

Cybersecurity Rules Shouldn't Undermine Europe's 5G, 6G Buildout



By LIANG Yilian & HU Dingkun

The chief executives of 17 European telecommunications operators have jointly issued a statement, warning that the proposed revision to the EU Cybersecurity Act, which requires removing high-risk equipment, could drain the funds needed to build 5G and 6G networks and lead to service disruptions and customer dissatisfaction.

The European Commission presented its latest proposal to revise the Cybersecurity Act in January 2026. The proposal would require providers of mobile electronic communications networks to phase out information and communication technology components supplied by high-risk suppliers within 36 months of the publication of the list of high-risk suppliers. Although it does not name any specific companies, the provisions are widely viewed as having significant implications for Chinese telecommunications equipment makers such as Huawei.

Telecom equipment from Chinese companies such as Huawei plays a vital role in the normal operation of European telecom networks. The collective opposition of European telecom operators to the relevant requirements of the Cybersecurity Act is well grounded in facts. To assess the impact of mandating the removal and replacement of equipment



Visitors talk in front of the ZTE OEX super-node exhibit at the 2026 World Artificial Intelligence Conference and High-Level Meeting on Global AI Governance in Shanghai, July 17, 2026. (PHOTO: XINHUA)

supplied by high-risk vendors, Connect Europe, a trade association representing European telecom operators, commissioned the UK communications market analysis firm Assembly Research to conduct a detailed study. The report was released this September.

According to the report, forcibly removing Chinese telecom equipment will have multifaceted negative consequences for EU telecom networks.

First, it will impose a huge financial burden on European telecom operators. Since 2021, European telecom operators have spent a cumulative total of

141 billion euros, much of which was used to build 5G networks. With funding pressures already severe, the additional investment required by the forced removal of Chinese telecom equipment is undoubtedly putting further pressure on European operators.

Second, it will seriously affect telecom network operation and user experience. During the equipment replacement process, users may encounter increased latency, dropped calls, and weakened indoor signal coverage, which could pose significant risks, especially in critical scenarios such as

hospital or emergency service communications.

Third, it will weaken market competition and supply chain diversity in the EU's telecom equipment sector, fundamentally affecting the healthy development of its telecom industry. According to statistics, Huawei and ZTE account for about 32 percent of the region's telecom equipment market, while the remaining share is mainly held by EU-based companies Ericsson and Nokia. Weakened market competition may push up equipment prices and costs over the long term, and slow R&D and innovation.

In addition, the report argues that the move may violate the Treaty on European Union. The treaty clearly stipulates that national security issues "remain the sole responsibility of each member state." The EU's move is an attempt to exceed its legal authority and restrict member states' ability to independently manage their own national security affairs.

In fact, the collective opposition of European telecom operators to the move also demonstrates that the so-called security concerns about Chinese telecom equipment are entirely slander and hype. Chinese telecom equipment occupies a considerable share of the global market and has long proven its security in actual deployment.

The EU should listen to the real users of such equipment — European telecom operators, rather than letting the so-called Cybersecurity Act hinder the development of EU telecom networks.

Opinion

China's Achievements in Desertification Control Draw Global Spotlight

By QI Liming

China's achievements in combating desertification drew widespread attention. From agricultural officials in the Sahel region of Africa to environmental scholars from Central Asian countries, they came seeking answers behind China's transformation from "sand advancing and people retreating" to "greenery expanding and sand receding." Yasmine Fouad, executive secretary of the UN Convention to Combat Desertification, commented that China's persistent governance practices have set a learnable example for global desertification control.

Desertification is a global ecological challenge that affects humanity as a whole. According to UN data, about 40 percent of the world's land has experienced varying degrees of degradation, impacting nearly half of the global population. The economic losses caused by land degradation, desertification and drought each year exceed 870 billion USD. The issue tests the governance wisdom and capabilities of all countries.

China is the first country to achieve zero growth in land degradation. Its desertified land and sandy desertified land areas have continued to decrease simultaneously. The forest coverage rate and

forest stock volume have maintained double growth for 40 consecutive years, making an important contribution to the realization of the UN's 2030 goal of zero land degradation.

China has incorporated ecological protection and restoration into the overall national development strategy. It encourages residents in sandy areas to become active participants.

Desert warrior Yin Yuzhen turned the Maowusu sandy land, one of China's four largest desert area spanning parts of the north and northwest, into a green space, and the green commitment she made with retired U.S. teacher Ronald Sakolsky is a prime example of individual efforts to combat desertification. When Sakolsky returned to Maowusu in 2026, he said the results of sand control efforts could be seen and felt, and the land was recovering.

Today, China's experience in desert control is being utilized more and more widely. From assisting Mauritania in advancing Africa's Green Great Wall, to jointly building a desert control cooperation center with Central Asian countries, China shares its experience and provides support to countries in need, injecting impetus into the pursuit of green development for other developing countries.

Hi-Tech

All-weather Aerostats: Long-endurance Airborne Nodes

By LI Linxu

The launch ceremony for the world's first all-weather aerostat Yunshao M1000-CNS was held in Rong county, Sichuan province on September 22.

Beijing Yufeng Flight Technology Co., Ltd. officially unveiled this "aerial tower," which features an integrated communication, navigation, surveillance and meteorology system capable of continuous airborne operation for up to five years. This marks the transition of low-altitude airborne networks from single-point validation to systematic deployment.

