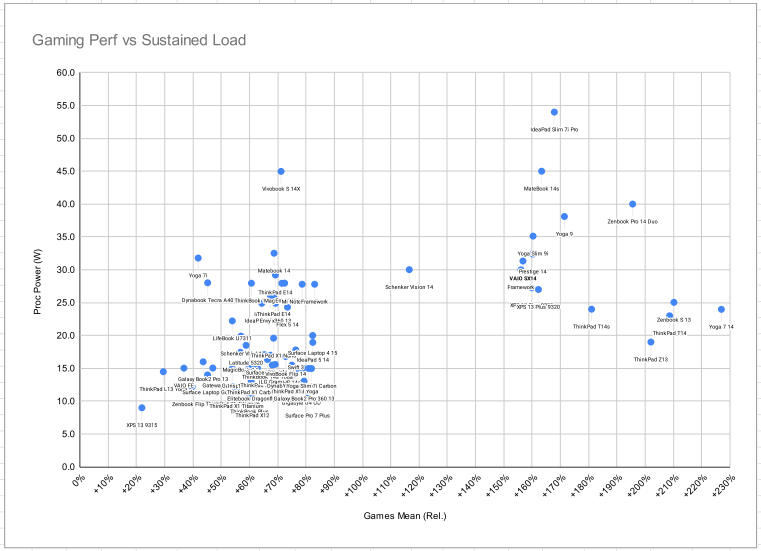
Unit	Processor	Relative to Minimum: R15 Single	R15 Multi	3DM Time Spy	3DM Fire Strike	The Witcher 3	Dota 2 Reborn	X-Plane 11.11	FFXV Bench	GTA V	Games Mean [1]
XPS 13 9315	1235U	+25%	+7%	+15%	+32%	+66%			0%	0%	+22%
ThinkPad L13 Yoga	1135G7	+32%	+28%	+21%	+20%	+19%	+37%	+33%			+30%
VAIO FE	1235U	+42%	+42%	+20%	+32%	+15%	+60%	+43%	+40%	+26%	+37%
Zenbook Flip 13	1165G7	+37%	+6%		+75%		+3%	+42%		+75%	+40%
Yoga 7i	1135G7	+34%	+80%	+4%	0%	+15%	+44%	+84%	+49%	+18%	+42%
Galaxy Book2 Pro 13	1240P		+86%	+57%	+79%	+26%	+65%	+18%		+65%	+44%
Surface Laptop Go 2	1135G7	+29%	+12%	+23%	+41%	+26%	+74%	+31%	+49%		+45%
Dynabook Tecra A40	1135G7	+32%	+79%	+19%	+12%	+22%	+75%	+35%	+73%	+23%	+45%
Gateway	1235U	+31%	+65%	+31%	+35%	+48%	+72%	+50%	+38%	+28%	+47%
LifeBook U7311	1135G7	+31%	+44%	+35%	+30%	+49%	+58%	+44%	+79%	+40%	+54%
Gateway	1135G7	+34%	+30%	+31%	+38%	+56%	+50%	+34%	+76%		+54%
ThinkPad X1 Titanium	1160G7	+30%	+9%	+58%	+90%	+67%	+50%	+45%			+54%
ThinkPad X1 Titanium	1140G7	+20%	0%	+27%	+32%	+35%	+76%				+55%
MagicBook 14	4500U	+15%	+92%				+89%	+52%	+29%		+57%
Schenker VIA 14	1135G7	+34%	+40%	+23%	+26%	+53%	+54%	+65%			+57%
Latitude 5320	1135G7	+26%	+39%	+39%	+34%	+35%			+83%		+59%
Inspiron 13 5301	1135G7	+32%	+33%	+51%	+73%	+69%	+34%	+64%	+72%		+60%
ThinkBook Plus	1135G7	+27%	+23%	+29%	+46%	+61%	+70%	+35%		+74%	+60%
Elitebook Dragonfly	1185G7	+12%	+21%	+41%	+47%	+105%	+47%	+25%	+65%		+61%
ThinkBook 14	1135G7	+36%	+73%	+26%	+25%	+50%	+61%	+71%			+61%
ThinkPad X1 Carbon	1250P	+34%	+129%	+34%	+76%	+78%	+73%	+37%	+56%		+61%
ThinkPad X12	1160G7	+14%	+12%	+61%	+36%	+112%	+52%	+20%			+61%
ThinkPad L13	5650U	+45%	+121%	+12%	+25%	+29%	+102%	+54%			+62%
ThinkPad X13	4750U	+23%	+149%	+16%	+23%	+52%	+87%	+49%			+63%
IdeaPad S540	4600U	+18%	+155%	+4%	+14%	+32%	+104%	+67%	+53%		+64%
Pavilion x360 14	1135G7	+32%	+24%	+57%	+68%	+82%	+45%	+66%	+65%	+68%	+65%
ThinkBook 14s Yoga	1165G7	+33%	+43%	+44%	+52%	+71%	+58%	+71%			+66%
IdeaPad 5 14	4500U	+16%	+97%	+4%	+17%	+37%	+104%	+61%			+67%
Surface Laptop 4 13	4680U	+14%	+127%	+7%	+23%	+50%	+98%	+55%			+68%
Pavilion 14	1135G7		+43%	+47%	+61%	+54%	+53%		+94%	+71%	+68%
ThinkPad X1 Nano	1160G7	+39%	+40%	+53%	+70%	+92%	+74%	+40%			+69%
ThinkPad E14	4500U	+18%	+79%	0%	+14%	+41%	+104%	+61%			+69%
Matebook 14	1165G7	+42%	+81%	+55%	+55%	+68%	+71%	+77%	+61%	+67%	+69%
LG Gram 14	1240P	+36%	+61%	+68%	+42%	+55%	+80%	+44%	+112%	+55%	+69%
ThinkPad E14	1165G7	+51%	+100%	+44%	+52%	+71%	+71%	+66%			+69% [3
Envy x360 13	4500U	+16%	+72%	+14%	+32%	+49%	+102%	+57%			+69%
Vivobook S 14X	12700H	+66%	+318%	+22%	+33%	+56%	+103%	+100%	+61%	+35%	+71% [3
MagicBook 14	1165G7	+52%	+84%	+55%	+62%	+74%	+65%	+73%	+74%		+71%
Envy 14	1135G7	+29%	+71%	+38%	+38%	+63%	+97%	+83%	+53%	+67%	+72%
VivoBook Flip 14	4700U	+22%	+111%	+10%	+23%	+69%	+93%	+66%	+63%		+73%
Flex 5 14	5500U	+18%	+187%		+26%	+47%	+105%	+69%			+73%
HP 14s	5500U	+18%	+106%	+30%	+38%	+30%	+112%	+55%	+70%	+108%	+75%
ThinkPad X13 Yoga	1165G7	+40%	+39%	+70%	+88%	+83%	+40%	+44%		+137%	+76%
Swift 3	4700U	+20%	+97%	+19%	+27%	+41%	+97%	+44%		+124%	+76%
Dynabook Portege X30L	1240P	0%	+70%	+44%	+68%	+80%	+85%	+63%	+89%	+66%	+77%
Yoga Slim 7	1135G7	+21%	+76%	+36%	+30%	+58%	+82%	+62%	+117%	+66%	+77%
Gigabyte U4 UD	1195G7	+43%	+38%	+67%	+61%	+72%	+105%	+58%		+78%	+78%
Mi Notebook Pro	11370H	+47%	+78%	+64%	+63%	+85%	+101%	+17%	+112%		+79%
Yoga 6	5500U	+18%	+103%	+19%	+30%	+84%	+100%	+48%	+62%	+101%	+79%
Latitude 13 7320	1180G7	+26%	+13%	+61%	+99%	+119%	+54%	+34%	+99%	+89%	+79%
Galaxy Book2 Pro 360 13	1260P	+38%	+85%	+76%	+94%	+83%	+91%	+72%	+79%	+72%	+79%
Surface Pro 7 Plus	1135G7	+26%	+9%	+68%	+89%	+119%	+67%	+55%			+81%
Matebook X Pro	1165G7	+40%	+29%	+74%	+110%	+95%	+56%	+54%	+99%	+101%	+81%
Yoga Slim 7i Carbon	1165G7	+47%	+41%	+90%	+90%	+119%	+57%	+69%			+82%
Surface Laptop 4 15	4980U	+22%	+199%	+38%	+57%	+78%	+106%	+63%			+82%
IdeaPad 5 14	5500U	+15%	+145%	+20%	+32%	+70%	+107%	+70%			+82%
Framework	1165G7	+50%	+79%	+48%	+51%	+85%	+95%	+75%	+77%		+83% [4
Schenker Vision 14	1165G7	+50%	+88%	+76%	+95%	+121%	+98%	+101%	+137%	+126%	+117%
Framework	1260P	+68%	+236%	+104%	+111%	+147%	+158%	+144%	+195%	+136%	+156%
VAIO SX14	1195G7	+59%	+104%	+122%	+130%	+160%	+174%	+90%	+165%	+194%	+157%
XPS 13 Plus 9320	1280P	+53%	+211%	+114%	+119%	+171%	+152%	+118%	+171%	+186%	+160%
Prestige 14	1195G7	+56%	+90%	+122%	+127%	+160%	+139%	+77%	+250%	+175%	+160%
Yoga Slim 9i	1280P	+72%	+276%	+128%	+132%	+158%	+160%	+140%	+162%	+181%	+160%
XPS 13 Plus 9320	1260P	+60%	+220%	+114%	+120%	+150%	+152%	+121%	+218%	+170%	+162%
MateBook 14s	11370H	+56%	+120%	+106%	+117%	+157%	+165%	+99%	+226%	+170%	+163%
IdeaPad Slim 7i Pro	11370H	+53%	+116%	+108%	+130%	+161%	+138%	+113%	+245%	+182%	+168%
Yoga 9	1260P	+62%	+246%	+117%	+123%	+157%	+153%	+140%	+237%	+170%	+171%
ThinkPad T14s	6850U	+61%	+239%	+136%	+161%	+242%	+151%	+96%	+235%		+181%
Zenbook Pro 14 Duo	12700H	+73%	+377%	+123%	+142%	+176%	+194%	+163%	+253%	+192%	+196%
ThinkPad Z13	6860Z	+56%	+270%	+164%	+179%	+200%	+159%	+107%	+237%	+308%	+202%
ThinkPad T14	6850U	+58%	+254%	+179%	+187%	+228%	+168%	+99%	+256%	+293%	+209%
Zenbook S 13	6800U	+58%	+240%	+179%	+172%	+236%	+168%	+96%	+242%	+308%	+210%
Yoga 7 14	6800U	+62%	+275%	+198%	+196%	+241%	+173%	+116%	+280%	+324%	+227%
median (n=158)											96%
minimum											22%
maximum											227%
Swift 3X	1165G7 Xe MAX	-12%	-59%	-28%	-11%	-21%	-36%	-35%	-29%	-35%	-31%

