Audio Interface LLP Data Base :

RME HDSPe AIO Pro : Driver 4.35 : LLP Rating – 10.00					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	136	000	100	0.839 / 1.633	2.494**
064	153	200	220	1.565 / 2.358	3.946**
128	160	300	340	3.016 / 3.810	6.848**
256	168	540	540	5.918 / 6.712	12.653**
512		720	720	11.723/12.517	24.263**
Total	**617**	**1760**	**1920**		**50.204/47.710**
%	1.00	1.00	1.00		1.00

Optimize Multiclient Mixing – Off
** RTL Calculated Via Utility

RME HDSPe AES/ADI8QS : Driver 3.24 : LLP Rating – 9.44					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	130	000	100	.794/1.519*	2.947**
064	149	200	220	1.519/2.245*	4.399**
128	155	300	340	2.971/3.696*	7.301**
256	158	540	540	5.873/6.599*	13.100**
512		720	720	11.678/12.404*	24.710**
Total	**593**	**1760**	**1920**		**52.457**
%	.96	1.0	1.0		.96

Optimize Multiclient Mixing – Off
* I/O not reporting AD/DA
** RTL Calculated Via Utility

Lynx AES 16e / Aurora 16 : Driver 2.19e : LLP Rating – 9.21					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	104	000	000	0.771/0.794*	2.132**
064	132	160	200	1.497/1.519*	3.582**
128	144	320	360	2.948/2.971*	6.486**
256	151	480	500	5.850/5.873*	12.289**
512		640	660	11.655/11.678*	23.899**
Total	**531**	**1600**	**1700**		**48.388**
%	.86	.90	.89		1.04

Double Playback Buffering – Off
* I/O not reporting AD/DA
** RTL Calculated Via Utility

RME Fireface UFX+ TB : Driver 1.12 : LLP Rating – 8.83					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	113	000	000	1.247/1.315	2.572**
064	141	180	200	1.973/2.041	4.024**
128	153	260	280	3.424/3.492	6.926**
256	159	460	480	6.327/6.395	12.725**
512		680	680	12.132/12.200	24.341**
Total	**566**	**1580**	**1640**		**50.588**
%	.91	.89	.85		.99

** RTL Calculated Via Utility

Antelope Discrete 8 TB : Driver 1.03.86 : LLP Rating – 8.78					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	113	000	000	0.771/0.839*	2.540**
064	138	180	200	1.497/1.565*	3.991**
128	147	260	280	2.948/3.016*	6.893**
256	154	460	480	5.850/5.918*	12.698**
512		680	680	11.665/11.723*	24.308**
Total	**552**	**1580**	**1640**		**50.430**
%	.89	.89	.85		.99

* I/O not reporting AD/DA
** RTL Calculated Via Utility

Lynx Aurora LT-TB : Driver 2.23i : LLP Rating 8.77					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	101	000	000	1.134/1.088	2.222**
064	136	160	180	1.859/1.814	3.673**
128	147	240	260	3.311/3.265	6.576**
256	155	440	460	6.213/6.168	12.381**
512		680	680	12.018/11.973	23.991**
Total	**539**	**1520**	**1580**		**48.843**
%	.87	.86	.82		1.02

** RTL Calculated Via Utility

RME Fireface UFX+ USB3 : Driver 0.9590 : LLP Rating - 8.48					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	120	000	000	1.111/2.063	3.187**
064	141	180	200	1.837/2.789	4.646**
128	153	280	300	3.288/4.24	7.548**
256	157	480	500	6.19/7.143	13.353**
512		680	680	11.995/12.948	24.956**
Total	**571**	**1620**	**1680**		**53.69**
%	.92	.92	.87		.93

** RTL Calculated Via Utility

RME HDSPe AIO : Driver 3.024 : LLP Rating – 8.39					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	130	000	100	1.746 / 2.517	4.263
064	149	200	220	2.472 / 3.243	5.715
128	155	300	340	3.923 / 4.694	8.617
256	158	540	540	6.825 / 7.596	14.421
512		720	720	12.630/13.401	26.031
Total	**593**	**1760**	**1920**		**59.047**
%	.95	1.0	1.0		.85

