

Videocard Benchmarks

Over 1,000,000 Video Cards Benchmarked

High End Video Card Chart

This chart made up of millions of [PerformanceTest](#) benchmark results and is updated daily with new graphics card benchmarks. The high end chart contains high performance video cards typically found in premium gaming PCs. Recently introduced AMD cards (such as the AMD RX 6950 XT) and nVidia graphics cards (such as the nVidia GeForce RTX 3090) using the PCI-Express 4.0 standard are common in our high end video card charts.

G3D Mark		Price Performance
PassMark - G3D Mark High End Videocards		
Videocard	Average G3D Mark	
GeForce RTX 4090		38,895
GeForce RTX 4080		34,672
GeForce RTX 4070 Ti		31,710
Radeon RX 7900 XTX		31,073
Radeon PRO W7900		30,323
GeForce RTX 3090 Ti		29,824
Radeon PRO W7800		29,140
Radeon RX 7900 XT		28,891
GeForce RTX 4090 Laptop GPU		28,638
Radeon RX 6950 XT		28,489
GeForce RTX 3080 Ti		27,326
Radeon RX 6900 XT		26,954
GeForce RTX 4070		26,865
GeForce RTX 3090		26,862
GeForce RTX 3080 12GB		26,710
GeForce RTX 4080 Laptop GPU		26,280
GeForce RTX 3080		25,358
RTX 4000 Ada Generation		25,226
Radeon RX 6800 XT		25,122
Radeon RX 7900 GRE		24,853

Video Card ▼

RTX 4000 SFF Ada Generation	20,529
GeForce RTX 3080 Ti Laptop GPU	20,218
TITAN RTX	19,972
Radeon PRO W6800	19,967
Radeon RX 6700 XT	19,882
TITAN V	19,784
GeForce RTX 2080 SUPER	19,596
GeForce RTX 4070 Laptop GPU	19,562
GeForce RTX 4060	19,477
Quadro RTX 8000	19,402
TITAN Xp COLLECTORS EDITION	19,356
RTX A4000	19,355
Quadro RTX 6000	19,247
GeForce RTX 2080	18,803
Radeon RX 6700	18,749
NVIDIA TITAN Xp	18,631
RTX 3000 Ada Generation Laptop GPU	18,570
GeForce GTX 1080 Ti	18,542
Radeon RX 6850M XT	18,418
NVIDIA A10G	18,293
GeForce RTX 3070 Ti Laptop GPU	18,280
GeForce RTX 2070 SUPER	18,253
GeForce RTX 4060 Laptop GPU	17,989
A40-48Q	17,864
Radeon PRO W7600	17,632
RTX A4500 Laptop GPU	17,602
Radeon Pro W5700X	17,591
RTX A5500 Laptop GPU	17,581
Radeon RX 6650 XT	17,444
GeForce RTX 3060	17,094
TITAN V CEO Edition	16,988
Radeon RX 5700 XT	16,769
Radeon VII	16,744
Radeon RX 5700 XT 50th Anniversary	16,615
GeForce RTX 2060 SUPER	16,581
GeForce RTX 3080 Laptop GPU	16,558
Radeon RX 6600 XT	16,460
Tesla V100-SXM2-16GB	16,235
GeForce RTX 2070	16,180
Radeon RX 7600	16,114
Radeon PRO W6600	16,066
Quadro RTX 5000	16,042
Radeon Pro Vega II Duo	15,977
Miracast display port driver V3	15,910
GeForce RTX 2060 12GB	15,899
RTX A5000 Laptop GPU	15,899
Radeon PRO W7500	15,831
Radeon Pro Vega II	15,668
RTX A4000 Laptop GPU	15,627
Quadro GP100	15,608
GeForce RTX 3070 Laptop GPU	15,533
GeForce GTX 1080	15,507
RTX 2000 Ada Generation Laptop GPU	15,479

