.6	105.78	2.49	
Samsung	ATIV Book 9 Plus NP940X3G-K04US		0.54		12.58 x 8.78	110.4524	3.06	
Samsung	ATIV Book 9 Plus NP940X3K-K02US		0.54		12.58 x 8.78	110.4524	3.06	
Samsung	ATIV Book 9 NP900X3K-K01US		0.53		12.35 x 8.60	106.21	2.36	
Toshiba	Portege® R30-ASMBN22 Laptop		0.71–1.04		12.44 x 8.94	111.2136	<ul style="list-style-type: none"> 3.37 	

Brand	Model	Thickness		Dimensions		Total area (sq. inches)	Weight	
		mm	inches	mm	inches		Lbs.	Kg.
							<ul style="list-style-type: none"> No weight given for 9-cell 	
Toshiba	KIRAbook™ 13 i7S1 Touch Ultrabook		0.70		12.44 x 8.15	101.386	<ul style="list-style-type: none"> 2.91 Described as starting point depending on configuration, but no other battery options listed 	
Toshiba	Satellite Click 2 L30W-BST2N23	22.9	0.90	331 x 244.5	13 x 9.6	124.8	<ul style="list-style-type: none"> Starting at 2.9 lbs. (tablet only) Starting at 4.85 lbs. (with dock) 	<ul style="list-style-type: none"> Starting at 1.3 kg. (tablet only) Starting at 2.2 kg. (with dock)
Toshiba	Satellite Click 2 Pro P30W-BST2N01 Ultrabook	19.9 (with dock)	0.78 (with dock)	331 x 249 (with dock)	13 x 9.8 (with dock)	127.4	4.5 (starting point with dock)	2.05 (starting point with dock)
Toshiba	Portege Z30-BST3NX3 Ultrabook	13.9-17.9	0.55-0.70	316 x 227	12.44 x 8.94	111.2136	3.0 (starting point depending on configuration)	1.35

Figure 1: Dimension information we gathered for the laptops. All links and data current as of 06/09/15.

Figure 2 details the available screen information for the systems we researched. According to vendor-provided data, the Dell XPS 13 9343 has a display with up to 4.4 times as many pixels as the MacBook Air (13-inch).

Brand	Model	Screen resolution		Pixels
		Horizontal	Vertical	
Dell	XPS 13 9343	3,200	1,800	5,760,000
Acer	Aspire S7 (S7-392-7863)	2,560	1,440	3,686,400
Acer	Aspire R 13 (R7-371T-57SN)	1,920	1,080	2,073,600
Acer	Aspire V (V3-371-596F)	1,366	768	1,049,088
Apple	MacBook Air (13-inch)	1,440	900	1,296,000
Apple	MacBook Pro (13-inch with Retina Display)	2,560	1,600	4,096,000
ASUS	Zenbook UX301LA	2,560	1,440	3,686,400
ASUS	Zenbook UX305FA	3,200	1,800	5,760,000
ASUS	Zenbook UX303LN	3,200	1,800	5,760,000
ASUS	Zenbook UX303LA	1,920	1,080	2,073,600
Fujitsu	LIFEBOOK E734	1,366	768	1,049,088
Fujitsu	LIFEBOOK T935	2,560	1,440	3,686,400
Fujitsu	LIFEBOOK T902	1,600	900	1,440,000
Fujitsu	LIFEBOOK T904	2,560	1,440	3,686,400
HP	ProBook 430 G2 Notebook PC	1,366	768	1,049,088
HP	Pavilion x360 - 13-a010dx Touch Laptop	1,366	768	1,049,088
HP	Pavilion x2 - 13-r100dx Laptop	1,366	768	1,049,088
HP	Stream - 13-c002dx Touch Laptop	1,366	768	1,049,088
HP	ENVY x2 - 13t Touch Laptop	1,920	1,080	2,073,600
Lenovo	LaVie Z	2,560	1,440	3,686,400
Lenovo	Yoga 2 Pro Laptop	3,200	1,800	5,760,000
Lenovo	Yoga 3 Pro	3,200	1,800	5,760,000
Lenovo	Yoga 2 Laptop (13 inch)	1,920	1,080	2,073,600

