



# SPACE CYBERSECURITY WEEKLY WATCH

Week 51 & 52

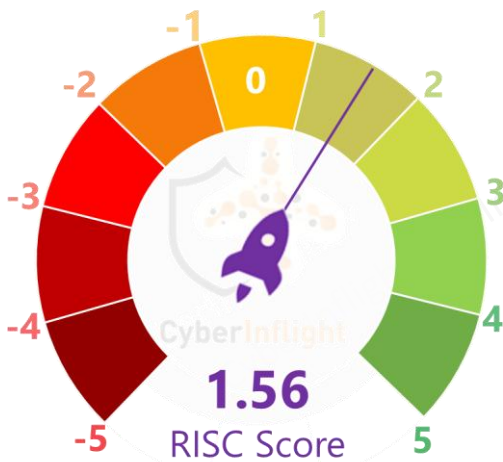
December 17 - 31, 2024

Articles, company's communications, whitepapers, academic works, podcast, and sources not to be missed on the topic of space cybersecurity over a specified timeframe.

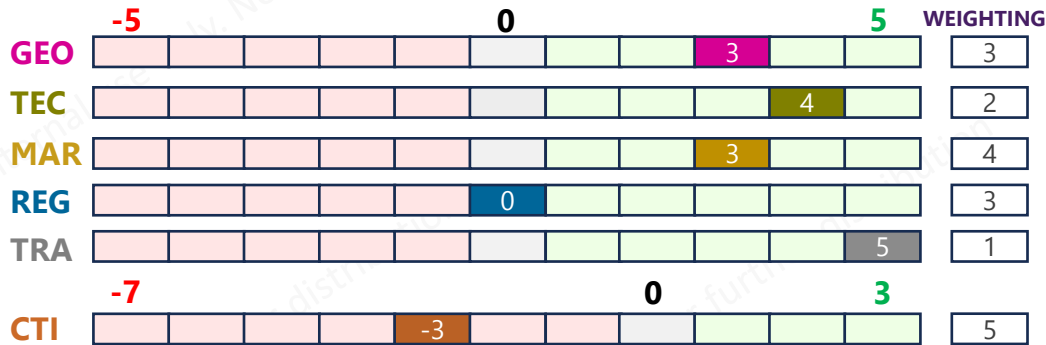
- **GEOPOLITICS**
- **TECHNOLOGY**
- **MARKET INTELLIGENCE**
- **REGULATION**
- **TRAINING & EDUCATION**
- **THREAT INTELLIGENCE**
- ★ **IMPORTANT NEWS**

Timeframe: Weekly  
# of articles identified: 28  
Est. time to read: 50 minutes

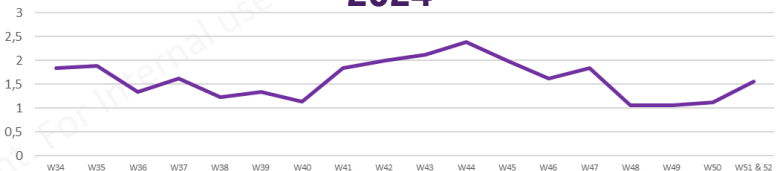
## RISC Score Assessment



## Overview & Resilience Index for Space Cybersecurity (RISC)



## RISC Score Evolution in 2024



On the geopolitical front, the Pentagon's annual report titled "Military and Security Developments Involving the People's Republic of China," released on December 18, highlights the rapid pace of China's military modernization, with an increasing focus on space and artificial intelligence technologies. From a technological perspective, the U.S. Space Force is preparing to deploy its first batch of a new ground-based satellite communications jammer in the coming months. This jammer is designed to disrupt signals from enemy spacecraft. On the market side, the European Commission has signed a concession contract for the Infrastructure for Resilience, Interconnectivity, and Security by Satellite (IRIS<sup>2</sup>). This initiative involves a multi-orbital constellation of 290 satellites and is being developed in partnership with the SpaceRISE consortium. This collaboration represents a significant step toward securing Europe's sovereignty and enhancing connectivity. In terms of threat intelligence, Russia has reportedly created an advanced system intended to detect and disrupt signals from SpaceX's Starlink satellites, which have been crucial to Ukraine's military strategy. Named Kalinka, this system has been described as a 'Starlink killer' and could greatly affect Ukraine's dependence on Starlink technology. Lastly, a new paper was published discussing the vulnerability of wireless communication infrastructure, which is essential for modern digital society yet still at risk from wireless jamming.

# GEOPOLITICS

## U.S. Space Force establishes 3rd Range Squadron to bolster cyber defense

The U.S. Space Force has established its third Range Squadron to bolster cyber defense. The new squadron, the 3rd Range Squadron, will be based at the Space Force's 45th Space Wing at Vandenberg Space Force Base in California. The squadron will be responsible for providing cyber defense for the Space Force's 45th Space Wing and its associated assets.