Video Card ▼

GeForce RTX 2070 Super with Max-Q Design	13,923
GeForce RTX 2080 Super with Max-Q Design	13,844
RTX A2000	13,790
Radeon RX 5600 XT	13,760
Radeon RX 7600S	13,728
Radeon RX 6650M	13,676
NVIDIA TITAN X	13,660
RTX A2000 12GB	13,642
Radeon RX 6600M	13,599
Quadro RTX 5000 with Max-Q Design	13,591
GeForce GTX 1070	13,515
GeForce RTX 3060 Laptop GPU	13,415
Radeon RX Vega 56	13,407
NVIDIA A40	13,371
Radeon Vega Frontier Edition	13,359
Radeon RX 6700M	13,283
GeForce RTX 2080 with Max-Q Design	13,204
Radeon RX 6800M	13,181
Intel d gfx-driver-ci-master-14429 DCH RI	13,174
Radeon PRO W6600X	13,113
GeForce GTX TITAN X	13,055
Radeon Pro Vega 64	12,984
Tesla V100-PCIE-16GB	12,983
GeForce RTX 3050	12,965
Radeon Pro WX 9100	12,960
GeForce GTX 1660 Ti	12,958
GeForce GTX 1660 SUPER	12,784
Radeon Pro 5700 XT	12,708
Quadro RTX 4000 (Mobile)	12,701
Quadro RTX 4000 with Max-Q Design	12,668
Tesla T10	12,650
Quadro P5200 with Max-Q Design	12,608
Quadro P5200	12,594
RTX A3000 Laptop GPU	12,490
GeForce RTX 2070 (Mobile)	12,354
Radeon Pro Vega 56	12,354
Quadro P5000	12,293
Radeon RX 6850M	12,274
Radeon Pro V520 MxGPU	12,258
Radeon RX 5600 OEM	12,229
GeForce RTX 3050 OEM	12,084
GeForce RTX 2070 with Max-Q Design	11,890
Quadro M6000 24GB	11,879
Radeon Pro 5700	11,844
Quadro M6000	11,741
GeForce GTX 1660	11,710
Quadro P4000	11,648
Intel Arc A580	11,605
GeForce GTX 1080 with Max-Q Design	11,577
Radeon RX 5600	11,507
Tesla P40	11,395
GeForce RTX 2060 (Mobile)	11,355
Radeon Pro Vega 48	11,300

Video Card

Radeon RX 7600M XT	9,991
RTX A10000 6GB Laptop GPU	9,979
GeForce RTX 2060 with Max-Q Design	9,787
GeForce GTX 1060 3GB	9,761
Radeon R9 Fury + Fury X	9,741
Radeon RX 6550M	9,669
GeForce GTX 970	9,645
Intel Arc A770	9,633
Radeon R9 Fury	9,605
RTX A1000 Laptop GPU	9,548
Radeon RX 590	9,488
Radeon RX 6500 XT	9,486
GeForce GTX 780 Ti	9,486
Radeon Ryzen 9 4900HSS	9,461
Radeon R9 390X	9,446
Radeon Pro 5600M	9,415
Intel Arc Pro A60	9,409
GeForce RTX 3050 Laptop GPU	9,408
Quadro M5000	9,389
Quadro P2200	9,376
Radeon RX 5500 XT	9,182
Intel Arc A750	9,141
Radeon Pro W5500	9,134
Quadro P3200 with Max-Q Design	9,113
GRID P40-2B4	9,111
Quadro P3200	9,100
Quadro P4000 with Max-Q Design	9,083
GeForce GTX 1060 5GB	9,032
GeForce GTX TITAN Black	9,011
Radeon R9 390	8,991
GeForce GTX TITAN Z	8,987
GRID P40-8Q	8,967
Radeon RX 580	8,897
Radeon RX 5500	8,839
Tesla P4	8,719
GeForce GTX 1660 Ti with Max-Q Design	8,682
Radeon R9 290X	8,660
Radeon RX 480	8,656
Radeon R9 295X2	8,638
Radeon RX590 GME	8,538
GRID RTX6000-1B	8,473
Quadro RTX 3000 with Max-Q Design	8,419
Radeon R9 290X / 390X	8,389
RTX A4500 Embedded GPU	8,373
Ryzen 5 4600HS with Radeon Graphics	8,371
Radeon R9 290	8,357
Radeon Pro 5500 XT	8,330
Radeon RX 5600M	8,326
Radeon Pro Duo	8,296
Intel Arc A730M	8,274
Tesla V100-PCIE-32GB	8,260
GeForce GTX Titan	8,212
GeForce GTX 1060 (Mobile)	8,161