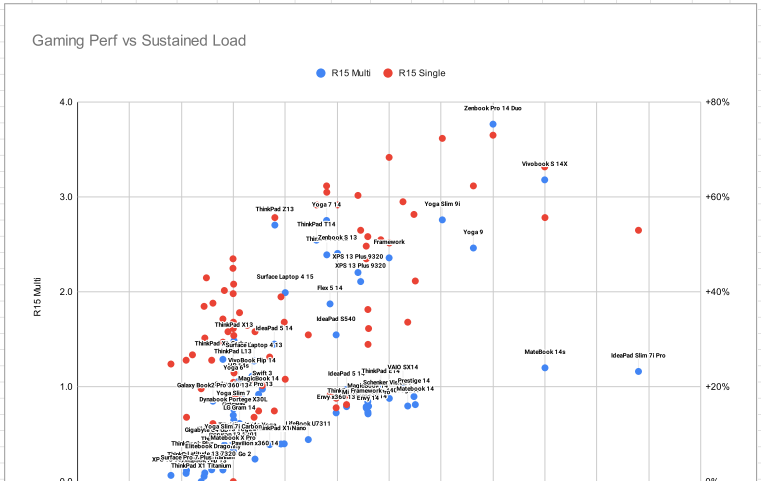
Unit	NBC P95+Furmark Stress: Proc Power (W)	Behavior	CPU Temp (°C)	CPU Clock (GHz)	GPU Clock (MHz)	Max Surface Temp (°C)	Max Fan Noise (dbA)	RAM: Clock (MHz)	Chassis: Volume (L)	Weight (kg)	CPU Power / Temp	CPU Power / Vol	CPU Temp / Vol	Surface Temp / Vol	R15: Single (first run)	Multi Loop (avg)	3DMark: Time Spy gfx	Fire Strike gfx
XPS 13 9315	9.0	⎍⎍⎍		1.0		45	40	5200	0.82	1.16		-42%	-100%	+32%	187	503	945	3247
ThinkPad L13 Yoga	14.5	⎍⎍⎍	72	0.9	500	55	37	3200	1.20	1.45	-33%	-35%	-4%	+10%	197	605	995	2950
VAIO FE	15.0	——	66	0.8	157	42	37	3200	1.42	1.60	-24%	-43%	-25%	-28%	212	672	985	3251
Zenbook Flip 13	12.2	⎍⎍⎍	68	0.9	600	47	47	4266	0.84	1.19	-40%	-22%	+31%	+35%	205	498		4297
Yoga 7i	31.8	——	73	1.9	1300	44	46	3200	1.22	1.45	+45%	+40%	-4%	-12%	200	848	856	2460
Galaxy Book2 Pro 13	16.0 [2	——	81	1.1	600	51	39	5200	0.67	0.89	-34%	+27%	+93%	+85%		878	1285	4408
Surface Laptop Go 2	14.0	⎍⎍⎍	62	1.4	100	47	42	4266	0.92	1.14	-25%	-18%	+9%	+24%	194	530	1008	3474
Dynabook Tecra A40	28.0	——	61	1.9	1166	45	30	3200 [	1.35	1.45	+54%	+11%	-28%	-18%	198	847	978	2762
Gateway	15.0	——	54	1.0	341	36	41	3200	1.64	1.63	-7%	-51%	-47%	-46%	196	778	1079	3327
LifeBook U7311	22.2	——	81	1.5	755	41	43	3200	1.28	1.24	-8%	-7%	+1%	-23%	196	681	1112	3209
Gateway	15.0	——	59	1.3	600	48	31	3200	1.42	1.64	-15%	-43%	-33%	-18%	200	612	1074	3387
ThinkPad X1 Titanium	12.3	——	70	0.9	500	47	36	4266	0.80	1.19	-42%	-18%	+41%	+42%	195	515	1298	4686
ThinkPad X1 Titanium	11.9	——	72	0.9		46	40	4266	0.80	1.20	-45%	-20%	+45%	+41%	179	472	1039	3258
MagicBook 14	17.4	——	68	3.4	1200	45	33	3200	1.10	1.38	-14%	-15%	-1%	-1%	172	906		
Schenker VIA 14	19.9	——	69	1.5	800	36	48	3200	1.15	1.07	-4%	-8%	-4%	-24%	200	660	1009	3089
Latitude 5320	18.5	——	60	1.3		35	51	3200	1.08	1.29	+3%	-8%	-11%	-20%	189	656	1145	3308
Inspiron 13 5301	15.0 [2	⎍⎍⎍	67	1.0	600	48	42	4266	0.99	1.15	-25%	-19%	+8%	+16%	198	627	1240	4260
ThinkBook Plus	11.1	——	63	1.0	493	45	35	4266	0.87	1.17	-42%	-32%	+17%	+25%	190	582	1056	3586
Elitebook Dragonfly	13.0	⎍⎍⎍	62	0.9	198	50	31	4266	0.96	1.16	-30%	-27%	+3%	+26%	168	569	1160	3625
ThinkBook 14	28.0	——	67	2.0		46	42	3200	1.26	1.49	+39%	+19%	-15%	-11%	204	818	1035	3080
ThinkPad X1 Carbon	14.0	——	64	0.7	100	45	35	5200	1.08	1.19	-27%	-31%	-5%	+1%	201	1080	1098	4318
ThinkPad X12	10.5	——	56	0.8		42	37	4266	0.84	1.11	-37%	-33%	+8%	+21%	170	528	1319	3355
ThinkPad L13	15.0	——	73	1.8	600	34	44	3200	1.20	1.38	-32%	-33%	-2%	-31%	217	1041	923	3085
ThinkPad X13	15.1	——	91	2.4		42	32	3200	1.15	1.29	-45%	-30%	+27%	-11%	184	1173	949	3019
IdeaPad S540	24.9	——	69	3.5	1210	38	45	3200	1.00	1.43	+20%	+34%	+11%	-7%	176	1202	852	2793
Pavilion x360 14	17.1	⎍⎍⎍	71	0.8	600	40	38	3200	1.34	1.5	-20%	-32%	-15%	-27%	197	584	1289	4143
ThinkBook 14s Yoga	16.4	——	58	0.9	650	38	30	3200	1.17	1.50	-6%	-25%	-20%	-22%	199	675	1184	3750
IdeaPad 5 14	25.9	——	70 [2	3.4		39	41	3200	1.15	1.38	+23%	+21%	-2%	-17%	174	930	852	2876
Surface Laptop 4 13	17.0	——	64	2.0	480	46	40	4266	0.96	1.27	-11%	-5%	+7%	+16%	170	1072	882	3020
Pavilion 14	15.5 [3	□W	68	1.5	510	41	36	3200	1.33	1.44	-24%	-38%	-18%	-26%		674	1206	3956
ThinkPad X1 Nano	19.6	——	71	1.2	700	48	38	4266	0.97	0.95	-8%	+8%	+17%	+19%	208	659	1260	4192
ThinkPad E14	25.9	——	91	2.9	960	48	33	3200	1.28	1.60	-5%	+9%	+14%	-8%	177	845	821	2802
Matebook 14	32.5	——	66	2.1	1143	47	40	3200	1.09	1.49	+65%	+59%	-4%	+5%	213	855	1271	3824
LG Gram 14	15.6	□W	72	0.8	449	45	36	5200	1.12	0.98	-28%	-26%	+3%	-3%	203	761	1378	3499
ThinkPad E14	29.2	——	77	2.6		46	33	3200 [	1.28	1.60	+26%	+23%	-3%	-12%	226	943	1179	3749
Envy x360 13	24.9	——	81	3.0	980	45	44	3200	0.98	1.26	+2%	+36%	+33%	+11%	173	814	932	3239