Optimize Multiclient Mixing – Off

Presonus Quantum : Driver UC 2.1.1 : LLP Rating - 8.30					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	100	000	000	0.907/1.088	2.085**
064	125	160	180	1.633/1.814	3.533**
128	135	240	260	3.084/3.265	6.434**
256	141	420	440	5.986/6.168	12.245**
512		600	600	11.791/11.973	23.853**
Total	**501**	**1420**	**1480**		**48.15**
%	.81	.80	.78		1.04

** RTL Calculated Via Utility

Lynx TWO-C : Driver 2.19 : LLP Rating – 8.29					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	130	000	000	2.222/1.633	3.855
064	143	200	240	2.948/2.358	5.306
128	152	300	360	4.399/3.810	8.209
256	160	500	540	7.302/6.712	14.014
512		620	700	13.107/12.517	25.624
Total	**585**	**1620**	**1840**		**57.008**
%	.94	.92	.96		.88

Double Playback Buffering – Off

RME Digiface Dante-RedNet A16R : Driver 0.973 : LLP Rating - 8.08					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	126	000	000	1.111/2.063*	3.832**
064	141	200	220	1.837/2.789*	5.283**
128	153	280	300	3.288/4.24*	8.186**
256	155	480	500	6.19/7.143*	13.991**
512		680	680	11.995/12.948*	25.601**
Total	**575**	**1640**	**1700**		**56.89**
%	.93	.92	.88		.88

* I/O not reporting AD/DA

** RTL Calculated Via Utility

Focusrite RedNet PCIeR-A16R : Driver 0.973 : LLP Rating – 7.92					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	121	000	000	1.451/1.451*	4.082**
064	142	200	220	2.177/2.177*	5.533**
128	154	280	300	3.628/3.628*	8.435**
256	160	480	500	6.531/6.531*	14.240**
512		680	680	12.336/12.336*	25.850**
Total	**577**	**1640**	**1700**		**58.14**
%	.93	.92	.88		.86

* I/O not reporting AD/DA
** RTL Calculated Via Utility

MOTU 424 : 24 I/O : Driver 1.6.9.5 : LLP Rating – 7.68					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	115	000	000	1.224/1.247*	3.673**
064	135	100	180	1.950/1.973*	5.125**
128	147	260	300	3.401/3.424*	8.027**
256	152	500	520	6.304/6.327*	13.832**
512		620	620	12.109/12.132*	25.442**
Total	**549**	**1480**	**1620**		**56.099**
%	.88	.84	.84		.89

* I/O not reporting AD/DA
** RTL Calculated Via Utility

RME Babyface Pro : Driver 1.099 : LLP Rating – 7.59					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	122	120	160	1.973 / 2.358	4.325**
128	144	260	280	3.424 / 3.810	7.242**
256	151	500	520	6.327 / 6.712	13.047**
512		620	620	12.132/12.517	24.644**
Total	**417**	**1500**	**1580**		**49.258**
%	.67	.85	.82		.97

** RTL Calculated Via Utility

UA Apollo Twin Mk II : Driver 9.30 : LLP Rating - 7.54					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	090	000	000	*2.653/1.293	3.946
064	125	180	200	*3.379/2.018	5.397
128	144	260	280	*4.830/3.469	8.299
256	157	460	480	*7.732/6.372	14.104
512		680	680	*13.537/12.177	25.714
Total	**516**	**1580**	**1640**		**57.46**
%	.83	.89	.85		0.87

*Input Delay Compensation Off

RME Fireface UCX FW : Driver 3.118 : LLP Rating – 7.45					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	139	180	220	1.927 / 3.220	5.154**
128	145	280	300	3.379 / 4.671	8.057**
256	148	500	520	6.281 / 7.574	13.862**
512		620	620	12.0860/13.379	25.471**
Total	**432**	**1580**	**1660**		**52.544**
%	.70	.89	.87		.90