 Video Card ▼

GeForce GTX 1650 Ti	7,578
Radeonn Pro 580X	7,540
Tesla M6	7,509
Intel Arc A770M	7,485
Radeon RX 6400	7,449
Radeon Ryzen 9 4900HS	7,419
GeForce GTX 980M	7,339
GeForce RTX 2050	7,313
FirePro W8100	7,279
Radeon Pro 5300	7,230
Tesla P100-PCIE-16GB	7,225
Quadro T2000	7,171
Radeon 780M	7,130
T600 Laptop GPU	7,094
A10-8Q	7,042
Quadro M5000M	7,011
GeForce RTX 3050 4GB Laptop GPU	7,011
RadeonT 780M	7,005
Ryzen 7 4800HS with Radeon Graphics	6,999
RTX A500 Laptop GPU	6,995
GeForce GTX 1650 (Mobile)	6,969
Radeon Pro W5500X	6,967
Quadro T2000 with Max-Q Design	6,949
Quadro P2000	6,916
Ryzen 7 6800HS with Radeon Graphics	6,867
Radeon Pro 5500M	6,816
GeForce GTX 970XM FORCE	6,707
Radeon R9 285	6,680
Quadro M4000	6,668
Quadro T1000 with Max-Q Design	6,662
Quadro P3000	6,622
AMD Ryzen Z1 Extreme	6,607
Quadro T1000	6,599
Radeon Pro WX 7130	6,578
Radeon RX Vega M GH	6,576
Radeon Ryzen 7 6800HS	6,567
Radeon RX 6300	6,545
P106-100	6,466
T600	6,462
GeForce GTX 1650 Ti with Max-Q Design	6,412
Radeon Pro 570	6,337
Ryzen 9 6900HS with Radeon Graphics	6,331
GeForce GTX 1050 Ti	6,307
Quadro M4000M	6,266
Radeon R9 380X	6,232
Radeon R9 280X	6,228
Tesla K80	6,210
Radeon R9 380	6,201
Radeon 680M Ryzen 7 7735HS	6,180
GeForce MX570 A	6,177
GeForce GTX 1650 with Max-Q Design	6,139
FirePro W9000	6,138
Radeon PRO W6300	6,137

