Statement of

Shannon Thompson
Vice President and Assistant General Counsel
Texas Instruments Incorporated

before the

Permanent Subcommittee on Investigations
United States Senate

September 10, 2024

Good afternoon Chairman Blumenthal, Ranking Member Johnson, and Members of the Subcommittee. Thank you for the opportunity to be here today on behalf of Texas Instruments ("TI") to discuss our efforts to keep chips out of the hands of bad actors and the actions TI is taking to combat illicit product diversion.

As Vice President and Assistant General Counsel at TI, I oversee our global commercial operations legal team with a particular focus on sales and customer engagements at TI. In this role, I have witnessed the importance of addressing product diversion risks globally, along with TI's collaborative, cross-functional global trade compliance efforts to address the challenges that exist.

I am here today because we take this issue very seriously. We share the Subcommittee's concerns about the illicit diversion of chips into Russia. We do not want TI chips being used in Russian military equipment, and we are angry that bad actors continue to find ways to divert chips and use them in this way. Russia's war against Ukraine is horrific, and we are deeply saddened by the loss of life and grieve with those impacted.

Let me reiterate what TI has expressed to the Subcommittee and publicly: TI strongly opposes the use of our chips in Russian military equipment and works to prevent the illicit diversion of our parts into Russia. TI stopped selling products into Russia and Belarus in February 2022 before it was required to do so. Any shipments of TI products into Russia and Belarus are illicit and unauthorized.

TI's strong commitment to trade compliance starts with our most senior leadership and permeates throughout our company. TI has devoted and continues to devote significant time and resources to developing, implementing and refining policies and procedures to combat illicit diversion. We have and will continue to actively and carefully monitor the sale and shipment of our parts, as part of our robust global trade compliance program. We screen customers and orders multiple times. We cancel orders that pose a credible concern. And if there is evidence indicating diversion, we investigate and take action.

Background on TI

Founded in 1930, TI is a Texas-based company that designs, manufactures, tests and sells analog and embedded processing semiconductors, or "chips." TI has a product portfolio of more than 80,000 chips that serve more than 100,000 customers. We manufacture tens of billions of analog and embedded processing chips every year. Our chips enable innovations that make the world smarter, more sustainable, more efficient and more affordable. Nearly every electronic device that plugs into a wall or has a battery likely uses at least one TI chip and oftentimes multiple TI chips.

Headquartered in Dallas, TI has approximately 34,000 employees worldwide, with over 15,000 employees in the Americas. TI currently operates 15 worldwide manufacturing sites, with plans to grow its semiconductor manufacturing capacity in the U.S. with new fabs already under construction in Texas and Utah.

TI has a long history of conducting business with ethics and integrity. We first published a code of business ethics in 1961, and place great importance not just on the results of our work, but also on the way in which we get that work done. Ethics and integrity matter to us. They always have, and we are committed to upholding the ambitions and values that TI has operated under for decades.

Background on TI Chips

TI chips are ubiquitous. They are designed to serve a broad range of basic electronic functions commonplace to thousands of different end products, from powering an electric toothbrush to transmitting sound from a microphone.

Generally, TI analog and embedded processing chips are the essential building blocks of electronic products. TI customers can use tens, hundreds, or even thousands of these types of chips in their end products. A modern heating and air conditioning system, for example, can have hundreds of chips in it.

And TI chips are small, some small enough to barely see with the human eye:

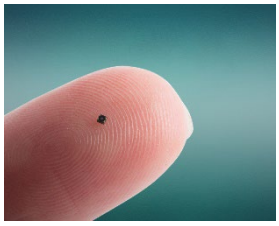

Figure 1: TI operational amplifier chip

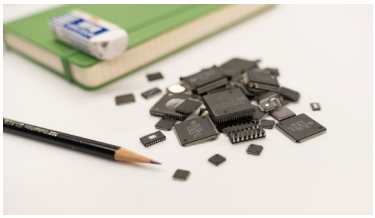

Figure 2: Varying small sizes of TI chips

Most TI chips are general purpose, which means they can be used to perform the same basic function in a variety of different end applications. For example, the same simple transceiver chip that sends and receives signals in a heating and air conditioning system can also send and receive signals between a cruise missile and its wings.