** RTL Calculated Via Utility

RME Fireface UCX USB : Driver 1.01 : LLP Rating – 7.42					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	118	120	180	2.086 / 2.472	4.565**
128	140	260	280	3.537 / 3.923	7.467**
256	148	500	520	6.446 / 6.825	13.268**
512		620	620	12.245/12.630	24.882**
Total	**406**	**1500**	**1600**		**50.182**
%	.65	.85	.83		.95

** RTL Calculated Via Utility

ESI Julia XTe : Driver 1.14 : LLP Rating – 7.27					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	105	120	140	1.451*/1.451*	4.138**
128	136	240	260	2.902*/2.902*	7.076**
256	160	480	480	5.805*/5.805*	13.18**
512		600	600	11.610*/11.610*	24.745
Total	**401**	**1440**	**1500**		**49.139**
%	.65	.82	.78		0.97

* I/O reported latencies are nominal
** RTL Calculation by RTL Utility

Mackie Onyx BlackBird : Driver 4.1.0 : LLP Rating – 7.22					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	85	000	000	1.224/1.905*	3.605**
064	116	80	180	1.905/2.630*	5.061**
128	140	260	280	3.401/4.082*	7.966**
256	143	480	500	6.304/6.984*	13.676**
512		600	600	12.109/12.789*	25.376**
Total	**484**	**1420**	**1560**		**55.684**
%	.78	.80	.81		.90

* I/O not reporting AD/DA
** RTL Calculated Via Utility

UA Apollo X8 : Driver 9.90 : LLP Rating - 7.21					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	097	000	000	*2.653/1.293	4.739
064	126	180	200	*3.379/2.018	6.190
128	144	280	300	*4.830/3.469	9.093
256	159	480	500	*7.732/6.372	14.898
512		680	680	*13.537/12.177	26.508
Total	**526**	**1620**	**1680**		**61.428**
%	.85	.92	.87		.82

*Input Delay Compensation Off

RME Fireface UFX FW : Driver 3.034 : LLP Rating – 7.19					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	140	180	220	1.950 / 3.696	5.646
128	145	280	300	3.401 / 5.147	8.548
256	148	500	520	6.304 / 8.050	14.354
512		620	620	12.109/13.855	25.964
Total	**433**	**1580**	**1660**		**54.512**
%	.70	.89	.86		.87

RME Fireface UFX USB : Driver 0.984 : LLP Rating – 7.08					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	118	120	180	2.063 / 2.993	5.056
128	140	240	260	3.515 / 4.444	7.959
256	148	500	520	6.417 / 7.347	13.764
512		620	620	12.222/13.152	25.374
Total	**406**	**1480**	**1580**		**52.153**
%	.65	.84	.82		.91

AVID Mbox Pro 3 : Driver 1.0.11 : LLP Rating – 6.97					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	134	140	200	2.517/2.517*	5.895**
128	148	280	300	3.968/3.968*	8.775**
256	152	500	520	6.871/6.871*	14.603**
512		620	620	12.676/12.676*	26.212**
Total	**434**	**1540**	**1640**		**55.485**
%	.70	.87	.85		.86

* I/O not reporting AD/DA
** RTL Calculated Via Utility

RME Fireface 800 : Driver 3.034 : LLP Rating – 6.93					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	140	160	220	2.472 / 3.628	6.100
128	145	280	300	3.923 / 5.079	9.002
256	148	500	520	6.825 / 7.982	14.807
512		620	620	12.630/13.787	26.417
Total	**433**	**1560**	**1660**		**56.326**
%	.70	.88	.86		.84

RME Babyface : Driver 0.984 : LLP Rating – 6.88					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	123	140	180	2.698/2.880	5.578
128	140	260	280	4.150/4.331	8.481
256	152	500	520	7.052/7.234	14.286
512		600	600	12.857/13.039	25.896
Total	**415**	**1500**	**1580**		**54.241**
%	.67	.85	.82		.87