Vivobook S 14X	45.0	——	78	2.3	1047	39	53	3200 [	1.33	1.63	+92%	+81%	-6%	-28%	249	1973	1003	3263
MagicBook 14	27.9	——	73	2.4	900	47	46	3200	1.10	1.38	+28%	+36%	+6%	+4%	227	870	1269	3988
Envy 14	28.0	——	61	1.9	1150	43	36	3200	1.26	1.46	+53%	+19%	-22%	-17%	193	809	1134	3388
VivoBook Flip 14	16.8	——	65	2.8	850	46	41	3200	1.30	1.56	-14%	-31%	-20%	-14%	182	996	903	3036
Flex 5 14	24.3	⎍⎍⎍	93	3.5	1412	47	44	3200	1.50	1.53	-13%	-13%	-1%	-25%	177	1356		3109
HP 14s	15.5	——	62	1.9	405	46	41	3200	1.30	1.46	-17%	-36%	-23%	-15%	177	970	1064	3383
ThinkPad X13 Yoga	14.1	——	69	0.9	508	52	34	4266	1.00	1.22	-32%	-25%	+10%	+25%	210	654	1394	4616
Swift 3	17.8	——	64 [3	2.5	733	44	34	3200	1.17	1.20	-7%	-19%	-12%	-10%	180	932	973	3134
Dynabook Portege X30L	15.0	——	65	0.9	786	43	36	4800	1.15	0.91	-23%	-30%	-9%	-10%	150	802	1181	4142
Yoga Slim 7	15.0	⎍⎍⎍	56	0.8	600	43	30	3200	0.99	1.36	-11%	-19%	-10%	+6%	181	833	1119	3210
Gigabyte U4 UD	12.4	——	57	0.8	450	37	45	3200	1.19	0.96	-27%	-44%	-23%	-24%	214	650	1369	3952
Mi Notebook Pro	27.8	——	67	1.7	1000	48	44	3200	1.20	1.40	+38%	+24%	-11%	-3%	220	838	1349	3999
Yoga 6	15.0	——	70	2.5	775	52	41	3200	1.16	1.33	-28%	-31%	-3%	+10%	177	960	978	3200
Latitude 13 7320	12.9	⎍⎍⎍	62	0.9	100	40	42	4266	0.51	0.78	-31%	+37%	+97%	+92%	188	531	1324	4893
Galaxy Book2 Pro 360 13	13.0	⎍⎍⎍	73	0.4	100	53	34	5200	0.70	1.04	-40%	-1%	+67%	+85%	206	872	1446	4762
Surface Pro 7 Plus	10.5	⎍⎍⎍	52	1.0	100	45	[41]	4266	0.50	0.80	-33%	+12%	+67%	+118%	188	513	1376	4652
Matebook X Pro	15.0	⎍⎍⎍	64	1.1	100	40	38	4266	0.96	1.31	-22%	-17%	+7%	+2%	209	611	1430	5169
Yoga Slim 7i Carbon	15.0	——	67	1.1		50	37	4266	0.93	0.98	-25%	-14%	+16%	+30%	220	667	1562	4669
Surface Laptop 4 15	20.0	——	68	2.2	641	45	40	4266	1.22	1.56	-2%	-12%	-10%	-11%	182	1412	1135	3860
IdeaPad 5 14	19.0	——	64	2.9	666	42	41	3200	1.30	1.38	-1%	-22%	-21%	-21%	172	1156	985	3253
Framework	27.8	——	74	2.0	748	47	48	3200 [	1.08	1.30	+25%	+38%	+10%	+7%	224	845	1216	3709
Schenker Vision 14	30.0	——	84	1.8	1109	52	41	3200	1.04	1.03	+19%	+55%	+30%	+22%	225	886	1441	4795
Framework	30.0	——	83	1.7	798	42	50	3200	1.08	1.33	+20%	+49%	+24%	-4%	252	1585	1675	5200
VAIO SX14	31.3	——	74	2.4	900	50	52	4266	1.28	1.12	+41%	+31%	-7%	-5%	238	962	1819	5661
XPS 13 Plus 9320	27.3	——	83	1.2	549		40	5200	0.90	1.27	+9%	+62%	+48%		229	1467	1760	5393
Prestige 14	32.4	——	90	2.4	950	58	44	4266	1.10	1.22	+20%	+58%	+32%	+29%	234	895	1819	5580
Yoga Slim 9i	35.1	——	67	1.0	1143	43	44	5200	1.01	1.39	+74%	+87%	+7%		258	1774	1871	5708
XPS 13 Plus 9320	27.0	——	78	1.2	805	49	46	5200	0.90	1.24	+16%	+61%	+38%	+32%	240	1512	1758	5421
MateBook 14s	45.0	——	73	2.4	1304	45	47	3733	1.21	1.44	+105%	+100%	-3%	-9%	233	1038	1688	5327
IdeaPad Slim 7i Pro	54.0	——	92	2.9	1100	51	46	4266	1.17	1.39	+96%	+147%	+26%	+7%	229	1020	1709	5652
Yoga 9	38.1	——	82	1.5	1149	52	39	5200	1.12	1.43	+56%	+83%	+17%	+14%	243	1634	1784	5479
ThinkPad T14s	24.0	——	74			49	27	6400	1.22	1.32	+9%	+6%	-3%	-2%	241	1600	1938	6431
Zenbook Pro 14 Duo	40.0	□W	66	1.7	1050	48	42	4800	1.42	1.74	+102%	+50%	-26%	-18%	259	2250	1830	5955
ThinkPad Z13	19.0	——	75	1.5	200	51	41	6400	0.82	1.29	-16%	+24%	+46%	+51%	233	1748	2170	6865
ThinkPad T14	23.0	——	77	2.0	569	53	39	6400	1.29	1.45	+0%	-5%	-5%	-1%	237	1673	2289	7050
Zenbook S 13	25.0	——	77	2.3	728	56	42	6400	0.93	1.10	+8%	+44%	+33%	+46%	237	1607	2287	6683
Yoga 7 14	24.0	——	65	2.2	675	45	43	6400	1.21	1.43	+23%	+6%	-14%	-9%	243	1771	2449	7279
median (n=158)	20.7		69	1.5	750	46	41	4266	1.11	1.32					214	889	1350	4374
minimum	9.0		50	0.4	100	33	27	3200	0.50	0.78					150	472	821	2460
maximum	54.0		95	3.7	1525	61	56	6400	1.88	1.83					260	2250	2449	7279
Swift 3X	21.0?	——	65	1.3	1200	45	44	4266	1.23	1.37			-15%	-10%	228	926	1766	6447