The majority of TI's 80,000 product portfolio is subject to the lowest level of export controls as classified by the U.S. Commerce Department because they serve basic electronic functions. Our chips typically do not require a U.S. government license to ship.

TI's Comprehensive Global Trade Compliance Program

It is TI policy to comply with export control laws. Our Global Trade Compliance team is responsible for compliance with country-specific import, export, sanctions, customs regulations and licensing requirements worldwide. Among other things, the team is tasked with identifying export and import classifications of TI products, screening orders for compliance with restrictions and sanctioned party lists, obtaining and managing licenses or other authorizations, reviewing customer information and certifications, and performing employee training. We shared details about our compliance program privately with the Subcommittee, and publicly outline our processes at a high level below.

Export classification process

Every new TI product goes through an export classification process. TI's Global Trade Compliance program uses an export classification tool that guides product engineers through a series of questions to determine the applicable classification. After a preliminary determination is made, TI's Global Trade Compliance team then reviews each product classification for accuracy, and then confirms the verified classifications in TI's systems.

Screening process

The Global Trade Compliance team carefully monitors the sale and shipment of TI chips, and screens on average more than 4 million orders per year.

TI conducts screening of customers and orders at least three times during the ordering process:

- First, a new customer must set up an account to purchase directly from TI, and the customer is screened at account set-up to verify, for example, that they are not on an applicable U.S. Government or other sanctioned party list.

- Second, every time a customer places an order, TI performs automated screening on both the customer and the order. This process includes checking for any required export licenses (described below).

- Third, TI performs another automated screening of both the customer and the order immediately before shipment to ensure that there have been no changes since the initial screening.

To be as thorough as possible, we deliberately set our automated screenings to be overinclusive to identify companies who are similar but not exact matches to companies on a sanctioned party list. When a potential match is identified, the Global Trade Compliance team, along with a reputable TI partner, conduct a manual review. We conduct tens of thousands of these manual reviews every quarter.

TI's manual reviews involve fact-finding such as obtaining a copy of a business registration or a government-issued identification to verify a customer's identity, among other due diligence. We also use multiple commercially available risk management databases to examine and understand connections between our customers and other companies. Through this process, we regularly identify and block suspicious and fraudulent orders. We cancel thousands of orders every year.

Customer information and certifications

Our global trade compliance program uses export compliance-related information and certifications obtained directly from customers. All customers ordering from TI must provide information about their company and the intended use of the chips they are ordering. Customers must also answer questions regarding their intended military business purpose or military application end use. Additionally, customers are informed of applicable U.S. laws and prohibited from selling, exporting or re-exporting chips to Russia.

Training

Global trade compliance is a key focus of training at TI. New TI employees undertake a comprehensive slate of courses on ethics and compliance. To keep that foundation strong, TI also requires that employees complete annual ethics and compliance training. In 2023, TI employees completed nearly 44,000 code of conduct and trade compliance training assignments in total. Global Trade Compliance provides additional, targeted training to supplement the broad corporate compliance training. For example, Global Trade Compliance delivers in-person trade trainings for TI sales and operations personnel when new trade rules and regulations are issued. Global Trade Compliance personnel also attend training led by government agencies and third-party providers to further improve their own knowledge and skills and to stay up to date on current topics.

The Role of Authorized Distributors

The vast majority of TI sales are direct to customers. Over the last decade, TI has been building closer direct relationships with our customers. TI streamlined its geographically diverse distribution network to one primary worldwide distributor, based in the United States, that we have been working with for around 40 years, along with seven other distributors serving niche markets. As a part of this effort, TI ended relationships with several regional distributors.

