US steps up high-tech war against China

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18 October 2023

As it intensifies operations against Russia in the Ukraine war, threatens Iran with the movement of warships into the Gulf and gives full backing to the Israeli onslaught against the Palestinian people in Gaza, the US has stepped up its high-tech war against China with the announcement by the Commerce Department of new export bans on Tuesday.

The bans are a tightening of the export controls introduced last October aimed at trying to further restrict the ability of Chinese companies to continue to make advances in the crucial area of artificial intelligence (AI).

Their main target is two chips developed by Nvidia specially for the Chinese market in response to the US measures a year ago. Nvidia redesigned two of its top-of-the-range chips, central to AI development, to produce modified versions known has A800 and H800 which complied with US regulations.

These sales will now be halted, one unnamed official told the *Financial Times*. Another commented that in drafting the new rules the administration had taken into account how attempts were made “to work around our parameters.”

A Commerce Department statement said the updates were “necessary to maintain the effectiveness of these controls, close loopholes, and ensure they remain durable.”

Commerce Secretary Gina Raimondo said the goal was to limit China’s “access to advanced semiconductors that could fuel breakthroughs in artificial intelligence and sophisticated computers.”

The US is stepping up the high-tech war on national security grounds, claiming the development of AI by China can give it an edge in military technology under conditions where the US military is continually advancing its war preparations.

The bans have a wider objective as well—the placing of constraints on the advancement of the Chinese economy, especially high-tech areas. Numerous studies and reports, going back to the Trump presidency and before, have made clear that Chinese gains in these crucial sectors are regarded as an existential threat to the global economic position of the US.

Officially, the US claims that it is not trying to hit the broader Chinese economy but is only targeting its military capabilities. This distinction is largely meaningless.

Raimondo acknowledged this in comments to reporters before the latest moves. “It’s difficult to draw a bright line between military and commercial technology,” she said, noting there are often “dual use technologies.”

In devising the new bans, US officials have drawn some lessons from the experiences of the past year. When the controls were put in place last October, agreement had not been reached with Japan and the Netherlands which supply crucial components and machinery for the development and manufacture of chips. Also, it had not ensured that China was cut off from alternative suppliers.

It has announced that it will require companies to obtain a licence to sell chips to more than 40 countries where China could find intermediaries to get around the US controls.

It is also looking to extend restrictions to machines used in the manufacture of chips. One of the major firms in this area is the Dutch company ASML.

The company opposed the restrictions imposed last October and it took some months to get it to comply. Now the US is seeking to extend controls to lower grade manufacturing equipment and, according to a report in Bloomberg, has been working with the Netherlands on the issue.

ASML said the new regulations would be applicable to a “limited number” of fabs (chip manufacturing plants) in China but did not specify which of its machines would be affected.

The net is being cast wider and tightened. The administration added two Chinese chip startup companies and their subsidiaries to a list that mandates companies in the US to obtain a government licence before they can export to them.

The Commerce Department's Bureau of Industry and Security hardened due diligence requirements to determine whether foreign companies were taking part in the evasion of export controls. It said the framework was now "default assumption of licence denial."

The new regulations will also require the companies which sell chips below the official threshold to inform the US government. This is because, as Bloomberg reported, according to a US official "with a lot of money and a little jury-rigging, a whole class of slightly inferior chips could also be used for AI and supercomputing and therefore pose a national security risk."

While the White House is determined to press ahead there are conflicts and contradictions arising from its ever-tightening restrictions.

The industry trade group, the Semiconductor Industry Association, said that "overly broad, unilateral controls risk harming the US semiconductor ecosystem without advancing national security as they encourage overseas customers to look elsewhere."

The president of the Information Technology and Innovation Foundation think tank, Robert Atkinson, said limiting the sale of chips to China risked significantly reducing competitiveness.

"US firms will lose the most profitable part of their markets, significantly reducing profits that otherwise would be invested in research and development for the next generation of chips," he said.

Paul Triolo, an expert on China and technology at the Washington-based consultancy Albright Stonebridge, pointed to an issue of growing concern for the Biden administration.

US controls had "massively incentivised the Chinese system … to invest in domestic capabilities." Since the initial measures, "tool makers in China have become fully integrated with the foundries in a way they never had before" and were taking market share.

The Chinese response to the bans has already rung alarm bells in the Biden administration.

Despite sweeping bans imposed by the Trump administration, continued under Biden, aimed at crippling it, the telecommunications giant, Huawei, launched a new upgraded phone in August.

Raimondo said the news that Huawei had developed a more advanced phone was "incredibly disturbing." While it is not directly related to AI technology, the Huawei advance was undoubtedly a motivation for the latest measures because it showed a capacity to get around the US bans to a significant extent.

Besides the expression of concerns in the industry over the economic fallout of the bans, there are also fears in some more historically aware sections of the financial elites as to where US policy is heading.

In a recent interview with Bloomberg, Ray Dalio, the founder and long-time chief executive of the Bridgewater hedge fund, likened US-China relations to those between the US and Japan in the lead up to outbreak of war in 1941.

"The reason in World War II—war with Japan—you had the [US] cutting off of the oil and then sanctioning them, taking their payments," he said.

There was now a "much similar situation. Chips [are] like oil back then."

While he did not see a war as inevitable, he saw Taiwan as a "breaking point." If the US said it was in favour of an independent Taiwan that would be "the equivalent of a declaration of war."