Brand	Model	Screen resolution		Pixels
		Horizontal	Vertical	
Samsung	Series 9 Premium Ultrabook NP900X3D-A03US	1,600	900	1,440,000
Samsung	ATIV Book 9 Plus NP940X3G-K04US	3,200	1,800	5,760,000
Samsung	ATIV Book 9 Plus NP940X3K-K02US	3,200	1,800	5,760,000
Samsung	ATIV Book 9 NP900X3K-K01US	3,200	1,800	5,760,000
Toshiba	Portege R30-ASMBN22 Laptop	1,366	768	1,049,088
Toshiba	KIRAbook 13 i7S1 Touch Ultrabook	2,560	1,440	3,686,400
Toshiba	Satellite Click 2 L30W-BST2N23	1,366	768	1,049,088
Toshiba	Satellite Click 2 Pro P30W-BST2N01 Ultrabook	1,920	1,080	2,073,600
Toshiba	Portege Z30-BST3NX3 Ultrabook	1,366	768	1,049,088

Figure 2: Screen information we gathered about the laptops. All links and data current as of 06/09/15.

Figure 3 details the available battery information for the systems we researched.

Brand	Model	Battery info
Dell	XPS 13 9343	<ul style="list-style-type: none"> Up to 15 hours 22 minutes using BrowsingBench. Tested system equipped with 4GB memory, Intel® HD 5500 graphics, Intel Core™ i5 processor, 128GB SSD, 52 Whr battery, and FHD display. System brightness set to 150-nits (40%) and wireless on. Up to 14 hours 46 minutes using MobileMark 2014. Tested system equipped with 4GB memory, Intel HD 5500 graphics, Intel Core i5 processor, 128GB SSD, 52 Whr battery, and FHD display.

Brand	Model	Battery info
		<ul style="list-style-type: none"> • Up to 13 hours 7 minutes using MobileMark 2012. Tested system equipped with 4GB memory, Intel HD 5500 graphics, Intel Core i5 processor, 128GB SSD, 52 Whr battery, and FHD display. • Up to 12 hours 47 minutes using Microsoft's Local Video Playback Energy Efficiency battery run down test. Tested system equipped with 4GB memory, Intel HD 5500 graphics, Intel Core i5 processor, 128GB SSD, 52 Whr battery, and FHD display. System brightness set to 200-nits (50%) and wireless on. • Up to 11 hours 7 minutes using BrowsingBench. Tested system equipped with 8GB memory, Intel HD 5500 graphics, Intel Core i5 processor, 256GB SSD, 52 Whr battery, and QHD+ touch display. System brightness set to 150-nits (40%) and wireless on. • Up to 11 hours 20 minutes using MobileMark 2014. Tested system equipped with 8GB memory, Intel HD 5500 graphics, Intel Core i5 processor, 256GB SSD, 52 Whr battery, and QHD+ touch display. • Up to 7 hours 37 minutes using MobileMark 2012. Tested system equipped with 8GB memory, Intel HD 5500 graphics, Intel Core i5 processor, 256GB SSD, 52 Whr battery, and QHD+ touch display. • Up to 8 hours 10 minutes using Microsoft's Local Video Playback Energy Efficiency battery run down test. Tested system equipped with 8GB memory, Intel HD 5500 graphics, Intel Core i5 processor, 256GB SSD, 52 Whr battery, and QHD+ touch display. System brightness set to 200-nits (50%) and wireless on. • Up to 11 hours 9 minutes using BrowsingBench. Tested system equipped with 8GB memory, Intel HD 5500 graphics, Intel Core i7 processor, 256GB SSD, 52 Whr battery, and QHD+ touch display. System brightness set to 150-nits (40%) and wireless on. • Up to 10 hours 12 minutes using MobileMark 2014. Intel HD 5500 graphics, Intel Core i7 processor, 256GB SSD, 52 Whr battery, and QHD+ touch display. • Up to 9 hours 10 minutes using MobileMark 2012. Intel HD 5500 graphics, Intel Core i7 processor, 256GB SSD, 52 Whr battery, and QHD+ touch display. • Up to 7 hours 53 minutes using Microsoft's Local Video Playback Energy Efficiency battery run down test. Intel HD 5500 graphics, Intel Core i7 processor, 256GB SSD, 52 Whr battery, and QHD+ touch display. System brightness set to 200-nits (50%) and wireless on. • Up to 22 hours total battery life when using the Dell Power Companion using BrowsingBench. Tested system equipped with 4GB memory, Intel HD 5500 graphics, Intel Core i5 processor, 128GB SSD, 52 Whr battery, and FHD display. System brightness set to 150-nits (40%) and wireless on.
Acer	Aspire S7 (S7-392-7863)	<ul style="list-style-type: none"> • 7.5 hours • 4-cell Li-Polymer • mAh: 6,280 • Maximum Power Supply Wattage: 45 W