Unit	The Witcher 3: low [2]	med [3]	high [4]	ultra [5]	Dota 2 Reborn: low [6]	med [7]	high [8]	ultra [9]	X-Plane 11.11: low [10]	med [11]	high [12]	FFXV Bench: low [13]	med [14]	high [15]	GTA V: low [16]	med [17]	high [18]	ultra [19]	NBC Witcher 3 Stress: Proc Power (W)	Behavior	CPU Temp (°C)	CPU Clock (GHz)	GPU Clock (MHz)
XPS 13 9315	67	47	22	8								19	11	5		31	10		8.6	⎍⎍⎍		1.0	100
ThinkPad L13 Yoga	36	31	17		74	43	31	30		28	25												
VAIO FE	42	27	15	8	85	58	34	31	38	26	24	22	14	9	50	46	12	6	15.1	⎍⎍⎍	67.0	0.4	751
Zenbook Flip 13					36	32	32	30	35	27	25				59	54	20	9					
Yoga 7i	51	29	13	7	76	52	31	29	47	34	31	24	13	11	60	46	10	4	22.4	——	59.0	2.4	1300
Galaxy Book2 Pro 13	37	29	16	11	75	54	45	39	30	21	21				72	65	16	6					
Surface Laptop Go 2	43	35			77	70	41	36	[21]	25	26	31	14	8									
Dynabook Tecra A40	53	32	12	8	99	61	35	33	21	31	29	25	14	14	56	44	12	5					
Gateway	55	37	20	10	89	62	38	35	40	27	25	27	14		62	49	11	5	15.0	——	54.0	0.6	977
LifeBook U7311	59	38	19	9	75	56	38	36	[23	30	27	30	16	12	63	51	13	6					
Gateway	56	39	21	10	76	50	35	33	35	25	22	27	16	13					15.0	——	60.0	2.0	1100
ThinkPad X1 Titanium	56	41	23		83	45	34	33	34	29	26												
ThinkPad X1 Titanium	46	32	18	10	88	64	41	36	[24]	[25]	[26]												
MagicBook 14					93	71	42	40	38	29	26	27	13										
Schenker VIA 14	58	37	19		76	56	35	32	37	35	28												
Latitude 5320	55	37	14									29	18	12									
Inspiron 13 5301	61	40	23	12	68	34	32	[28	40	32	28	28	17	11									
ThinkBook Plus	66	40	21	10	82	64	40	35	37	25	22				60	55	19	9					
Elitebook Dragonfly	72	48	29	14	72	47	35	35	23	30		27	15	11					12.9	——	65.0	1.2	600
ThinkBook 14	59	36	18		77	60	37	34	39	37	29												
ThinkPad X1 Carbon	74	45	22	11	91	64	37	33	33	27	24	31	14	9									
ThinkPad X12	83	52	25		71	60	34	31	29	24	21												
ThinkPad L13	49	31	14	10	101	75	44	42	40	29	26												
ThinkPad X13	56		18		91	70	42	40	37	29	26												
IdeaPad S540	49	35	15		100	77	45	42	40	31		29	15	9									
Pavilion x360 14	63	43	24	13	79	46	33	31	39	32		29	15	11	69	58	17	7					
ThinkBook 14s Yoga	65	42	21	12	78	55	37	35	41	33	30												
IdeaPad 5 14	50	32	16	11	98	78	46	43	40	31	27												
Surface Laptop 4 13	60	37	17		91	75	47	43	38	30	27												
Pavilion 14	51	38	20	11	78	50	35	35				30	18	14	65	60	18	8					
ThinkPad X1 Nano	79	46	26	11	76	68	44	36	[31]	29	27												
ThinkPad E14	53		16		98	79	44	42	41	30	28												
Matebook 14	59	44	21		76	65	41	38	43	35	31	32	17		76	59	17	7					
LG Gram 14	47	30	24	12	104	68	33	31	38	25	25	32	17	16	67	58	15		16.8	□W	73	1.8	1247
ThinkPad E14	68	42	20		81	63	40	37	[34	34	31												
Envy x360 13	56		17	11	95	76	46	43	39	30	27								21.8	⎍⎍⎍	74.0	1.4	1500
Vivobook S 14X	68	40	18	10	106	75	43	40	49	39	35	28	14	11	78	52	12	4	44.8	——	86.0	3.4	1339
MagicBook 14	59	50	20		80	58	38	37	[37	36	32	33	17	10									
Envy 14	66	40	19	11	104	70	42	40	47	34	32	29	14	9	75	59	16		17.5	——	50	2.4	1277
VivoBook Flip 14	61	39	20	13	94	70	45	42	41	33	29	30	15	10					17.0	——	61.0	1.4	1462
Flex 5 14	58	31	15	13	94	78	48	45	41	33	30												
HP 14s	52	29	15	10	99	85	47	44	39	30	26	35	17		82	74	22						
ThinkPad X13 Yoga	65	43	24		68	47	33	33	35	30	24				100	61	29	11					
Swift 3	52	34	17	11	91	73	46	44	35	28	25				87	77	24	10					
Dynabook Portege X30L	70	47	23	11	96	65	40	39	44	29	27	31	18	13	69	56	17	8					
Yoga Slim 7	60	39	19	11	82	72	42	38	39	31	29	31	17	17	75	61	17	6					
Gigabyte U4 UD	70	44	22	10	110	71	43	42	[39]	33	30				83	66	18	7	11.4	——	60.0	1.5	1000
Mi Notebook Pro	70	47	23	12	114	62	43	43	26	24	22	35	19	15					21.1	——	62.0	3.3	1350
Yoga 6	67		20	14	98	75	44	42	37	29	25	30	15	10	86		22	9	15.0	——	69.4	1.4	1400
Latitude 13 7320	80	53	30	14	77	51	37	35	[40]	28	26	32	18	14	64	58	21	10	13.1	□W	63.0	1.8	700
Galaxy Book2 Pro 360 13	71	45	22	12	104	71	42	33	44	35	27	33	19	10	78	61	17	7					
Surface Pro 7 Plus	82	56	29	14	80	61	39	37	37	30	28												
Matebook X Pro	70	47	27	13	77	48	38	38	[42]	32	29	31	18	14	71	61	23	10	18.0	——	64.0	1.7	950
Yoga Slim 7i Carbon	82	52	28		80	47	40	36	40	34	29												
Surface Laptop 4 15	71	44	18	14	91	75	51	48	40	32	27												
IdeaPad 5 14	61	39	20	14	97	77	48	45	41	33	30												
Framework	76	45	22	12	109	66	41	38	41	37	30	29	16	12					27.9	——	73.0	3.1	1300
Schenker Vision 14	90	56	29	13	84	75	49	47	46	38	39	41	21	16	103	86	21	9					
Framework	98	61	32	15	122	90	63	58	63	46	41	43	23	23	118	97	20	8	29.6	——	82.0	0.5	1397
VAIO SX14	96	58	37	17	136	96	63	59	44	39	34	45	25	17	113	99	33	13	28.7	——	77.0	3.6	1250
XPS 13 Plus 9320	105	66	37	16	110	87	68	59	55	41	38	46	25	18	124	109	28	12					
Prestige 14			35	16		90	66	62	[45	37	33	51	28	28	101	89	32	12					
Yoga Slim 9i	97	63	35	16	111	88	71	63	62	46	40	50	28		121	103	27	12	35.4	——	67.0	0.4	1446
XPS 13 Plus 9320	99	62	34	14	110	85	68	61	56	43	37	45	25	25	115	102	26	11					
MateBook 14s	101	65	35	15	128	91	66	58	48	39	35	46	26	26	111	96	29	11					
IdeaPad Slim 7i Pro	101	61	35	17	[46	104	60	54	48	46	36	49	27	27	110	99	30	12	33.8	——	66.0	3.3	1250
Yoga 9	100	65	36	14	111	84	68	63	61	46	40	48	27	27	115	101	26	11					
ThinkPad T14s	120		41	25	109	90	66	57	51	39	31	59	30	22									
Zenbook Pro 14 Duo	109	68	37	16	134	100	76	69	68	49	44	51	28	28	131	116	27	11					
ThinkPad Z13	131	78	33	18	108	92	72	61	52	41	34	59	31	22	137	123	47	21					
ThinkPad T14	117	79	41	24	111	96	73	63	49	40	34	62	32	23	134	120	[47]	22					
Zenbook S 13	123		40	23	111	97	72	63	47	40	34	60	32	22	136	120	47	21					
Yoga 7 14	126	76	43	25	115	98	74	64	55	42	36	69	34	24	131	120	50	24	22.8	—	59.9	1.4	1750
median (n=158)	75	49	25	13	96	75	48	45	42	34	30	37	20	15	91	79	24	10	21.1		67	1.7	1250
minimum	36	27	12	7	36	32	31	29	21	21	19	19	11	5	50	31	10	4	8.6		50	0.4	100
maximum	131	79	46	25	136	120	76	69	68	49	44	69	34	28	137	123	53	24	44.8		89	4.2	2400
Swift 3X	108	67	35	19	70	82	51	47	40	35	29		26	18	99	90	31	13					

