



## Action from Semiconductor Companies is Long Overdue

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The United States and its allies have struggled to stop the supply of controlled microelectronics to Russia, which then uses them in a variety of drones, missiles, and other weapon systems in its brutal war against Ukraine. While the United States and its allies can do more, it is time to turn far greater attention to the Western companies making these goods and demand far more from them.

A recent companion study of trade data charting exports from China to Russia in a twenty-month period up to the end of 2023, conducted by one of us, showed that exports of the most critical microelectronics, electronic integrated circuits, amounted to \$1.5 billion, steadily increasing throughout 2023, despite Western restrictions and pressure on China, which remains uncooperative, even hostile.<sup>1</sup> Electronic integrated circuits take on special significance, because Russia cannot make them, and there are limited manufacturers in the world, almost all in the United States and Europe. In a four-tier U.S. priority listing of banned electronic and other components and the means to make them, Tier 1 is exclusively composed of electronic integrated circuits.

Aided importantly by China, Russia is countering the sanctions imposed by the United States and its allies. Without more countermeasures and enforcement, it would be unsurprising to find Russia continuing to acquire large quantities of restricted Western microelectronics needed for its war production.

The United States has played a leading role in identifying key items to ban for export to Russia, aided by examining components in downed weapon systems found in Ukraine, and gained via Russian insiders. The United States and European countries have also continued to apply

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<sup>1</sup> Spencer Faragasso, "Chinese Export of Restricted High Priority Battlefield Items to Russia," *Institute for Science and International Security*, September 23, 2024, <https://isis-online.org/isis-reports/detail/chinese-export-of-restricted-high-priority-battlefield-items-to-russia/>.

sanctions and tighten restrictions regularly.<sup>2</sup> Nonetheless, Russia continues to acquire far too many of the microelectronic goods it needs.

One major reason for Russia's ongoing success is that the supply chains of major microelectronic manufacturers contain far too many distributors and resellers, many of which are indifferent, if not irresponsible, and willing to sell to any buyer without exercising adequate due diligence. Study after study shows this reality.

Western companies claim that they conduct adequate due diligence on their distributors and customers, or—when pressed—plead that they cannot be expected to control all of these distributors and resellers. However, the scale of the exports to Russia demands action rather than excuses.

To halt the flow of crucial microelectronics, especially electronic integrated circuits, to Russia, Western companies must intensify their effort. Given China's track record, Western companies should halt the export either directly or indirectly of the most sensitive microelectronic items to Chinese companies, in order to prevent Chinese companies from re-exporting them to Russia and to block secondary sales of their products to other Chinese companies willing to violate US trade restrictions. However, exercising due diligence is simply not possible given the existing, decentralized distribution networks and China's unwillingness to block exports to Russia of these goods.

Western companies producing the most sensitive microelectronic goods in China should be expected, at a minimum, to exercise extreme diligence in selling their commodities to any company; but it would be far better if they stopped such production in China. Western companies should invest in moving supply chains out of China. To spur this move, Western governments should offer public financing and tax incentives to compensate these companies for having already invested large sums of monies into current supply chains.

In conjunction with continuing to strengthen restrictions, Western governments, particularly the United States, should establish and levy appropriate fines for the inadvertent export of the most sensitive microelectronics goods, especially electronic integrated circuits, to Russia's military. Their well-documented existence in downed drones in Ukraine concretely shows the companies' failure to control their exports and would justify the imposition of fines for inadvertent exports.

These ideas are neither new nor radical; they have a long history of being applied to other dangerous and sought-after dual-use commodities, such as those in the nuclear and missile sectors. The United States has used fines to remedy the problem of inadvertent exports of other controlled goods. This threat of fines got the attention of those industries, encouraging more due diligence and scrutiny of their customers.

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<sup>2</sup> See for example the August 23, 2024, BIS notice at <https://www.bis.gov/press-release/commerce-tightens-export-controls-targets-illicit-procurement-networks-supplying>.

The unfortunate reality is that Western electronics companies, particularly those based in the U.S., have not done enough. They can legitimately be accused of helping to arm Russia in its bloody attacks on Ukraine.

Western countries are supplying Ukraine with tens of billions of dollars' worth of military equipment to defend Ukraine from Russian weapons that could not function without Western electronic goods. Halting the flow of these items can have a meaningful impact on Russia's ability to field its weapons against Ukraine and can contribute to tipping the balance of power in Ukraine's favor and degrading the Russian military production complex. Responsible governments have fashioned an extensive control and sanctions regime over electronics critical to Russia, a regime that they continue to strengthen. Western electronics companies have unintentionally undermined that regime. They urgently need to fix this problem.