Brand	Model	Battery info
Acer	Aspire R 13 (R7-371T-57SN)	<ul style="list-style-type: none"> • 4-cell Lithium Ion (Li-Ion) • 3220 mAh, 8 Hour
Acer	Aspire V (V3-371-596F)	<ul style="list-style-type: none"> • 4-cell Lithium Ion (Li-Ion) • 3220 mAh, 6.5 Hour
Apple	MacBook Air (13-inch)	<ul style="list-style-type: none"> • Up to 12 hours wireless Web time • Up to 12 hours iTunes Movie Playback • Up to 30 days Standby time • Built-in 54Wh Li-Po battery
Apple	MacBook Pro (13-inch with Retina Display)	<ul style="list-style-type: none"> • Up to 10 hours wireless Web time • Up to 12 hours iTunes Movie Playback • Up to 30 days Standby time • Built-in 74.9Wh Li-Po battery
ASUS	Zenbook UX301LA	<ul style="list-style-type: none"> • 6-cell / Polymer • 50.6Wh
ASUS	Zenbook UX305FA	<ul style="list-style-type: none"> • 44 Whrs Polymer Battery • 10 hours daily working • 8 hours video playing
ASUS	Zenbook UX303LN	<ul style="list-style-type: none"> • 3Cells 50 Whrs Polymer Battery
ASUS	Zenbook UX303LA	<ul style="list-style-type: none"> • 3Cells Polymer Battery
Fujitsu	LIFEBOOK E734	<ul style="list-style-type: none"> • First Battery Options: Li-Ion battery 6-cell, 63 Wh / Li-Ion battery 6-cell, 72Wh • Second Battery (Optional): Li-Ion battery 6-cell, 28 Wh • Up to 13 hrs and 10 min (with 72 Wh battery) • Up to 21 hrs (with 72 Wh high capacity main battery + 2nd Battery + SSD Hard Drive)
Fujitsu	LIFEBOOK T935	<ul style="list-style-type: none"> • Up to 13 hours and 20 minutes • 4-cell Li-Ion 3,150 mAh, 45 Wh • "Rapid Charge" feature (~120 mins)
Fujitsu	LIFEBOOK T902	<ul style="list-style-type: none"> • Main battery (72Wh) = Up to 8 hours and 50 mins • Main battery plus Bay battery (28 Wh) = up to up 12 hours • Battery life tested using MobileMark 2007 and Windows 7 operating system, and may include audio muted.
Fujitsu	LIFEBOOK T904	<ul style="list-style-type: none"> • Li-Ion battery 4-cell, 3150 mAh, 45 Wh