Focusrite Saffire Pro 24 : Driver 4.0.0 : LLP Rating – 6.86					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	91	000	000	1.224/1.905*	4.444**
064	124	140	160	1.905/2.630*	5.897**
128	140	260	280	3.401/4.082*	8.800**
256	148	480	500	6.304/6.984*	14.605**
512		600	600	12.063/14.059*	26.215**
Total	**503**	**1480**	**1540**		**59.961**
%	.81	.84	.80		.84

* I/O not reporting AD/DA
** RTL Calculated Via Utility

M-Audio Profire 610 : Driver 6.09 : LLP Rating – 6.76					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	126	160	200	3.152 / 3.152	6.304
128	148	280	300	4.603 / 4.603	9.206
256	152	500	520	7.506 / 7.506	15.012
512		620	620	13.311/13.311	26.622
Total	**426**	**1560**	**1640**		**57.144**
%	.69	.88	.85		.83

Presonus Firestudio Mobile : Driver 4.0.0 : LLP Rating – 6.65					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	91	000	000	1.224/1.905*	4.715**
064	121	140	160	1.905/2.630*	6.161**
128	140	260	280	3.401/4.082*	9.062**
256	148	480	500	6.304/6.984*	14.867**
512		600	600	12.063/14.059*	26.915**
Total	**500**	**1480**	**1540**		**61.720**
%	.81	.84	.80		.81

* I/O not reporting AD/DA
** RTL Calculated Via Utility

Steinberg AXR4U : Driver 2.1.6 : LLP Rating – 6.46					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	116	000	000	2.200/2.902*	5.147**
064	132	160	180	2.925/3.628*	6.599**
128	147	260	280	4.376/6.077*	10.499**
256	157	440	460	7.279/8.980*	16.304**
512		660	660	13.084/15.782*	28.912**
Total	**552**	**1520**	**1580**		**67.461**
%	.92	.86	.83		.74

* Mode – Low Latency
** RTL Calculated Via Utility

Presonus Studio 1824c : Driver 5.28 : LLP Rating – 6.33					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	115	000	000	2.222/2.494	5.379**
064	117	160	180	2.948/2.494	5.829**
128	142	240	260	4.399/4.490	9.501**
256	150	400	420	7.302/7.506	15.873**
512		600	600	13.107/13.492	27.029**
Total	**524**	**1400**	**1460**		**63.611**
%	.84	.79	.76		.82

** RTL Calculated Via Utility

Apogee Duet : Driver 4.32 : LLP Rating – 6.24					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	126	000	000	2.290/2.540	4.785**
064	130	180	200	3.016/2.540	5.488**
128	142	280	300	5.465/4.535	9.955**
256	148	400	420	10.363/8.549	18.844**
512		620	620	16.168/12.540	28.638**
Total	**546**	**1480**	**1540**		**67.71**
%	.88	.84	.80		.74

** RTL Calculated Via Utility

MOTU 16A TB : Driver 4.0.8202 : LLP Rating – 6.16					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	130	000	000	1.088/1.841*	4.097**
064	140	200	220	1.814/3.265*	6.274**
128	153	300	320	3.265/6.168*	10.628**
256	165	520	540	6.168/11.973*	19.335**
512		680	680	11.973/23.583*	36.728**
Total	**588**	**1700**	**1760**		**77.062**
%	.95	.96	.91		.65

* I/O not reporting AD/DA / Large extra buffering on playback
** RTL Calculated Via Utility

Focusrite Clarrett 2Pre TB : Driver FC 2.1.4 : LLP Rating – 6.11					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	136	000	000	2.222/2.222	4.510**
064	149	200	220	3.220/3.220	6.322**
128	158	300	320	5.306/5.306	10.677**
256	161	520	540	9.660/9.660	19.386**
512		660	660	18.367/18.367	36.794**
Total	**604**	**1680**	**1740**		**77.689**
%	.97	.95	.90		.64

** RTL Calculated Via Utility

Steinberg MR816 CSX : Driver 1.61 : LLP Rating – 6.10					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	79	000	000	1.746/3.923	5.669
064	119	120	180	2.472/4.649	7.121
128	125	240	280	3.923/6.100	10.023
256	132	500	520	6.825/9.002	15.827
512		620	620	12.630/14.807	27.437
Total	**455**	**1480**	**1600**		**66.077**
%	.73	.84	.83		.75