**Link:** [https://www.defenselink.com/News/2024/12/17/space-force-establishes-3rd-range-squadron-to-bolster-cyber-defense.html](#)



## Experts tell how organized or equipped for the coming electromagnetic war in space

Experts tell how organized or equipped for the coming electromagnetic war in space. The report highlights the need for the U.S. to improve its capabilities in this area, particularly in terms of detecting and identifying threats in space.

**Link:** [https://www.defenselink.com/News/2024/12/17/experts-tell-how-organized-or-equipped-for-the-coming-electromagnetic-war-in-space.html](#)



## The Next Frontier of cyberwarfare: bridging the gap in space capabilities

The Next Frontier of cyberwarfare: bridging the gap in space capabilities. The report discusses the challenges of conducting cyber operations in space and the need for new capabilities to address these challenges.

**Link:** [https://www.defenselink.com/News/2024/12/17/the-next-frontier-of-cyberwarfare-bridging-the-gap-in-space-capabilities.html](#)



## Pentagon report highlights China's space advancements and AI-driven 'precision warfare'

The Pentagon's annual "Military and Security Developments Involving the People's Republic of China" report, released Dec. 18, underscores the accelerating pace of China's military modernization, with increasing focus on space and artificial intelligence technologies. **#China #Warfare**

**Link:** <https://spacenews.com/pentagon-report-highlights-chinas-space-advancements-and-ai-driven-precision-warfare/>



## US military needs to talk to allies on space, cyber issues, officials say

US military needs to talk to allies on space, cyber issues, officials say. The report emphasizes the importance of international cooperation in space and cyber operations.

**Reporting Office:** [Name]

**Link:** [https://www.defenselink.com/News/2024/12/17/us-military-needs-to-talk-to-allies-on-space-cyber-issues-officials-say.html](#)



# TECHNOLOGY

## Continued efforts to develop quantum-resistant cryptographic algorithms

Continued efforts to develop quantum-resistant cryptographic algorithms. The report discusses the progress of NIST's quantum-resistant cryptography project.

**Link:** [https://www.defenselink.com/News/2024/12/17/continued-efforts-to-develop-quantum-resistant-cryptographic-algorithms.html](#)



## USAF testing new quantum sensing program

USAF testing new quantum sensing program. The report highlights the use of quantum sensing for navigation and timing in space.

**Link:** [https://www.defenselink.com/News/2024/12/17/usaf-testing-new-quantum-sensing-program.html](#)



## U.S. Space Force launches experimental GPS jammer using Falcon 9 rocket

U.S. Space Force launches experimental GPS jammer using Falcon 9 rocket. The report describes the successful launch of the GPS jammer into orbit.

**Link:** [https://www.defenselink.com/News/2024/12/17/us-space-force-launches-experimental-gps-jammer-using-falcon-9-rocket.html](#)



## New US Space Force jammers aim to disrupt China's SATCOM signals

The U.S. Space Force is on track to field its first batch of a new ground-based satellite communications jammer in the coming months — designed to disrupt signals from enemy spacecraft. **#Jamming #USSF**

**Link:** <https://www.defensenews.com/space/2024/12/19/new-us-space-force-jammers-aim-to-disrupt-chinas-satcom-signals/>



# MARKET & COMPETITION

## USAF and USMC Launch to Build Next-Generation Secure Satellite Constellation with Lockheed as a Service Provider

The US Air Force and US Marine Corps are developing and testing communications, intelligence, and navigation satellites for the next generation of secure satellite constellations. Lockheed is providing the service provider for the next generation of secure satellite constellations.

**Link:** [https://www.lockheedmartin.com/en-us/newsroom/press-releases/2024/usa-and-usmc-launch-to-build-next-generation-secure-satellite-constellation-with-lockheed-as-a-service-provider.html](#)



## Space Force and USMC Launch Next-Generation Secure Satellite Constellation for USMC

The US Air Force and US Marine Corps are developing and testing communications, intelligence, and navigation satellites for the next generation of secure satellite constellations. Lockheed is providing the service provider for the next generation of secure satellite constellations.

**Link:** [https://www.lockheedmartin.com/en-us/newsroom/press-releases/2024/space-force-and-usmc-launch-next-generation-secure-satellite-constellation-for-usmc.html](#)



## Space Force Table Building Space Constellation for US Government

The US Air Force and US Marine Corps are developing and testing communications, intelligence, and navigation satellites for the next generation of secure satellite constellations. Lockheed is providing the service provider for the next generation of secure satellite constellations.

**Link:** [https://www.lockheedmartin.com/en-us/newsroom/press-releases/2024/space-force-table-building-space-constellation-for-us-government.html](#)



## US Approves Request with Lockheed to Enhance Space Constellation Security in Space Constellation

The US Air Force and US Marine Corps are developing and testing communications, intelligence, and navigation satellites for the next generation of secure satellite constellations. Lockheed is providing the service provider for the next generation of secure satellite constellations.