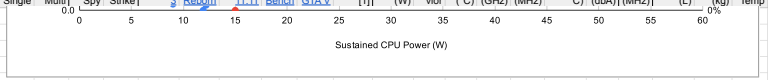
		Relative to Minimum										NBC P95+Furmark Stress							RAM	Chassis						R15		3DMark		The Witcher 3				Dota 2 Reborn				X-Plane 11.11			FFXV Bench			GTA V				NBC Witcher 3 Stress				
Unit	Processor	R15 Single	R15 Multi	3DM Time Spy	3DM Fire Strike	The Witcher 3	Dota 2 Reborn	X-Plane 11.11	FFXV Bench	GTA V	Games Mean [1]	Proc Power (W)	Behavior	CPU Temp (°C)	CPU Clock (GHz)	GPU Clock (MHz)	Max Surface Temp (°C)	Max Fan Noise (dbA)	Clock (MHz)	Volume (L)	Weight (kg)	CPU Power / Temp	CPU Power / Vol	CPU Temp / Vol	Surface Temp / Vol	Single (first run)	Multi Loop (avg)	Time Spy gfx	Fire Strike gfx	low [2]	med [3]	high [4]	ultra [5]	low [6]	med [7]	high [8]	ultra [9]	low [10]	med [11]	high [12]	low [13]	med [14]	high [15]	low [16]	med [17]	high [18]	ultra [19]	Proc Power (W)	Behavior	CPU Temp (°C)	CPU Clock (GHz)	GPU Clock (MHz)
Latitude 5411	10850H MX250	-22%	-53%	-52%	-47%	-57%	-4%	+15%	-42%		-22%	17.5+?	—	85	1.7	1367	46	46	3200	1.47	1.54			-7%	-23%	203	1055	1165	3824	50	36	21		129	109	76	68	74	57	53	41	19										
ThinkPad P14s	1185G7 T500	-18%	-67%	-33%	-48%	-37%	+3%	+16%	-32%	-9%	-12%	18.7 [4		73	1.1	100	64	39	3200	1.34	1.49	-14%	-26%	-13%	+15%	213	751	1636	3814	79	50	28	17	146	117	79	71	[49	71	39	51	24	17	148	118	41	19					
Modern 14	1165G7 MX450	-22%	-61%	-20%	-36%	-24%	+5%	+11%	-30%	+5%	-7%	21.6+?	—	89	1.5	1395	68	53	3200	1.18	1.30			+21%	+40%	202	876	1968	4689	103	60	33	20	125	109	88	82	85	38	57	56	26	15	151	135	52	24					
ThinkPad T14	1165G7 MX450LP	-15%	-62%	-33%	-40%	-28%	+1%	+8%			-6%	10.0+?	—	70	0.6	855	58	40	3200	1.34	1.48			-16%	+6%	220	859	1633	4336	98	55	32	19	126	110	83	75	70	41	59										
ZBook Firefly 14	1165G7 T500	-13%	-68%	-21%	-36%	-25%	+11%	+23%	-31%		-6%	14.9+?	—	67	1.9	1710	49	40	3200	1.24	1.41			-13%	-3%	225	710	1939	4635	96	57	31	22	133	117	101	78	76	64	56	49	25	17									
Yoga Slim 7	1065G7 MX350	-29%	-69%	-46%	-40%	-39%	+1%	+27%			-4%	14.0+?	—	93	1.5	1354	56	42	3200	0.99	1.44			+51%	+38%	184	700	1326	4332	80	47	27	16	116	112	85	77	78	65	59										
Inspiron 13 5310	11300H MX450		-64%	-45%	-26%	-16%	+13%	+2%	-11%		-3%	+? [51]	—	64	1.9	1395	58	48	4266	0.99	1.31			+4%	+43%	[52]	816	1347	5361	112	71	33	23	130	118	103	83	65	53	44	58	32									
Zenbook 14	1165G7 MX450LP	-19%	-73%	-31%	-40%	-29%	+5%	+23%		+1%	-0%	12.5+?	—	68	0.9	575	37	42	4266	1.07	1.29			+2%	-17%	210	603	1682	4371	93	59	31	18	131	111	87	80	78	58	59				143	130	51	22					
Envy 13	1165G7 MX450LP	-21%	-69%		-37%	-21%	+9%	+17%			+1%						46	43	2933	1.02	1.25					206	687		4571	112	65	35	18	133	115	92	82	72	64	51											
ZBook Firefly 14	1265U T550	-17%	-70%	-23%	-34%	-13%	+4%	+22%	-14%	+12%	+2%	32.0 [5	—	61	1.1	500	48	41	4800	1.41	1.52	+75%	+22%	-30%	-17%	215	676	1882	4816	121	73	39	20	113	104	92	84	68	64	59	60	31	22	[54	117	62	29					
XMG Core 14	1135G7 1650M	-30%	-66%	+37%	+22%	+16%	-0%	+5%		+12%	+8%	64.2 [5	—	65	1.0	1245	46	52	3200	1.32	1.44	+229%	+161%	-21%	-15%	183	756	3344	8901	139	90	54	32	111	91	88	86	61	55	49				108	95	68	38	69.9 [	—	62.0	3.3	1740
Zenbook 14X	1165G7 MX450	-17%	-60%	-7%	-21%	-6%	+27%	+53%	-0%	-4%	+14%	40.0+?	—	88	3.4		50	40	4266		1.44					216	897	2276	5753			44	24	136	123	115	105	95	82	67	70	33			50	23	37.0 [	—		4.2	1498
Yoga Slim Pro	5900HS MX450	-8%	-15%	-6%	-24%	+2%	+23%	+62%	-13%	+25%	+20%	46.3 [5	—	81	2.6	1782	56	44	4266	1.24	1.37	+91%	+100%	+5%	+11%	238	1911	2297	5540	140		46	25	136	133	106	96	99	88	71	69	33	18	172	160	66	28					
Summit E14	1185G7 1650TiMQ	-14%	-62%	+18%	+11%	+3%	+26%	+54%	+4%	+36%	+24%	49.6 [5	—	76	0.9	975	61	52	4266	1.12	1.30	+118%	+138%	+9%	+32%	224	866	2886	8114	144	76	48	25	142	118	113	103	94	81	70	72	38	26	167	157	73	37	47.0 [	—	83.0	4.6	1035
ROG Flow X13	5980HS 1650MQ	-7%	-17%		+15%	+27%	+24%	+45%	+29%		+31%	54.5 [6		69	2.0	1159	53	43	4266	1.05	1.36	+163%	+178%	+6%	+22%	243	1873		8396	168		56	33	133	120	111	106	88	78	64	91	46	33									
ThinkPad X1 Extreme	10750H 1650TiMQ	-21%	-47%	+36%	+25%	+46%	+20%	+43%			+37%	71.0 [6	—	78	2.9	1459	51	44	3200	1.66	1.71	+202%	+129%	-24%	-25%	205	1183	3332	9105	199	117	66	36	130	117	107	101	93	73	63										
Razer Blade Stealth	1165G7 1650TiMQ	-16%	-64%	+34%	+20%	+15%	+34%	+61%	+34%	+56%	+40%	60.8 [6	—	73	2.9	1050	47	46	3733	0.98	1.39	+178%	+233%	+20%	+18%	219	813	3276	8743	153	87	53	30	147	129	121	110	96	88	72	94	48	34	171	164	92	45	49.9 [	—	63.0	3.9	1658
Envy 14	1135G7 1650TiMQ	-24%	-59%	+22%	+12%	+68%	+22%	+40%	+28%	+48%	+41%	78.9 [6	—	85	3.7	690	46	49	3200	1.26	1.63	+209%	+236%	+9%	-12%	198	919	2982	8131	156	145	88	45	128	116	109	105	87	74	63	90	46	33	156	145	88	45	48.8 [	—	62.0	4.1	1440
IdeaPad 5 Pro 16	5800H 1650M	-14%	-14%	+24%	+14%	+30%	+25%	+58%		+55%	+42%	66.8 [6	—	95	3.0	870	52	53	3200	1.56	1.98	+133%	+129%	-2%	-19%	224	1945	3038	8287	175		58	33	128	122	112	108	97	85	70				171	162	92	45					
Vivobook Pro 14	5600H 3050 35W	-16%	-35%	+84%	+58%	+67%	+26%	+50%		+99%	+61%	60.6 [6	—	70	1.4	1261	50	56	3200	1.36	1.47	+190%	+139%	-18%	-11%	218	1460	4497	11485			67	48	130	124	113	108	91	80	67				172		115	60					
Vision 14	11370H 3050TI 35W	-11%	-53%	+93%	+52%	+88%	+35%	+66%	+60%	+66%	+63%	64.9 [6	—	84	3.2	958	56	50	3200	1.04	1.13	+156%	+235%	+31%	+31%	232	1053	4721	11055	163	154	104	52	148	132	117	113	98	88	76	110	58	41	163	154	104	52	60.0 [	—	65.0	4.5	1294
Surface Laptop Studio	11370H 3050TI 50W	-14%	-58%	+100%	+60%	+74%	+29%	+68%	+66%	+84%	+64%	70.0 [7	—	74	2.7	1314	42	47	4266	1.40	1.83	+213%	+168%	-15%	-27%	223	947	4893	11656	212	145	85	42	137	121	115	111	101	90	75	101	64	45	170	163	111	63	63.9 [	—	61.6	3.8	1408
Precision 5470	12900H A1000 40W	-5%	-18%	+67%	+50%	+80%	+46%	+80%	+61%	+80%	+69%	55.7 [7	—	67	1.0	1027	42	50	5200	1.24	1.62	+177%	+141%	-13%	-18%	248	1847	4101	10914	244	148	82	43	161	148	112	132	119	95	76	105	59	43	168	160	114	59	62.6 [	—	82.0	0.5	1380
Magicbook 14	12500H 2050 60W	-8%	-17%	+61%	+46%	+67%	+52%	+83%	+66%	+81%	+70%	70.0 [7	—	73	1.7	1284	52	51	4800	1.18	1.56	+220%	+217%	-1%	+6%	240	1875	3938	10621	217	141	78	40	159	144	138	130	117	94	82	113	61	43	183	176	112	56	61.0 [	—	64.0	2.1	1717
Zephyrus G14	4900HS 2060MQ	-26%	-26%	+139%	+115%	+110%	+20%	+55%	+125%		+77%	64.5 [7	—	82	3.3	1054	46	54	3200	1.29	1.60	+163%	+168%	+2%	-12%	193	1655	5850	15650	232	168	101	58	121	115	108	104	95	82	70	141	83	62					88.4 [	—	90.1	3.2	1413