Presonus Quantum ES 2: Driver UC 4.3.1.1 : LLP Rating – 5.99					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	118	000	000	2.608/3.719	6.395**
064	128	160	180	3.333/3.719	7.120**
128	148	240	260	4.789/5.714	10.522**
256	153	420	440	7.687/8.730	16.485**
512		600	600	13.492/14.717	28.254**
Total	**524**	**1420**	**1480**		**68.776**
%	.88	.80	.78		.72

** RTL Calculated Via Utility

Focusrite Scarlett 6i6-G2 : Driver 4.65.5 : LLP Rating – 5.99					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032 (016)*	089	000	000	1.973/1.973	4.014**
064 (032)*	116	060	080	2.313/2.313	4.739**
128 (064)*	142	160	180	4.036/4.036	8.186**
256 (128)*	153	340	360	6.485/6.485	13.197**
512 (256)*		480	480	12.381/12.4381	24.989**
Total	**500**	**1040**	**1100**		**54.685**
%	.81	.59	.57		.91

*Buffers as per Corrected Values (Panel Setting in Brackets)
** RTL Calculated Via Utility

Focusrite Scarlett 4i4-G4 : Driver 4.119.3 : LLP Rating – 5.95					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032 (016)*	094	000	000	2.041/3.039	5.057**
064 (032)*	116	100	120	2.404/3.401	5.782**
128 (064)*	142	160	180	4.127/4.127	8.254**
256 (128)*	153	380	400	6.576/8.571	15.147**
512 (256)*		580	580	12.472/14.467	26.961**
Total	**505**	**1220**	**1280**		**61.201**
%	.82	.69	.66		.82

*Buffers as per Corrected Values (Panel Setting in Brackets)
** RTL Calculated Via Utility

Apogee Duet 3 : Driver 5.30 : LLP Rating – 5.84					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	x	x	x	x	x
064	116	180	200	3.265/4.172	7.392**
128	148	280	300	4.717/6.168	10.748**
256	153	440	460	7.619/9.184	16.621**
512		580	580	13.424/15.170	28.367**
Total	**417**	**1480**	**1540**		**63.128**
%	.68	.84	.80		.75

** RTL Calculated Via Utility

Antelope Discrete 8 USB : Driver 4.4.7 : LLP Rating – 5.75					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	121	000	000	2.222/2.494*	5.351**
064	125	160	180	2.948/2.494*	6.077**
128	135	240	260	5.397/4.490*	10.522**
256	143	420	440	10.295/8.503*	19.410**
512		600	600	16.100/12.494*	29.206**
Total	**524**	**1420**	**1480**		**70.566**
%	.84	.80	.77		.71

* I/O not reporting AD/DA
** RTL Calculated Via Utility

MOTU UltraLite Mk4 USB : Driver 4.0.8202 : LLP Rating – 5.67					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	127	000	000	1.088/1.841*	4.739**
064	138	160	140	1.814/3.265*	6.916**
128	150	280	300	3.265/6.168*	11.224**
256	165	480	500	6.168/11.973*	19.932**
512		680	680	11.973/23.583*	37.324**
Total	**580**	**1600**	**1660**		**80.135**
%	.94	.90	.86		.62

* I/O not reporting AD/DA / Large extra buffering on playback
** RTL Calculated Via Utility

AVID Mbox 3 : Driver 1.0.19 : LLP Rating – 5.64					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	x	x	x	x	x
128	148	340	360	5.238/5.238	10.476
256	156	540	560	8.141/8.141	16.282
512		580	600	13.946/13.946	27.892
Total	**304**	**1460**	**1520**		**54.650**
%	.49	.82	.79		.80