Brand	Model	Battery info
		<ul style="list-style-type: none"> • Battery life up to 9.5 h • Battery life tested using MobileMark 2007 and Windows® 7 operating system, and may include audio muted and power saving utility enabled. • Battery features: Rapid Charge • Battery Charging time ~ 120min
HP	ProBook 430 G2 Notebook PC	<ul style="list-style-type: none"> • 4-cell, 44 WHr Li-ion • 40 WHr Long Life Li-ion
HP	Pavilion x360 - 13-a010dx Touch Laptop	<ul style="list-style-type: none"> • 3-cell • 43.5 WHr 3.82Ah prismatic • Up to 6 hours and 15 minutes
HP	Pavilion x2 - 13-r100dx Laptop	<ul style="list-style-type: none"> • 2-cell • 30 WHr 4.15Ah Lithium-ion polymer • Up to 5 hours and 15 minutes
HP	Stream - 13-c002dx Touch Laptop	<ul style="list-style-type: none"> • 3-cell • 36 WHr Lithium-ion • 3.25Ah • Up to 7 hours and 30 minutes
HP	ENVY x2 - 13t Touch Laptop	<ul style="list-style-type: none"> • 2-cell 33WHr Lithium-ion Battery
Lenovo	LaVie Z	<ul style="list-style-type: none"> • Up to 7 hours MM12 • Up to 9 hours Video Playback
Lenovo	Yoga 2 Pro Laptop	<ul style="list-style-type: none"> • Up to 9 hours Windows 8 idle @ 150 nits • Up to 6 hours FHD playback @ 150 nits
Lenovo	Yoga 3 Pro	<ul style="list-style-type: none"> • Up to 7.2 hours
Lenovo	Yoga 2 Laptop (13 inch)	<ul style="list-style-type: none"> • Up to 8 hours (no specifics)
Samsung	Series 9 Premium Ultrabook NP900X3D-A03US	<ul style="list-style-type: none"> • Up to 9 hours • 4-cell / Li-Po • 44 WHr
Samsung	ATIV Book 9 Plus NP940X3G-K04US	<ul style="list-style-type: none"> • Up to 7 hours (MobileMark 2012) • 4-cell / Li-Po • mAh: 7300

Brand	Model	Battery info
		<ul style="list-style-type: none"> • 55.5Wh
Samsung	ATIV Book 9 Plus NP940X3K-K02US	<ul style="list-style-type: none"> • Up to 12.5 hours (MobileMark 2012) • 4-cell / Li-Po • 40 W • mAh: 7300 • 55Wh
Samsung	ATIV Book 9 NP900X3K-K01US	<ul style="list-style-type: none"> • Up to 10 hours (Mobile Mark 2007) • 4 Cell / Li-Po • mAh: 5,880 • 44Wh
Toshiba	Portege R30-ASMBN22 Laptop	<ul style="list-style-type: none"> • 6-cell / Li-Ion • 66Wh • Up to 8 hours, 30 minutes (MobileMark Productivity 2012, Core i5-4200M, Windows 8.1, 6-cell battery) • Up 9 hours, 10 minutes (MobileMark Productivity 2012, Core i7-4700MQ, Windows 8.1, 6-cell battery) • (9-cell/93Wh Li-Ion battery pack optional)
Toshiba	KIRAbok 13 i7S1 Touch Ultrabook	<ul style="list-style-type: none"> • 4-cell / Li-Po battery pack • 52Wh
Toshiba	Satellite Click 2 L30W-BST2N23	<ul style="list-style-type: none"> • 3 cell/43 Wh Lithium Ion battery pack (not user replaceable) • 3 cell battery: up to 8 hours, 7 minutes (MobileMark Productivity 2012)
Toshiba	Satellite Click 2 Pro P30W-BST2N01 Ultrabook	<ul style="list-style-type: none"> • 3 cell/41Wh Lithium Ion battery pack (in tablet) • 3 cell/26Wh Lithium Ion battery pack (in keyboard dock) • Included 3 cell battery: up to 6 hours, 35 mins (tablet only) (measured by MobileMark Productivity 2012) • Up to 9 hours, 31 minutes (tablet/keyboard dock connected) (measured by MobileMark Productivity 2012)
Toshiba	Portege Z30-BST3NX3 Ultrabook	<ul style="list-style-type: none"> • Up to 15 hours and 5 minutes • 4 cell/52 Wh Lithium Ion battery pack (not user replaceable)

Figure 3: Battery information we gathered about the laptops. All links and data current as of 06/09/15.

ABOUT PRINCIPLED TECHNOLOGIES



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