ROG Flow Z13	12900H 3050TI 40W	+6%	-3%	+65%	+46%	+65%	+70%	+113%		+81%	+82%	56.2 [7		74	1.0	929	48	41	5200	0.74	1.19	+153%	+307%	+61%	+59%	275	2190	4041	10600	225	142	74	37	187	172	151	137	134	114	93				181	174	114	55	[80]	—	60.0	3.8	972
Inspiron 14 Plus 7420	12700H 3050 50W	-3%	-16%	+84%	+67%	+81%	+62%	+119%	+77%	+84%	+85%	50.0 [8	—	69	0.8	1762	40	52	4800	1.35	1.67	+142%	+99%	-18%	-28%	253	1900	4503	12125	222	150	84	46	174	159	145	134	138	117	94	114	66	47	182	161	112	62	68.0 [	—	80.0	2.5	1582
Vision 14	12700H 3050TI 35W	+1%	-12%	+95%	+70%	+125%	+30%	+85%	+93%	+93%	+85%	60.0 [8	—	84	1.6	631	57	49	3200	1.10	1.31	+139%	+191%	+22%	+26%	263	1988	4773	12349	249	264	92	44	148	122	114	109	112	100	82	131	71	50	171	163	121	68					
Zephyrus G14	5900HS 3060 80W	-10%	-7%	+195%	+153%	+150%	+30%	+51%	+137%	+139%	+101%	95.4 [8		95	3.6	1410	62	52	3200	1.43	1.68	+233%	+257%	+7%	+6%	235	2088	7234	18436	267		128	68	133	132	115	110	97	83	62	139	89	69	172		134	80	93.7 [	—	84.3	3.3	1560
Razer Blade 14	5900HX 3070 100W	-24%	-9%	+299%	+221%	+209%	+26%	+40%	+185%	+137%	+119%	109.6 [	—	90	4.2	1635	52 [87]	52	3200	1.18	1.77	+308%	+397%	+22%	+6%	197	2052	9768	23373	288		164	89	127	126	112	107	85	75	63	139	114	88	169		132	80	119.1	—	82.9	3.9	1740
Alienware x14	12700H 3060 75W	-3%	-2%	+203%	+165%	+162%	+78%		+157%	+143%	+135%	90.5 [8	—	72	1.5	1233	51	52	5200	1.22	1.79	+319%	+295%	-6%	+2%	252	2194	7425	19277	267	239	144	58	184	168	161	153				151	97	74	185	181	165	89	89.1 [	—	61.5	1.8	1345
Zephyrus G14	6900HS 6800S 105W	-2%	-9%	+278%	+276%	+257%	+44%	+14%	+241%	+174%	+146%	89.3 [9		93	3.0		55	45	4800	1.38	1.71	+220%	+246%	+8%	-3%	254	2040	9246	27397		273	164	94	147		128	107	73	60	50		122	90		173	162	88	70.0 [	—	74.1	2.2	1691
Razer Blade 14	6900HX 3070Ti 100W	-6%	+1%	+298%	+263%	+265%	+40%	+87%	+230%	+142%	+153%	142.0 [	—	93	3.7	780	43	42	4800	1.18	1.78	+410%	+543%	+26%	-12%	245	2265	9753	26398	386	300	188	95	146	131	126	121	115	101	82	177	129	98	178	173	158	93	132.8	—	80.6	3.7	1350
GE76 Raider	12900HK 3080TI 175W	+6%	+21%	+444%	+368%	+407%	+81%	+149%	+387%	+238%	+252%	184.1 [	—	74	2.2	1770	47	53	4800	2.93	3.02	+729%	+236%	-59%	-61%	275	2722	13324	34041		384	247	126	186	172	164	156	155	133	109		171	131		184	176	125	203.0	—	78.0	4.4	1710
averages																																																				
amd (n=35)	^[45].*U$	+28%	+157%	+26%	+37%	+67%	+112%	+66%	+78%	+137%	+86%	19.7		70	2.5	801	45	39		1.21	1.40		-11%	-5%	-8%	191	1214	1030	3374	62	37	19	13	100	80	49	46	41	32	29	33	16	11	92	81	25	11					
intel (n=81)	^11.*$	+40%	+59%	+70%	+87%	+105%	+89%	+69%	+128%	+118%	+96%	22.1		69	1.5	774	46	40		1.06	1.26		+13%	+8%	+10%	210	749	1392	4596	79	51	27	13	87	68	46	43	41	34	30	37	21	16	86	73	24	10					
amd vega 6 (n=6)	^4[56].*U$	+16%	+104%	+6%	+20%	+42%	+100%	+59%	+41%		+66%	22.7		74	3.0	966	43	39		1.08	1.39		+13%	+10%	-1%	174	962	868	2946	54	35	16	11	96	76	45	42	39	30	27	28	14	9									
intel 80eu (n=38)	^(11|12)([34	+36%	+76%	+50%	+62%	+76%	+92%	+61%	+100%	+93%	+82%	20.0		67	1.3	702	44	40		1.08	1.24		+3%	+6%	+6%	203	832	1231	3989	68	43	23	12	92	69	45	42	41	31	28	34	18	14	79	68	20	8					
amd vega 7 (n=19)	^(47|5[56]).	+26%	+155%	+25%	+36%	+64%	+110%	+66%	+76%	+133%	+86%	20.4		72	2.5	810	45	38		1.29	1.44		-14%	-9%	-14%	189	1206	1029	3334	61	35	19	13	99	79	48	45	41	32	28	33	16	11	92	82	25	10					
amd vega 8 (n=11)	^(4[89]|5[78	+40%	+202%	+38%	+50%	+86%	+126%	+77%	+92%	+152%	+103%	17.4		64	2.3	743	46	39		1.13	1.33		-17%	-7%	-0%	209	1427	1133	3679	68	43	21	14	106	85	52	49	44	35	30	35	18	12	97	88	27	11					
intel 96eu (n=76)	^(11|12)([68	+48%	+95%	+85%	+103%	+123%	+105%	+79%	+150%	+132%	+113%	23.6		71	1.5	739	47	41		1.04	1.26		+24%	+13%	+13%	222	920	1521	4986	86	55	29	14	94	73	51	47	44	36	32	40	22	18	95	81	24	10					
intel 12th (n=31)	^12	+56%	+180%	+84%	+95%	+115%	+131%	+88%	+145%	+123%	+119%	25.4		73	1.3	658	45	42		1.05	1.27		+32%	+17%	+9%	234	1320	1507	4807	83	53	29	13	108	81	57	51	47	36	33	40	22	18	99	84	21	9					
amd 6000 (n=7)	^6	+59%	+249%	+145%	+147%	+189%	+150%	+88%	+212%	+292%	+183%	24.3		75	2.1	654	50	39		1.07	1.32		+22%	+16%	+17%	238	1647	2011	6084	116	65	34	20	109	90	66	57	47	37	32	55	28	20	134	117	46	20					
3200 (n=60)	3200	+35%	+117%	+41%	+49%	+72%	+97%	+70%	+92%	+99%	+83%	22.3		70	2.0	826	44	40		1.23	1.38		-1%	-7%	-11%	203	1022	1159	3671	66	42	21	12	94	72	45	42	42	34	30	33	17	13	83	70	20	8					
3200 intel (n=27)		+39%	+61%	+52%	+60%	+76%	+78%	+68%	+100%	+77%	+78%	22.6		68	1.6	806	44	39		1.20	1.34		+3%	-7%	-9%	208	758	1246	3937	68	45	22	11	86	64	41	39	40	34	30	33	18	14	76	63	18	7					
3200 amd (n=26)		+25%	+148%	+23%	+34%	+62%	+109%	+64%	+74%	+134%	+82%	20.0		71	2.6	847	45	39		1.25	1.42		-13%	-7%	-12%	187	1172	1013	3298	60	35	19	13	98	78	48	45	41	32	28	32	16	11	89	80	25	11					
3200 amd vega 6 (n=5)		+16%	+99%	+5%	+19%	+40%	+101%	+59%	+41%		+65%	23.8		76	3.2	1088	43	39		1.10	1.41		+17%	+11%	-5%	174	939	864	2928	52	33	16	11	97	76	45	42	40	30	27	28	14	9									
3200 intel 80eu (n=15)		+34%	+60%	+39%	+43%	+62%	+71%	+62%	+85%	+58%	+67%	21.0		65	1.4	766	42	40		1.25	1.41		-9%	-15%	-16%	200	756	1138	3509	63	40	20	11	85	61	39	37	40	32	28	30	16	13	69	57	16	7					
3200 amd vega 7 (n=17)		+24%	+152%	+25%	+35%	+61%	+108%	+63%	+74%	+129%	+83%	19.8		72	2.4	765	45	38		1.29	1.43		-17%	-10%	-15%	186	1188	1023	3314	60	35	19	12	97	78	48	45	40	32	28	32	16	11	89	80	25	10					
3200 intel 96eu (n=17)		+50%	+84%	+68%	+77%	+95%	+95%	+82%	+116%	+93%	+94%	24.0		70	1.6	799	45	41		1.17	1.31		+13%	-1%	-4%	224	871	1375	4349	76	50	24	12	94	70	46	43	46	36	32	36	19	15	87	71	19	8					
3200 amd vega 8 (n=5)		+43%	+217%	+40%	+48%	+86%	+129%	+83%	+93%	+154%	+109%	17.8		66	2.6	1022	48	38		1.25	1.37		-23%	-15%	-7%	213	1497	1148	3648	69	43	21	14	109	87	52	48	45	36	32	35	17	12	97	91	26	11					
4266 (n=95)	3733	+45%	+115%	+83%	+99%	+122%	+112%	+75%	+151%	+152%	+116%	22.4		70	1.5	707	47	40		1.01	1.24		+20%	+15%	+17%	218	1013	1501	4903	86	54	29	14	97	76	53	48	44	35	31	42	23	18	99	86	27	11					
4266 amd (n=9)		+37%	+183%	+31%	+46%	+81%	+122%	+72%	+91%	+148%	+97%	18.9		66	2.3	669	44	39		1.07	1.33		-6%	-0%	+2%	204	1335	1079	3585	67	41	20	14	104	84	51	48	43	34	29	36	18	12	100	87	27	11					
4266 intel (n=54)		+41%	+58%	+79%	+100%	+120%	+95%	+69%	+144%	+138%	+105%	21.9		69	1.5	757	47	41		1.00	1.22		+18%	+15%	+19%	211	744	1471	4926	86	54	29	14	88	70	48	45	42	34	30	40	22	17	91	78	26	11					
4266 amd vega 6 (n=1)		+14%	+127%	+7%	+23%	+50%	+98%	+55%			+68%	17.0		64	2.0	480	46	40		0.96	1.27		-5%	+7%	+16%	170	1072	882	3020	60	37	17		91	75	47	43	38	30	27										