RTL % calculated on buffers 128-512

Focusrite Clarett+ 2Pre: Driver 4.100.10 : LLP Rating – 5.53					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032 (016)*	095	000	000	2.381/3.379	5.850**
064 (032)*	114	100	120	2.744/3.741	6.553**
128 (064)*	142	160	180	4.467/4.467	9.002**
256 (128)*	153	380	400	6.916/8.912	16.032**
512 (256)*		560	560	12.812/14.807	27.823**
Total	**504**	**1200**	**1260**		**65.260**
%	.81	.68	.65		.77

*Buffers as per Corrected Values (Panel Setting in Brackets)
** RTL Calculated Via Utility

Roland Studio Capture : Driver 1.0.1 : LLP Rating – 5.52					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	128	000	000	1.837/3.333*	5.320**
064	158	180	200	2.562/5.125*	7.788**
128	163	260	300	4.014/8.118*	12.275**
256	171	520	540	6.916/13.878*	20.937**
512		640	640	12.721/25.375*	38.219**
Total	**620**	**1600**	**1680**		**84.539****
%	1.0	.90	.91		.59

* Double Buffering on Playback
** RTL Calculated Via Utility

Focusrite Clarett+ 8Pre: Driver 4.99.0 BETA : LLP Rating – 5.49					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032 (016)*	095	000	000	2.381/3.379	5.850**
064 (032)*	117	100	120	2.744/3.741	6.463**
128 (064)*	135	160	180	4.467/4.467	9.025**
256 (128)*	153	380	400	6.916/8.912	15.805**
512 (256)*		540	540	12.812/14.807	27.596**
Total	**500**	**1180**	**1240**		**64.739**
%	.81	.67	.64		.77

*Buffers as per Corrected Values (Panel Setting in Brackets)
** RTL Calculated Via Utility

M-Audio Fastrack Ultra 8R : Driver 6.08 : LLP Rating – 5.45					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	x	x	x	x	x
128	146	300	360	5.397/5.397	10.794
256	156	540	560	8.299/8.299	16.598
512		580	580	14.104/14.104	28.208
Total	**302**	**1420**	**1500**		**55.600**
%	.48	.80	.78		.79

RTL % calculated on buffers 128-512

NI Komplete Audio 6 : Driver 3.00 : LLP Rating – 5.38					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	120	100	100	3.917/5.079*	8.788**
064	128	200	200	3.923/5.805*	10.240**
128	131	260	260	5.374/7.256*	13.136**
256	132	500	500	8.277/10.159*	18.947**
512		580	600	14.082/15.964*	30.557**
Total	**511**	**1640**	**1660**		**81.668**
%	.82	.93	.86		.61

* I/O not reporting AD/DA
** RTL Calculated Via Utility

Prism Orpheus : Driver 1.07 : LLP Rating – 5.26					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	118	000	000	2.268/2.676*	5.971**
064	115	40	160	3.039/3.447*	7.551**
128	140	260	280	4.535/5.442*	12.997**
256	152	480	500	7.528/9.443*	18.984**
512		560	580	13.515/16.417*	30.957**
Total	**525**	**1340**	**1620**		**76.46**
%	.85	.76	.79		.68

* I/O not reporting AD/DA
** RTL Calculated Via Utility

Steinberg UR44 : Driver 2.1.0 : LLP Rating – 5.06					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	132	220	240	4.240/5.215	9.455**
128	144	300	340	6.689/7.664	14.353**
256	148	520	540	9.592/11.565	21.157**
512		640	660	16.395/19.365	35.760**
Total	**424**	**1680**	**1780**		**80.725**
%	.69	.95	.93		.59

** RTL Calculated Via Utility

Steinberg UR22 MkII : Driver 2.1.6 : LLP Rating – 4.94					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 10 x64					
032	118	000	000	2.608/2.585*	7.982**
064	142	180	200	3.333/4.308*	10.454**
128	152	260	280	5.782/5.760*	14.308**
256	159	440	460	8.685/9.660*	21.134**
512		660	660	15.488/16.463*	34.671**
Total	**571**	**1540**	**1600**		**88.549**
%	.89	.87	.83		.57

* Mode – Low Latency/ Large Extra Buffering Not Reported
** RTL Calculated Via Utility