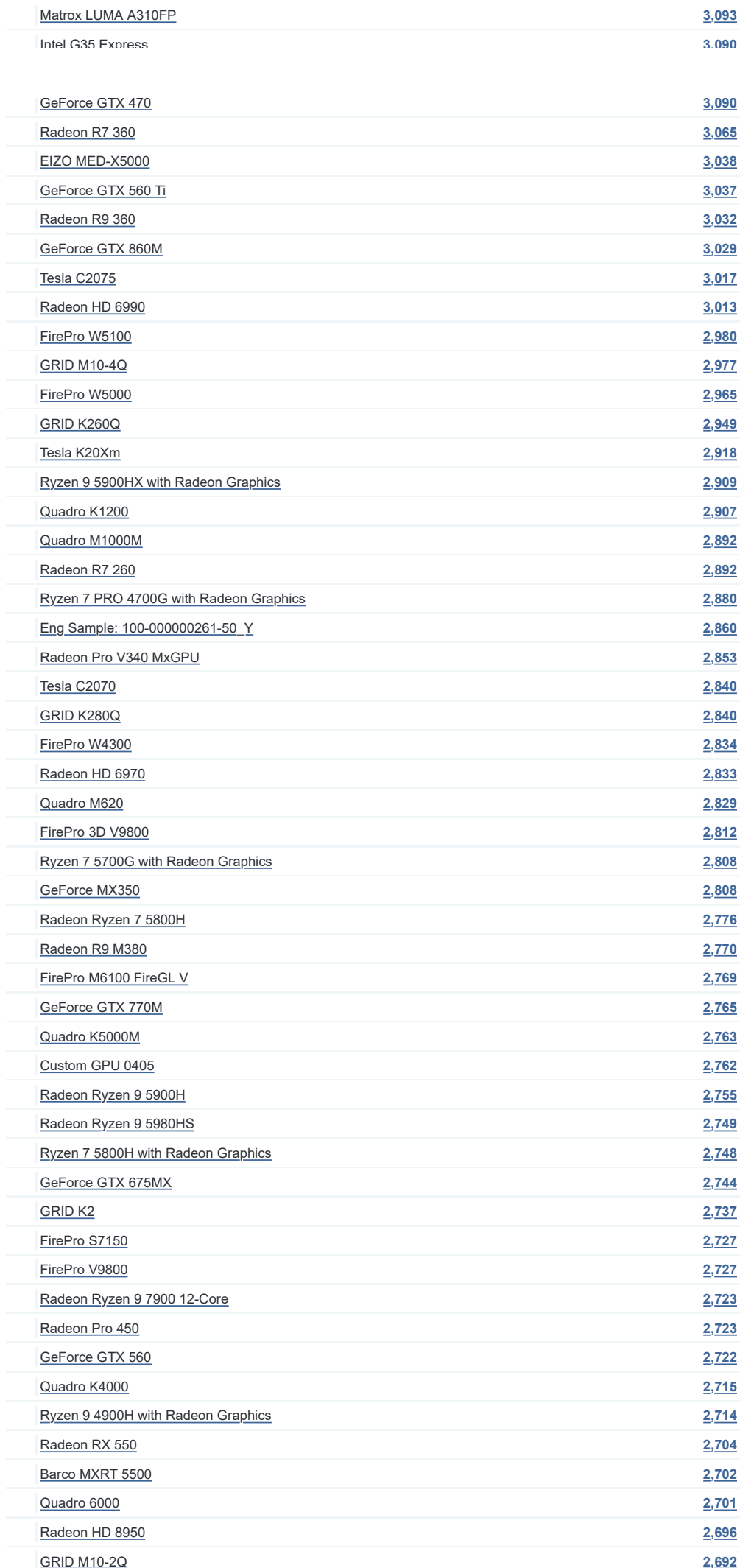
 Video Card ▼

Ryzen 9 5900HS with Radeon Graphics	5,570
Radeonn HD 7990	5,566
GeForce GTX 680	5,546
GRID M60-8A	5,523
Radeon Ryzen 9 7950X 16-Core	5,515
Quadro M3000M	5,514
Radeon Ryzen 7 6800H	5,433
GeForce GTX 760 Ti OEM	5,427
Ryzen 9 6900HX	5,416
Radeon RX 5500M	5,415
Radeon Ryzen 7 6800HS Creator Edition	5,386
GeForce GTX 1050 Ti with Max-Q Design	5,381
Radeon Ryzen 7 7735HS	5,377
GRID P40-4Q	5,365
Ryzen 7 6800HS Creator Edition	5,345
GeForce GTX 950	5,344
FirePro W7100	5,317
GeForce GTX 670	5,316
Ryzen 7 7735HS with Radeon Graphics	5,307
Radeon Pro Vega 20	5,300
Radeon Ryzen 9 6900HX	5,287
Radeon HD 7970 / R9 280X	5,248
Ryzen 7 6800H	5,248
Ryzen 7 6800HS	5,237
Intel Arc Pro A40/A50	5,224
Radeon HD 8990	5,214
Radeon Ryzen 7 PRO 6850HS	5,212
GRID M60-2Q	5,203
Radeon R9 M395X	5,195
GeForce GTX 760 Ti	5,191
Radeon Ryzen 7 PRO 6850U	5,174
Quadro P2000 with Max-Q Design	5,172
Q12U-1	5,164
Radeon R9 M295X	5,150
Radeon Ryzen 7 7735U	5,148
GeForce GTX 1050 3GB	5,146
Ryzen 7 PRO 6860Z	5,077
Ryzen 9 PRO 6950HS with Radeon Graphics	5,068
FirePro S9000	5,059
GRID T4-16Q	5,055
GeForce GTX 1050	5,049
EIZO Quadro MED-XN51LP	5,048
Ryzen 7 PRO 6850U with Radeon Graphics	5,043
Radeon R9 M395	5,024
Ryzen 7 6800U	5,006
GeForce GTX 1630	4,995
Radeon Instinct MI25 MxGPU	4,979
Barco MXRT 7600	4,944
Ryzen 7 6800H with Radeon Graphics	4,922
Radeon R9 270X	4,913
FirePro S9050	4,901
Ryzen 7 6800U with Radeon Graphics	4,845
GRID P40-2Q	4,844

