

# US Warns Nvidia About Hardware Designed to Avoid Chinese Sanctions

Josh Norem : 3-4 minutes

US companies are prohibited from exporting advanced [semiconductor](#) products to China due to sanctions. Nvidia has been particularly hard hit by these regulations, as it's not allowed to ship its high-end AI accelerators, and its RTX 4090 gaming GPU has even been added to the list of sanctioned items. The United States does not want China acquiring anything that could even remotely be used for AI development, and now it's delivered a direct warning to Nvidia about its practice of developing "workaround" chips for the Chinese market.

The recent comments were made by the US Commerce Secretary Gina Raimondo at the Reagan National Defense Forum, [according](#) to Fortune magazine. She seemed to call out Nvidia without mentioning the company by name, stating that if a company remakes an existing product to comply with US sanctions, that new product will also receive scrutiny, implying it would be quickly banned.

"If you redesign a chip around a particular cut line that enables them to do AI, I'm going to control it the very next day," Raimondo said.

That comment seems to be directly aimed at Nvidia, which has developed new versions of banned products that go right up to the edge of US sanctions. Nvidia isn't hiding the fact that it's doing this, and its CEO even [recently stated](#) that it would be designing products that complied with the regulations and would do business with China with those products.

## Introduction

The NVIDIA A800 Tensor Core GPU, for customers in China, Hong Kong and Macau, delivers outstanding acceleration and flexibility to power the highest-performing elastic data centers for AI, data analytics, and HPC applications. As the engine of the NVIDIA data center platform, A800 provide up to significantly higher performance over V100 GPUs and can efficiently scale up to thousands of GPUs, or be partitioned into seven isolated GPU instances to accelerate workloads of all sizes.

The A800 is offered in China, Hong Kong and Macau, however the A100 is not offered in these markets. The only difference between the A100 and A800 is the speed of the NVLink interface: The NVLink on the A100 operates at 600 GB/s, where as the NVLink on the A800 operates at 400 GB/s.

The third-generation Tensor Core technology supports a broad range of math precisions providing a unified workload accelerator for data analytics, AI training, AI inference, and HPC. Accelerating both scale-up and scale-out workloads on one platform enables elastic data centers that can dynamically adjust to shifting application workload demands. This simultaneously boosts throughput and drives down the cost of data centers.



Figure 1. ThinkSystem NVIDIA A800 PCIe 4.0 GPU

The Nvidia A800 was developed specifically for countries that weren't allowed to buy its A100 GPU, though the two are practically identical. Credit: Lenovo

The most recent illustration of this cat-and-mouse game Nvidia is playing with US sanctions is the [rumored RTX 4090 D](#). The standard RTX 4090 was banned from being exported to China in October. Hence, the company seemingly developed a new version for China with reduced specs to come in just under the sanctions radar. We only know that it exists due to a Twitter leak showing the card uses a new die named AD102-250, compared with AD102-300 for the original card. There's no official information about this GPU yet, other than rumors that it exists, but it follows similar actions by Nvidia in reworking existing products to be in compliance.

For example, [according](#) to Videocardz, the US announced a ban on Nvidia's H100 and A100 (Hopper and Ampere) AI accelerators in August of this year. By November, it had developed new products to sell to China named A800/H800. The A800 accelerator is precisely the same as the banned A100, but with the NVLink interconnect neutered from 600GB/s to 400GB/s. Those chips were then banned in October, which is indicative of the back-and-forth that has occurred between Nvidia and the government so far.

Fortune notes that Nvidia responded to the Commerce Department's bans on its hardware by launching three new chips for the Chinese market, seemingly the impetus for the new remarks. "I know there are CEOs of chip companies in this audience who were a little cranky with me when I did that because you're losing revenue," said Raimondo. "Such is life. Protecting our national security matters more than short-term revenue."