Steinberg UR28M : Driver 1.1.1 : LLP Rating – 4.92					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	136	220	240	5.283/5.261*	10.363**
128	146	300	340	6.735/7.710*	14.263**
256	150	520	540	9.637/11.610*	21.247**
512		640	660	16.440/19.410*	36.669**
Total	**432**	**1700**	**1780**		**83.730**
%	.70	.96	.93		.57

** RTL Calculated Via Utility

Presonus Studio 68 : Driver UC 2.5.2 : LLP Rating – 4.91					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	99	000	000	2.789/2.857*	6.104**
064	99	100	120	3.515/2.857*	6.927**
128	124	240	260	5.964/4.853*	11.277**
256	135	440	460	10.862/8.866*	20.191**
512		520	520	16.667/12.857*	29.989**
Total	**457**	**1300**	**1360**		**74.488**
%	.74	.74	.71		.67

* I/O not reporting AD/DA
** RTL Calculated Via Utility

Audient iD4 : Driver 4.00 : LLP Rating – 4.85					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	57	000	000	2.222/2.494*	4.880**
064	76	040	060	2.948/2.494*	5.628**
128	120	220	240	5.397/4.490*	10.050**
256	136	400	420	10.295/8.503*	18.961**
512		540	560	16.100/12.494*	28.780**
Total	**389**	**1200**	**1280**		**68.299**
%	.63	.68	.66		.73

* I/O not reporting AD/DA , Hidden Buffers.
** RTL Calculated Via Utility

ESI MAYA44e : Driver 2.0 : LLP Rating – 4.75					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	128	140	180	1.451*/1.451*	11.348**
128	145	260	280	2.902*/2.902*	12.822**
256	152	480	500	5.805*/5.805*	18.604**
512		600	620	11.610*/11.610*	36.019**
Total	**425**	**1480**	**1580**		**78.793**
%	.68	.84	.82		.63

* I/O and RTL reported latencies are nominal
** RTL Calculation by RTL Utility showing double playback + hidden buffers

Audient iD22 : Driver 4.00 : LLP Rating –4.61					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	100	00	00	2.222/2.494*	7.093**
064	107	120	140	2.948/2.494*	7.842**
128	124	220	240	5.397/4.490*	12.347**
256	136	400	420	10.295/8.503*	21.220**
512		540	560	16.100/12.494*	31.016**
Total	**467**	**1280**	**1360**		**79.518**
%	.75	.72	.70		.63

* I/O not reporting AD/DA , Hidden Buffers.
** RTL Calculated Via Utility

MOTU 828 Mk3 Hybrid FW : Driver 4.05 : LLP Rating – 4.49					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	121	80	180	2.653/3.243*	7.788**
128	144	240	240	4.104/6.145*	12.302**
256	148	480	480	7.007/11.950*	21.009**
512		600	600	12.812/23.560*	38.417**
Total	**413**	**1400**	**1500**		**79.516**
%	.67	.79	.78		.60

* I/O not reporting AD/DA / Large extra buffering on playback
** RTL Calculated Via Utility

Presonus AudioBox 44 VSL : Driver 1.57 : LLP Rating – 4.25					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	086	000	000	2.449/2.449*	7.323**
128	100	140	160	3.900/3.900*	10.227**
256	124	300	400	6.803/6.803*	15.950**
512		540	540	12.608/12.608*	27.561**
Total	**310**	**980**	**1100**		**61.061**
%	.50	.55	.57		.78

* I/O not reporting AD/DA , Hidden Buffers
** RTL Calculated Via Utility

Midas Venice F : Driver 3.5.3 : LLP Rating – 4.01					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	055	000	000	1.905/3.900*	6.576**
128	100	120	180	3.356/5.351*	9.478**
256	119	240	260	6.259/8.254*	15.306**
512		560	580	12.063/14.059*	26.915**
Total	**274**	**920**	**1020**		**58.275**
%	.44	.52	.53		.82