In 2023, about 75% of TI's revenue was from direct sales to customers, which is up from 35% in 2019. This high percentage of direct sales gives us increased visibility into the customers who are buying our products.

All of TI's authorized distributors operate their own trade compliance programs. Six of our eight authorized distributors, which represent the vast majority of our revenue from distribution, are based in the United States, which means they are directly subject to U.S. law. Our only two non-U.S. based distributors are located in Japan, a country that actively participates in the Global Export Control Coalition, a partnership of countries "committed to implementing substantially similar export controls on Russia, Belarus, and the temporarily occupied Crimea region of Ukraine under their domestic laws."[1]

TI requires our distributors to comply with export control laws and prohibits them from reselling our chips into Russia. Our contract allows for immediate termination for non-compliance. Additionally, TI's Global Trade Compliance team is in communication with our distributors on export compliance topics – providing information, collaborating on specific issues and flagging potential concerns.

TI's processes include regular business audits of distributors, including annual inventory audits. For compliance-related matters, we use a risk assessment process that includes qualitative and quantitative inputs to determine whether an audit is needed. TI might also employ an audit as an investigative or remedial tool.

Global Trade Compliance Program Accountability

TI's dedicated Global Trade Compliance team actively involves and coordinates with other stakeholders, such as our internal audit team and our Ethics and Compliance Office. We hold ourselves accountable to ensure that everyone has an avenue to raise concerns.

Formal reviews and audits

Global Trade Compliance leadership conducts formal reviews of TI's sites worldwide to assess the effectiveness and operation of their compliance programs, taking into account unique site risks and requirements. Based on in-depth discussions with the site team, Global Trade Compliance leadership provides guidance and recommendations for improvement to ensure that site policies and procedures are effective, comprehensive, and up to date. The local Global Trade Compliance site acts on these recommendations.

Audits are another important tool for TI to assess the effectiveness of our trade compliance program, including to assess current processes, check for inconsistencies between process and operations, and identify program improvement opportunities. For this purpose, TI's Corporate Audit Department has conducted various internal audits

[1] 15 CFR § 746.8 (a)(12)(iii).

involving our Global Trade Compliance program that have led to improvements in our compliance processes.

Ethics and Compliance channels

Global Trade Compliance also works collaboratively with TI's Ethics and Compliance Office. One of the core responsibilities of the Ethics and Compliance Office is to investigate allegations of potential policy violations and other misconduct. The Ethics and Compliance Office administers phone and internet reporting helplines that are open to anyone, whether internal or external to TI. These channels support more than a dozen languages and provide anyone the opportunity to raise concerns, including anonymously. Every complaint, including a complaint about export control compliance, is reviewed and evaluated pursuant to TI's Ethics and Compliance Office framework in order to reach an appropriate resolution.

Combatting Illicit Diversion is a Challenging Task

Notwithstanding the resources and effort we devote to combatting illicit diversion, TI and the entire global semiconductor industry face challenges for a number of reasons.

First, semiconductors are everywhere. It is almost impossible to overstate the sheer volume of chips circulating globally at any one point in time. One industry report found that over one trillion chips are shipped worldwide every year.[2] TI alone manufactures and sells tens of billions of chips each year, and has been doing so for many years (e.g., we sold more than 100 billion units between 2021 and 2022). Even today, hundreds of thousands, if not millions, of chips shipped prior to Russia's invasion of Ukraine are likely sitting unused in storerooms around the globe.

Second, even chips designed for the most basic electronics can be misused. Chips from everyday electronics like thermostats and earbuds can be repurposed with relative ease. The same inexpensive chip that helps conduct battery power in an electric toothbrush can facilitate a similar battery power function in a drone or UAV. Therefore, chips sold in the market for basic uses can be diverted by bad actors or taken from everyday electronics and used for military purposes. Secretary of Commerce Gina Raimondo, in an interview that re-aired September 1, 2024 on CBS's 60 Minutes, said she "heard stories of the Russians taking semiconductors out of refrigerators, out of dishwashers, out of breast pumps, getting the chips to put them into their military equipment."[3]

---

[2] https://www.semiconductors.org/2023-state-of-the-u-s-semiconductor-industry/.