Video Card

Ryzen 9 6900HX with Radeon Graphics	4,680
GRID V1000-2Q	4,668
Radeon HD 7870	4,641
Radeon Ryzen 7 PRO 6860Z	4,637
A16-2Q	4,583
GeForce MX550	4,583
Radeon Ryzen 9 PRO 6950HS	4,558
B8DKMDAP	4,557
GeForce GTX 580	4,547
Radeon Eng Sample: 100-000000561-40_Y	4,544
Radeon Ryzen 7 6800U	4,540
Radeon Pro 465	4,538
FirePro S7000	4,524
GRID T4-8Q	4,519
Radeon R7 370	4,513
Tesla K40c	4,495
Radeon HD 7870 XT	4,470
GeForce GTX 1050 (Mobile)	4,462
GRID M60-1B	4,457
Citrix Indirect Display Adapter	4,447
Quadro P1000	4,440
GRID P6-4Q	4,429
Intel Arc	4,419
GeForce GTX 660 Ti	4,396
FirePro W7000 Adapter	4,362
GRID GTX P40-6	4,340
Tesla K20m	4,331
Quadro K4200	4,324
Radeon RX 5300M	4,307
Radeon R9 270	4,306
Quadro M2200	4,301
GRID RTX6000P-4Q	4,283
FirePro W7000	4,261
Radeon R9 270 / R7 370	4,260
RTXA6000-8Q	4,237
NVIDIA A40-4Q	4,230
NVIDIA A40-8Q	4,220
RadeonT 680M Ryzen 7 7735HS	4,159
GRID V100D-8Q	4,156
Radeon Ryzen 5 7535HS	4,156
GeForce GTX 680MX	4,142
Radeon RX 460	4,113
FirePro W8000	4,096
Radeon 660M Ryzen 5 7535HS	4,078
Radeon PRO Ryzen 5 PRO 6650U	4,067
GeForce GTX 480	4,062
RadeonT 660M Ryzen 5 7535HS	4,042
Radeon HD 7800-serie	4,029
GeForce GTX 1050 with Max-Q Design	4,022
Radeon Ryzen 5 6600H	4,014
GeForce GTX 660	3,997
Quadro K5000	3,983
Quadro M2000	3,980

Barco MXRT 7500	3,753
GRID T4-1Q	3,743
Ryzen 7 PRO 6850HS with Radeon Graphics	3,736
Ryzen 5 PRO 6650H with Radeon Graphics	3,727
GeForce MX450	3,727
GRID M60-1Q	3,695
T500	3,692
Eng Sample: 100-000000545-40_Y	3,692
T400 4GB	3,691
Matrox LUMA A310	3,690
Ryzen 5 6600HS Creator Edition	3,686
Ryzen 5 7535HS with Radeon Graphics	3,680
Radeon Pro 560X	3,678
Ryzen 5 6600H with Radeon Graphics	3,674
Radeon Ryzen 5 PRO 6650U	3,672
Radeon R9 M485X	3,661
Radeon RX 560	3,648
Intel Arc A370M	3,646
T400	3,620
Radeon RX Vega M GL	3,607
Quadro P620	3,600
Ryzen 5 PRO 6650U with Radeon Graphics	3,575
GRID RTX8000-2Q	3,574
GeForce GTX 680M KY_Bullet Edition	3,569
GRID M6-8Q	3,568
Radeon Ryzen 5 6600U	3,565
GeForce GTX 775M	3,551
Quadro K2200	3,551
Microsoft Basic Display Adapter Ryzen 5 3550H	3,537
Ryzen 5 7535U with Radeon Graphics	3,529
Ryzen 5 PRO 6650U	3,519
GRID K520	3,516
Quadro 7000	3,505
Tesla M10	3,490
Radeon Pro 560	3,475
Radeon Pro 460	3,453
GRID T4-2Q	3,451
Quadro M2000M	3,450
GeForce GTX 870M	3,449
Quadro K2200M	3,441
Radeon 740M	3,437
Tesla C2050 / C2070	3,428
NVIDIA A10-4Q	3,425
GeForce GTX 960M	3,397
Radeon HD8970M	3,369
Radeon E8870PCIe	3,368
GeForce GTX 750	3,362
GRID M10-1Q	3,351
Radeon R9 M390X	3,346
GeForce GTX 590	3,341
GeForce GTX 650 Ti BOOST	3,339
GRID P4-8Q	3,299
Tesla K40m	3,281





Video Card



Radeon Ryzen 9 4900H	2,559
Ryzen 7 PRO 4750GE with Radeon Graphics	2,550
Ryzen 7 PRO 5750GE with Radeon Graphics	2,546
GRID K240Q	2,541
Radeon HD 6850 X2	2,534
Ryzen 9 5980HS with Radeon Graphics	2,534
GeForce GTX 650 Ti	2,532
FireStream 9370	2,528
N18E-Q1	2,525
GeForce GTX 850M	2,522
Radeon Ryzen 5 5600GE	2,520



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