* I/O not reporting AD/DA
** RTL Calculated Via Utility

MOTU 828 Mk3 Hybrid USB : Driver 4.05 : LLP Rating – 3.96					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	108	40	120	2.653/3.243*	8.960**
128	128	220	240	4.104/6.145*	13.190**
256	143	420	460	7.007/11.950*	21.956**
512		600	600	12.812/23.560*	39.366**
Total	**379**	**1280**	**1420**		**83.472**
%	.61	.73	.74		.57

* I/O not reporting AD/DA / Large extra buffering on playback
** RTL Calculated Via Utility

UAD Apollo Twin USB3 : Driver 9.02 : LLP Rating – 3.69					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	090	000	000	*3.946/3.946	8.250**
128	096	120	160	*6.395/6.395	11.149**
256	106	280	300	*12.404/12.404	16.654**
512		580	600	*24.195/24.195	28.564**
Total	**242**	**980**	**1060**		**64.617**
%	.39	.55	.55		.74

*Input Delay Compensation Off
** RTL Calculated Via Utility

ESI U46 XL : Driver 3.0 : LLP Rating – 3.12					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	132	200	220	1.451*/1.451*	10.515**
128	144	300	380	2.902*/2.902*	12.488**
256	152	540	560	5.805*/5.805*	24.325**
512		x	x	x	x
Total	**428**	**1040^**	**1160^**		**47.328^**
%	..69	.59	.60		.49

^ Highest buffer setting of 256 , RTL % calculated on buffers up to 256
* I/O and RTL reported latencies are nominal
** RTL Calculation by RTL Utility showing double playback + safety buffers

Makie Onyx 1640i (Pre Dice): Driver 1.9.0 : LLP Rating – 2.74					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	81	000	000	.726*/.726*	5.410**
064	114	120	140	1.451*/1.451*	9.515**
128	127	160	180	2.902*/2.902*	15.524**
256	136	240	260	5.805*/5.805*	30.809**
512		560	580	11.610*/11.610*	58.134**
Total	**458**	**1080**	**1160**		**119.392**
%	.74	.61	.60		.42

*I/O and RTL reported latencies are nominal.
** RTL Calculated by Utility, showing multiple playback + safety buffers
Listed buffer settings have absolutely no correlation to latency delivered.

Echo AudioFire12 : Driver 5.50 : LLP Rating – 2.29					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	130	140	180	4.354/5.805*	12.177**
128	148	260	280	5.805/8.707*	20.952**
256	152	480	500	8.707/14.512*	38.413**
512		600	620	14.512/26.122*	NRA***
Total	**430**	**1480**	**1580**		**80.542^**
%	.69	.84	.82		.29

* Output reporting differently on alternate DAW Hosts.
** RTL Calculated by Utility, showing multiple playback + safety buffers
***512 Value unavailable due to crashing.
^ RTL % Calculated for Buffers 064-256

Presonus Studio 192 : Driver UC 1.5.1 : LLP Rating – 1.91					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
064M	082	000	000	4.785/4.603	8.907**
128L	092	080	100	7.234/7.052	13.825**
256S	099	160	180	12.132/11.950	24.082**
512R		280	280	17.937/21.769	39.706**
Total	**273**	**520**	**560**		**85.521**
%	.44	.30	.29		.56

Default Paired Safety / Buffer
** RTL Calculated Via Utility

Focusrite Saffire 6 USB : Driver 1.9.0 : LLP Rating – 1.81					
BUFFER	RXC	CV	NCV	I/O	RTL
Windows 7 x64					
032	x	x	x	x	x
064	068	000	060	4.218/5.669	9.887
128	072	080	080	7.120/10.020	17.140
256	130	240	240	12.925/18.730	31.655
512		480	520	24.530/36.145	60.675
Total	**270**	**800**	**900**		**119.357**
%	.44	.45	.47		.39

Large safety buffers + double/triple buffering on Input/Output
Listed buffer settings have absolutely no correlation to latency delivered.

Benchmarks Used :

DAWbench DSP – Reference Plugin : ReaFX – ReaXComp

DAWbench VI – Reference VI : Native Instruments - Kontakt 4

Sample Rate : 44.1 kHz

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