		Relative to Minimum										NBC P95+Furmark Stress							RAM	Chassis						R15		3DMark		The Witcher 3				Dota 2 Reborn				X-Plane 11.11				FFXV Bench			GTA V				NBC Witcher 3 Stress					
Unit	Processor	R15 Single	R15 Multi	3DM Time Spy	3DM Fire Strike	The Witcher 3	Dota 2 Reborn	X-Plane 11.11	FFXV Bench	GTA V	Games Mean [1]	Proc Power (W)	Behavior	CPU Temp (°C)	CPU Clock (GHz)	GPU Clock (MHz)	Max Surface Temp (° C)	Max Fan Noise (dbA)	Clock (MHz)	Volume (L)	Weight (kg)	CPU Power / Temp	CPU Power / Vol	CPU Temp / Vol	Surface Temp / Vol	Single (first run)	Multi Loop (avg)	Time Spy gfx	Fire Strike gfx	low [2]	med [3]	high [4]	ultra [5]	low [6]	med [7]	high [8]	ultra [9]	low [10]	med [11]	high [12]	low [13]	med [14]	high [15]	low [16]	med [17]	high [18]	ultra [19]	Proc Power (W)	Behavior	CPU Temp (°C)	CPU Clock (GHz)	GPU Clock (MHz)
4266 intel 80eu (n=23)		+37%	+87%	+58%	+75%	+85%	+104%	+60%	+110%	+118%	+91%	19.4		69	1.3	656	45	40		0.96	1.14		+11%	+20%	+21%	205	882	1294	4302	72	45	25	12	96	74	49	45	41	31	28	36	20	14	86	76	22	9					
4266 amd vega 8 (n=6)		+37%	+190%	+36%	+51%	+85%	+124%	+72%	+91%	+149%	+98%	17.1		64	2.0	558	44	39		1.04	1.29		-12%	-1%	+5%	205	1370	1119	3705	67	43	21	14	104	83	52	49	42	34	29	36	18	12	97	83	28	12					
4266 amd vega 7 (n=2)		+46%	+188%	+32%	+43%	+88%	+131%	+82%	+92%	+147%	+110%	25.4		74	3.2	1525	43	39		1.22	1.46		+11%	-3%	-14%	219	1362	1080	3508	68		21	15	114	89	50	47	46	35	31	34	17	12	102	91	26	11					
4266 intel 96eu (n=59)		+48%	+98%	+91%	+110%	+132%	+109%	+78%	+160%	+142%	+118%	23.5		71	1.4	722	47	41		1.00	1.25		+27%	+17%	+18%	221	935	1565	5169	89	57	31	14	94	73	53	49	44	36	32	42	23	18	97	84	25	11					
3200 amd vega 6 (n=5)		+16%	+99%	+5%	+19%	+40%	+101%	+59%	+41%		+65%	23.8		76	3.2	1088	43	39		1.10	1.41		+17%	+11%	-5%	174	939	864	2928	52	33	16	11	97	76	45	42	40	30	27	28	14	9									
3200 intel 80eu (n=15)		+34%	+60%	+39%	+43%	+62%	+71%	+62%	+85%	+58%	+67%	21.0		65	1.4	766	42	40		1.25	1.41		-9%	-15%	-16%	200	756	1138	3509	63	40	20	11	85	61	39	37	40	32	28	30	16	13	69	57	16	7					
4266 amd vega 6 (n=1)		+14%	+127%	+7%	+23%	+50%	+98%	+55%			+68%	17.0		64	2.0	480	46	40		0.96	1.27		-5%	+7%	+16%	170	1072	882	3020	60	37	17		91	75	47	43	38	30	27												
3200 amd vega 7 (n=17)		+24%	+152%	+25%	+35%	+61%	+108%	+63%	+74%	+129%	+83%	19.8		72	2.4	765	45	38		1.29	1.43		-17%	-10%	-15%	186	1188	1023	3314	60	35	19	12	97	78	48	45	40	32	28	32	16	11	89	80	25	10					
4266 intel 80eu (n=23)		+37%	+87%	+58%	+75%	+85%	+104%	+60%	+110%	+118%	+91%	19.4		69	1.3	656	45	40		0.96	1.14		+11%	+20%	+21%	205	882	1294	4302	72	45	25	12	96	74	49	45	41	31	28	36	20	14	86	76	22	9					
3200 intel 96eu (n=17)		+50%	+84%	+68%	+77%	+95%	+95%	+82%	+116%	+93%	+94%	24.0		70	1.6	799	45	41		1.17	1.31		+13%	-1%	-4%	224	871	1375	4349	76	50	24	12	94	70	46	43	46	36	32	36	19	15	87	71	19	8					
4266 amd vega 8 (n=6)		+37%	+190%	+36%	+51%	+85%	+124%	+72%	+91%	+149%	+98%	17.1		64	2.0	558	44	39		1.04	1.29		-12%	-1%	+5%	205	1370	1119	3705	67	43	21	14	104	83	52	49	42	34	29	36	18	12	97	83	28	12					
3200 amd vega 8 (n=5)		+43%	+217%	+40%	+48%	+86%	+129%	+83%	+93%	+154%	+109%	17.8		66	2.6	1022	48	38		1.25	1.37		-23%	-15%	-7%	213	1497	1148	3648	69	43	21	14	109	87	52	48	45	36	32	35	17	12	97	91	26	11					
4266 amd vega 7 (n=2)		+46%	+188%	+32%	+43%	+88%	+131%	+82%	+92%	+147%	+110%	25.4		74	3.2	1525	43	39		1.22	1.46		+11%	-3%	-14%	219	1362	1080	3508	68		21	15	114	89	50	47	46	35	31	34	17	12	102	91	26	11					
4266 intel 96eu (n=59)		+48%	+98%	+91%	+110%	+132%	+109%	+78%	+160%	+142%	+118%	23.5		71	1.4	722	47	41		1.00	1.25		+27%	+17%	+18%	221	935	1565	5169	89	57	31	14	94	73	53	49	44	36	32	42	23	18	97	84	25	11					





