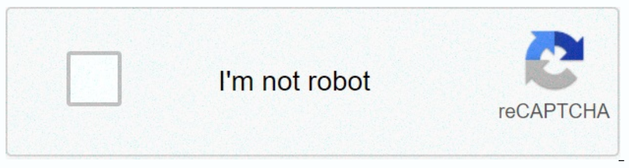

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Nvidia quadro k4000 3gb gddr5

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(external) DirectCompute 5.0, DirectX 11, OpenCL, OpenGL 4.3 Kepler GPU Architecture, Nvidia CUDA technology, Nvidia Quadro Mosaic Technology, Nvidia nVIEW Multi-Display Technology, Shader Model 5.0 Video System Requirements Microsoft Windows 7 Professional (32/64 bits), Red Hat Enterprise Linux Desktop 5, SUSE Linux Enterprise Desktop 11, Windows 8 Pro 64-bit Edition Header Video Memory Interfaces DVI-I (dual link), DisplayPort Cable Details Dimensions & Weight Immagine non disponibile per Colore: Report an Error 640x480 1280x720 1366x768 1600x900 1920x1080 2560x1440 3840x2160 The Frame K4000 was an enthusiast-class professional graphics card by NVIDIA , released in March 2013. Based on the 28 nm process and based on the GK106 graphics processor, the card supports DirectX 12. The GK106 graphics processor is a medium-sized chip with a die area of 221 mm² and 2,540 million transistors. Unlike the fully unlocked GeForce GTX 660, which uses the same GPU but has all 960 shaders enabled, NVIDIA has disabled some shading units in the K4000 Frame to achieve the target shading count of the product. It has 768 shading units, 64 texture mapping units and 24 ROPs. NVIDIA has paired the 3,072 MB GDDR5 memory with the K4000 Frame, which is connected using a 192-bit memory interface. The GPU is operating at a frequency of 810 MHz, the memory is running at 1404 MHz (5.6 Gbps effective). Being a single slot card, the NVIDIA Frame K4000 draws power from the 1x 6-pin power connector, with power draw rated at 80 W maximum. Display outputs include: 1x DVI, 2x DisplayPort. Frame K4000 is connected to the rest of the system using a PCI-Express 2.0 x16 interface. The plate is 241 mm long, 111 mm wide and has a single-slot cooling solution. Its price at launch was $1269. Spitzenre评创zensionen Neueste zuerst The NVIDIA Frame K4000 is a workstation← →键翻页键-grade graphics card with a simple focus: provide a professional graphics solution of low power and relatively lower cost. Of course, for a relatively lower cost, the cards are sold for about $800 new, which is at the bottom end of the side of the professional graphics card of the spectrum. As most professional users will attest these cards are not intended for games. Instead, NVIDIA pairs its GPU technology with professional graphics drivers. These drivers support many expensive applications and unlock enhanced features, such as Adobe Premiere Pro Mercury Engine. For those who are not familiar with the market, and see prices much higher than desktop parts, there is an important component that should be addressed. Drivers. NVIDIA has an extra layer of QA for its professional Quadro drivers and tests them with specific applications like SolidWorks, AutoCAD, Siemens NX, Adobe Creative Cloud, and a host of other applications. The key here is that the extra QA features help ensure that the job completes accurately and that the work time is not lost due to driver errors. In addition, and something we use specifically, some applications can leverage NVIDIA CUDA technology to speed up functions like Blur Gallery and the new Smart Sharpen in Photoshop CC. These have major performance implications in the real world. NVIDIA Frame Driver Download In terms of where the card falls into NVIDIA's current product portfolio, nvidia quadro k6000 and K5000 cards are considered the two options above the K4000 in the product hierarchy. The K2000 and the K600/Frame 410 are considered entry level cards. NVIDIA's Keplar architecture found in the K4000 Frame was a major improvement over previous generations in terms of power consumption, making the K4000 a maximum power share of 80w. Nvidia Quadro K4000 card is marked by NVIDIA itself. Unlike desktop parts, professional series graphics cards and tesla accelerators are commonly sold directly under the NVIDIA label. It can be seen that the cooler is a single active groove cooling unit that depletes backwards. Practically speaking, the unique slot design means that this card can be used on virtually any workstation that has a free PCIe x16 slot. For those looking for a passively cooled rack mounting solution, there are other options available. NVIDIA Frame K4000 Top Moving to the output side of the display we can see the three primary outputs of the NVIDIA Frame K4000. There are two full displayport connectors as well as a single DVI-I connector. For many users, the two displayport ports will be the key. They can high-resolution professional graphics. NVIDIA Panel Frame K4000 IO A significant note here is that our previous AMD HD6970 GPU failed to consistently power the HP HP dual ZR30W IPS displays of 30 under Windows 8, consistently dropping the second display to sub resolution 2560×1600. The only fix was to restart the system which can be difficult with multiple applications open for the workflow. The problem occurred in multiple versions of the driver and on video ports. After switching the test bed to the K4000 