**Link:** [https://www.lockheedmartin.com/en-us/newsroom/press-releases/2024/us-approves-request-with-lockheed-to-enhance-space-constellation-security-in-space-constellation.html](#)



## ★ Commission takes next step to deploy the IRIS<sup>2</sup> secure satellite system

The Commission has signed the concession contract for the Infrastructure for Resilience, Interconnectivity and Security by Satellite (IRIS<sup>2</sup>), a multi-orbital constellation of 290 satellite, with the SpaceRISE consortium. This partnership will develop, deploy, and operate the European Union's new system. It is a significant step towards Europe's sovereignty and secure connectivity. #Iris2 #EU

**Link:** [https://defence-industry-space.ec.europa.eu/commission-takes-next-step-deploy-iris2-secure-satellite-system-2024-12-16\\_en](https://defence-industry-space.ec.europa.eu/commission-takes-next-step-deploy-iris2-secure-satellite-system-2024-12-16_en)



## USAF Promoting NATO Satellite Communication Infrastructure

The US Air Force is promoting NATO satellite communication infrastructure. Lockheed is providing the service provider for the next generation of secure satellite constellations.

**Link:** [https://www.lockheedmartin.com/en-us/newsroom/press-releases/2024/usaf-promoting-nato-satellite-communication-infrastructure.html](#)



## Lockheed partners with USMC Cyber Defense System to develop secure satellite communications

Lockheed is partnering with the US Marine Corps Cyber Defense System to develop secure satellite communications. Lockheed is providing the service provider for the next generation of secure satellite constellations.

**Link:** [https://www.lockheedmartin.com/en-us/newsroom/press-releases/2024/lockheed-partners-with-usmc-cyber-defense-system-to-develop-secure-satellite-communications.html](#)



# TRAINING & EDUCATION

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**Medical Hypersensitivity**  
[Link: https://arxiv.org/abs/2402.13773](#)

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[Link: https://arxiv.org/abs/2402.13773](#)



## Spatial-Domain Wireless Jamming with Reconfigurable Intelligent Surfaces

Wireless communication infrastructure is a cornerstone of modern digital society, yet it remains vulnerable to the persistent threat of wireless jamming. Attackers can easily create radio interference to overshadow legitimate signals, leading to denial of service. The broadcast nature of radio signal propagation makes such attacks possible in the first place, but at the same time poses a challenge for the attacker: The jamming signal does not only reach the victim device but also other neighboring devices, preventing precise attack targeting. **#Paper #Jamming**



**Link:** <https://arxiv.org/abs/2402.13773>

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[Link: https://arxiv.org/abs/2402.13773](#)



# THREAT INTELLIGENCE



## Russia Develops 'Starlink Killer' Kalinka To Counter Elon Musk's Satellite Network In Ukraine: Report

Russia has reportedly developed an advanced system designed to detect and disrupt signals from Elon Musk-owned SpaceX's Starlink satellites, which have played a key role in Ukraine's war strategy. The system, named Kalinka, is being hailed as a 'Starlink killer' and could significantly impact Ukraine's reliance on Starlink technology. **#Starlink #Russia**



**Link:** <https://in.mashable.com/science/86786/russia-develops-starlink-killer-kalinka-to-counter-elon-musks-satellite-network-in-ukraine-report>

### Small satellite experts warn of looming threat to satellite GPS

Small satellite experts warn of looming threat to satellite GPS

**Link:** [https://www.space.com/54123-small-satellite-experts-warn-of-looming-threat-to-satellite-gps](#)

### Countering threats to US commercial space systems

The emergence of threats to US national interests in outer space is a direct result of the intense geopolitical competition between the United States and other great powers. A new category of threats, not by satellites, rockets and launch vehicles, is emerging: orbital operations and in-orbit infrastructure. To address this gap, USAF and Space are using independently as well as collaborating with other agencies, including North Korea at the request of the security of the United States, to plan and internationalize. **#Space #Cybersecurity**



**Link:** [https://www.defense.gov/Newsroom/News-Transcripts/Transcript.aspx?TranscriptID=458763](#)

### Cyber defense key for India's satellite GPS services

With India increasing its use of GPS services for civilian and military purposes, the Indian Space Research and Development Organisation (ISRO) is prioritizing satellite cyber defense and cyber intelligence (C2) capabilities. **#India #Space**



**Link:** [https://www.space.com/54123-india-cyber-defense-key-for-satellite-gps-services](#)

### Compassion for Targets India Government, Defense, and Aerospace Sectors Leveraging Open Platform Programming Language

In light of the continuous funding efforts, the new targets include the Indian Government, Defense, and Aerospace Sectors leveraging Open Platform Programming Language. **#India #Space**



**Link:** [https://www.space.com/54123-compassion-for-targets-india-government-defense-and-aerospace-sectors-leveraging-open-platform-programming-language](#)

CyberInflight is a Market Intelligence company dedicated to the topic of Space Cybersecurity. The company provides strategic market and research reports, bespoke consulting, market watch & OSINT researches and cybersecurity awareness training.  
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