		Relative to Minimum										NBC P95+Furmark Stress							RAM	Chassis						R15		3DMark		The Witcher 3				Dota 2 Reborn				X-Plane 11.11			FFXV Bench			GTA V				NBC Witcher 3 Stress				
Unit	Processor	R15 Single	R15 Multi	3DM Time Spy	3DM Fire Strike	The Witcher 3	Dota 2 Reborn	X-Plane 11.11	FFXV Bench	GTA V	Games Mean [1]	Proc Power (W)	Behavior	CPU Temp (°C)	CPU Clock (GHz)	GPU Clock (MHz)	Max Surface Temp (° C)	Max Fan Noise (dbA)	Clock (MHz)	Volume (L)	Weight (kg)	CPU Power / Temp	CPU Temp / Vol	Surface Temp / Vol	Single (first run)	Multi Loop (avg)	Time Spy gfx	Fire Strike gfx	low [2]	med [3]	high [4]	ultra [5]	low [6]	med [7]	high [8]	ultra [9]	low [10]	med [11]	high [12]	low [13]	med [14]	high [15]	low [16]	med [17]	high [18]	ultra [19]	Proc Power (W)	Behavior	CPU Temp (°C)	CPU Clock (GHz)	GPU Clock (MHz)



[1] igpu: relative to min igpu
dgpu: relative to max igpu

[2] 1024x768 Low

[3] 768p Med

[4] 1080p High

[5] 1080p Ultra

[6] 720p Min

[7] 768p Med

[8] 1080p High

[9] 1080p Ultra

[10] 720p Low

[11] 1080p Med

[12] 1080p High

[13] 720p Lite

[14] 1080p Standard

[15] 1080p High

[16] 1024x768 Low

[17] 768p Normal

[18] 1080p High

[19] 1080p Highest

[20] Cinebench R15 Multi

[21] 19.5

[22] 8GB single-channel

[23] 26.5

[24] 17.1

[25] 15.1

[26] 14.2

[27] estimated

[28] 40.2

[29] https://www.ultrabookreview.com/wp-content/uploads/2020/07/stress-3dmark2.jpg

[30] Prime95 only

[31] 28.8

[32] 16GB single-channel

[33] 16GB single-channel

[34] 29.3

[35] 8+4 GB flex mode

[36] 8+4 GB flex mode

[37] 29.4

[38] https://youtu.be/awPI4RzKMvY?t=332

[39] 26.8

[40] 20.6

[41] fanless

[42] 23.2

[43] 16GB single-channel

[44] 16GB single-channel

[45] 26.3

[46] 87

[47] 99.1

[48] 10 CPU + 8.7 GPU

[49] 47.4

[50] 16GB single-channel

[51] https://www.notebookcheck.com/fileadmin/Notebooks/Dell/Inspiron_13_5310-NJ24J/stress_screen.PNG

[52] 123

[53] 12 CPU + 20 GPU

[54] 116

[55] 14.6 CPU + 49.6 GPU

[56] 20.1 CPU + 49.8 GPU

[57] 15 CPU + 22 GPU

[58] 23.18 CPU + 23.14 GPU

[59] 14.9 CPU + 34.7 GPU

[60] 21.8 CPU + 25.2 GPU

[61] 20.0 CPU + 34.5 GPU

[62] 36 CPU + 35 GPU

[63] 26.1 CPU + 34.7 GPU

[64] 15.1 CPU + 34.8 GPU

[65] 44.3 CPU + 34.5 GPU

[66] 13.9 CPU + 34.8 GPU

[67] 33.0 CPU + 33.8 GPU

[68] 25.8 CPU + 34.8 GPU

[69] 30 CPU + 34.9 GPU

[70] 13.7 CPU + 45.3 GPU

[71] 25 CPU + 45 GPU

[72] 15.4 CPU + 48.5 GPU

[73] 20.9 CPU + 34.8 GPU

[74] 26.8 CPU + 35.8 GPU

[75] 25 CPU + 45 GPU

[76] 9 CPU + 52 GPU

[77] ~36 CPU + 28.5 GPU

[78] 23.7 CPU + 64.7 GPU
https://www.ultrabookreview.com/37852-asus-zephryus-g14-ryzen-9-4900hs/

[79] 21.4 CPU + 34.8 GPU

[80] 21.8 CPU + 34.9 GPU

[81] 20 CPU + 30 GPU

[82] 18 CPU + 50 GPU

[83] 25 CPU + 35 GPU

[84] 33.2 CPU + ~62.2 GPU

[85] 13.8 CPU + 79.9 GPU

[86] 44.6 CPU + 65 GPU

[87] during Witcher stress

[88] 25.6 CPU + 93.5 GPU

[89] 30.57 CPU + 59.88 GPU

[90] 17.19 CPU + 71.91 GPU

[91] 29.3 CPU + 60W GPU (?)

[92] 14 CPU + 56 GPU

[93] 52 CPU + 90 GPU

[94] 31.8 CPU + 101 GPU

[95] 45 CPU + 139.1 GPU

[96] 44.46 CPU + 158.5 GPU