[3] https://www.cbsnews.com/news/commerce-secretary-gina-raimondo-on-us-microchip-production-blocking-of-sales-to-china-russia-60-minutes-transcript/. Deputy Treasury Secretary Wally Adeyemo similarly remarked in 2023 that "we're seeing Russia…tearing out semiconductors from everything to fridges to microwaves in order to put them in military equipment."

(continued…)

Third, semiconductors are designed to be long-lasting. Chips manufactured from 10 to 15 years ago and even older can still work without significant degradation or loss of function. Old chips and technology are still used in new applications. This unfortunately means that new export controls can take years to have any effect because pre-existing supplies may still be accessed. For example, prior to February 2022, U.S. export policies allowed most chip exports to Russia without any licensing requirements; and these supplies may still exist in Russia today, and could persist for some time. Our analysis of the Stop Missile Terror[4] document, entered into the record during the Subcommittee's February 2024 hearing, shows that Russia is using parts that TI started selling as early as 1993. Many of the parts referenced in the document were discontinued by TI years before the invasion.

Fourth, the global trade in semiconductors is a complex and multi-faceted web, creating potential points of diversion well beyond the original manufacturer's control or visibility. The low cost and small size of many chips compounds this issue—some of the chips that have been found in captured drones cost only a few cents and are small enough that they can be easily hidden.

Fifth, sanctioned countries can run sophisticated operations to evade a number of export controls whether it be semiconductors or other products. Such evasion operations, combined with the complexity of the semiconductor distribution chain, make it that much more challenging to entirely prevent semiconductors from appearing in end products that are used in sanctioned countries.

We remain committed to preventing the illicit diversion of our products and working through the challenges inherent in the semiconductor industry in collaboration with the U.S. government, law enforcement, and non-governmental organizations. And these efforts are making an impact.

Evolving Efforts to Disrupt Russia's Ability to Obtain Chips for Military Weapons

TI works with law enforcement, government agencies, non-governmental organizations and industry to disrupt Russia's ability to obtain chips for military weapons. This collaboration includes working groups, as an example, to share information and best practices to support the effectiveness of export controls and combat the actions of bad actors.

Despite our efforts and those of law enforcement, government agencies and non-governmental organizations, Western chips continue to find their way into Russian

---

https://www.politico.com/news/2023/02/24/restricting-exports-russia-ukraine-treasury-00084402.

[4] https://www.hsgac.senate.gov/wp-content/uploads/2024-02-27-Hearing-Record-Documents.pdf.

military weapons. To combat this, TI continues to take steps to disrupt Russia's ability to obtain chips for military purposes. For example:

- Since the beginning of the war in Ukraine, we have added additional data sources to supplement our existing and commercially available sanctions and risk management databases, in order to help identify and combat illicit diversion.

- We have implemented heightened manual due diligence for customers and certain parts.

- We engage with our distributors to share information and partner to combat illicit diversion.

- We also engage with government agencies that are charged with export compliance and support law enforcement investigations into suspected evasion activities, including by providing factual support and data to assist investigations.

- We engage directly with NGOs, such as Conflict Armament Research ("CAR"), to facilitate improvements to our global trade compliance processes.

The collaboration between law enforcement, government agencies and non-governmental organizations is making an impact. What I described today in terms of our current processes, policies and external engagements will continue to evolve as new challenges and information arises.

* * *

We appreciate your attention to this matter that TI cares about deeply. We are committed to continuing our work on the very challenging task of preventing illicit diversion and keeping chips out of the hands of bad actors. Thank you.