we saw a completely different behavior. Even after the monitors were put on hold to conserve power, the problem that plagues the consumer's AMD solution was quickly fixed. Moving to the top of the card, we see that the cooling solution of a single slot is ventilated to the rear of the chassis. The image above clearly shows that there is not much dedicated ventilation space on the rear I/O panel due to the outputs of the display. To remedy this, the NVIDIA Frame K4000 has openings along the top of the board and just above the rear I/O panel. Given the maximum dissipation of 80W this solution works well as long as there is sufficient airflow around the card. Most workstation manufacturers take this into account when designing the airflow of the chassis. In our tests cooling was not a problem. NVIDIA Frame K4000 SLI Connector For a quick comparison of the NVIDIA Frame K4000 with the current NVIDIA line, you can switch the specifications below. [toggle_box title=Click to compare NVIDIA Frame width=Width of the toggle box specifications] Frame K6000 Frame K5000 Frame K4000 Frame K2000/D Frame K600 Frame 410 NVIDIA CUDA Colors 2880 1536 768 384 192 192 Memory size (GB) 12 4 3 2 1 0.5 Memory Interface (bits) 1384 256 192 128 128 64 Memory Bandwidth (GB/s) 288 173 134 64 29 14 Maximum power consumption (w) 225 122 80 51 41 37 Number of slots 2 2 1 1 1 Max Simultaneous Displays 4 4 4 4 2 2 Display Connectors DVI-I DVI-I DVI-I DVI-I DVI-I DVI-DVI-DVI-D DD-D DP DP DP DP DP DP DP DP DP 3pin Stereo 3pin Stereo 3pin Stereo ECC Yes No No No No No No OpenGL 4.3 4.3 4.3 4.3 4.3 4.3 4.3 Shader Model 5 5 5 5 5 5 5 DirectX 11 11 11 11 11 11 NVIDIA 3D Vision®Pro Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes NVIDIA® Mosaic Technology Yes Yes Yes Yes Yes Yes Frame Sync Yes No No No No No No Support NVIDIA SLI Yes No No [/toggle_box] Testing the configuration We built a very heavy processor test configuration that is also ready to test the card. Although this is a fairly high-end configuration that would cost well over $8,000, excluding the K4000 frame or software, it is more aligned with the market segment that Frame cards are marketed. Unfortunately, our E5-2687W processors have been tied up in a long-term test, but this is certainly a very high-end workstation platform. Testing the accelerated mercury reproduction engine of the Frame We made a simple encoding of some videos. When installing the card and frame driver, Adobe Premiere Pro CC automatically detected the configuration and switched CPU-only mode to CUDA acceleration. NVIDIA Mercury Quadro playback engine on Adobe Premiere Pro Pro We did a quick test to see what export performance would be. Fortunately, one of our Hollywood readers is a video producer, so we were able to get a sample workflow shot in both 4K HD and traditional 1080 resolution. The net result was a newsable impact of GPU acceleration with Adobe Premiere Pro CC. NVIDIA Frame K4000 Adobe Premiere Pro There is a clear benefit to having GPU acceleration. A highlight is that not all applications will see the same level of impact, but this is certainly an example where the GPU can help. A word about power consumption Since the NVIDIA Frame K4000 has about a quarter of the computational power and memory of a K6000 frame is clearly a lower power option. Based on the GK104 architecture, like the most expensive Quadro cards, the K4000 simply has less of the active chip. A great benefit here is that the energy required is significantly lower than the top tip options. The card requires only a single 6-pin PCIe power connector and a single slot cooler. This results in some pretty decent numbers of energy consumption. NVIDIA Frame K4000 Power consumption As you can see, Kepler is a very power efficient GPU, even paired with 3GB of GDDR5 memory. One note here is that the maximum specified power consumption is 80w, probably due to the 28nm process and 768 CUDA cores running at just over 800MHz. Less heat generated, in turn, requires less energy expended to cool components, which also helps. Great results overall. The key here is that acceleration of specific applications can happen much more effectively with an 80w GPU of $800 instead of a second $2,000 130w TDP CPU. Conclusion After spending some time with the NVIDIA Frame K4000, there is one thing clear: it will be difficult to run a content creation workstation with anything other than a professional graphics card. We had no errors in Adobe CC applications. In addition, there are certainly features like the Mercury Playback Engine that the K4000 Frame has a huge impact in terms of performance. You wouldn't need many labor cost renderings to offset the asking price of the K4000 Frame. The bottom line is this: nvidia Quadro K4000 allows professional workstation users to access drivers who work with their applications with extra QA tests and regular driver fixes being released. The added benefit is for those users where professional cards can unlock acceleration in professional applications. The K4000 is certainly not marketed as a desktop part, and has a price accordingly. Accordingly.