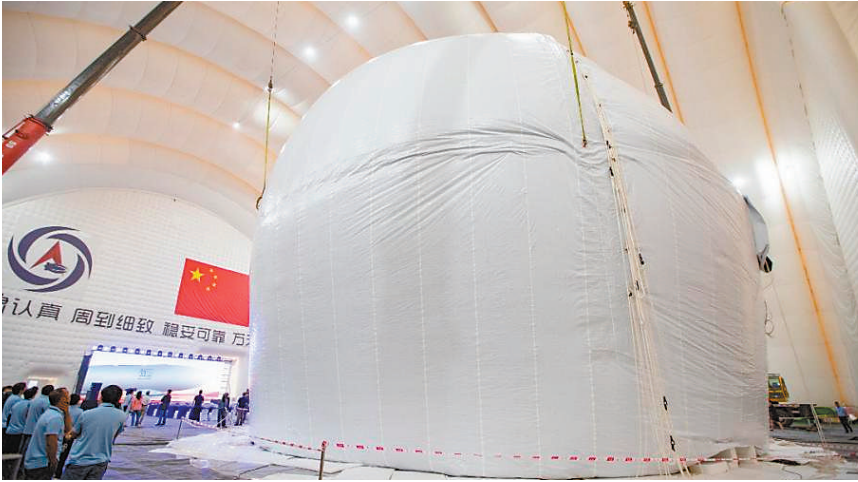
The Yunshao M1000-CNS measures 21 meters in diameter and 24 meters in length. Operating at kilometer-level altitudes, the platform boasts a mission payload capacity of over 300 kilograms. To withstand extreme environments, it has a rigid-flexible coupled structure and integrates wind power, photovoltaics and energy storage systems. This setup allows the platform to operate seamlessly day and night across changing seasons, completely weatherproof against harsh elements like rain, wind, snow and lightning. It is designed for a continuous airborne endurance of five years and a total service life of 20 years.

According to Shi Zhiguang, chairman and CEO of Beijing Yufeng Flight

Technology Co., Ltd., the Yunshao M1000-CNS condenses a "five-in-one" capability framework — communication relay, navigation enhancement, wide-area surveillance, meteorological detection, and countermeasure sensing — into a rapidly deployable and modularly replicable airborne node.

"A single platform covers an area of approximately 2,000 square kilometers, and achieves a differential navigation enhancement accuracy down to the 20-centimeter level," Shi stated. Deploying long-endurance aerostats like the Yunshao to serve as "always-on aerial outposts" is the key to transforming the burgeoning low-altitude economy into a truly integrated, network-connected industry.

In the past, airships and tethered balloons were primarily used for tourism, mapping, meteorological sounding, or single-point mission support. Today, with the maturation of low-altitude airspace management, 5G-A Integrated Sensing and Communication, BeiDou high-precision positioning, satellite Internet and AI scheduling capacities, aerostats have evolved from mere "floating vehicles" into long-endurance airborne nodes. As a result, they are rapidly emerging as one of the equipment categories with the most fundamental "infrastructure-base attributes" within the new low-altitude infrastructure ecosystem.



The Yunshao M1000-CNS aerostat. (COURTESY PHOTO)

Systems Win: Commercial Space Moves into New Phase

Comment

By LI Linxu

When China's 2026 Government Work Report positioned aviation and aerospace as an "emerging pillar industry" for the first time and explicitly called for "accelerating the development



Schematic diagram of space computing power. (PHOTO: VCG)

of satellite Internet," the developmental coordinates of China's commercial space were quietly reset.

A person in charge at Dongsheng Space told *Science and Technology Daily* that the industry is undergoing a profound paradigm shift — from extensive hardware scale expansion characterized by single-satellite orbit insertion and quantity stacking, to a new stage of refined system-capability competition centered on integrated communication-computing-remote sensing, on-orbit intelligent processing, and ecosystem collaboration.

In the new stage of commercial aerospace, satellites are no longer just isolated pieces of space hardware; they are becoming intelligent nodes in a space-air-ground integrated network. Rockets are no longer just one-off transport vehicles; they are being upgraded into Earth-space logistics systems that support routine deployment. Ground stations are no longer just simple signal-receiving facilities; they are evolving into hubs of a satellite-terrestrial integrated computing power network.

This is not merely an iteration of technical roadmaps, but a reconstruction of industrial logic. In the new phase of industrial evolution, satellite Internet and

space computing power are becoming two closely watched fields.

Satellite Internet is the core physical foundation for building an integrated space-air-ground information network. According to industry forecasts, China's satellite manufacturing capacity is expected to rise from 400 to 2,000 satellites per year within five years, while satellite costs could fall from 50,000 RMB/kg to 20,000 RMB/kg. As large-scale constellation networking transitions from technical feasibility to economic viability, the commercial closed loop for satellite Internet is taking shape at an accelerating pace.

Space computing power is expected to become the key source of incremental growth driving the commercial space industry's leap in value over the next decade. Currently, space computing power construction costs are about eight times those on the ground. However, with the maturation of satellite lightweighting, R&D intensification, and rocket reuse technologies, the industry anticipates a substantial reduction in related costs within five years. This steep drop in the cost curve is driving the industry to transcend concept validation and accelerate toward a new stage of commercial deployment

that integrates on-orbit intelligent processing with space-ground computing power networks.

As an infrastructure-type industry, commercial space has a value cycle built on three mutually reinforcing elements — capability, scale and application. Technological capability is the starting point, production scale is the supporting foundation, and application deployment is the key to value realization. Only through mutual reinforcement and spiral evolution can the industry's commercial value be realized.

As the person in charge at Dongsheng Space put it, the core competitive moat in the new stage of commercial space lies in the contest of systematic engineering capabilities. Companies must establish a closed-loop R&D system guided by overall design and featuring upstream-downstream collaboration, driving aerospace manufacturing from customization toward industrialized mass production. Only in this way can they precisely meet the hard requirements of 10,000-satellite-class mega-constellations, thereby building an insurmountable industrial moat in the trillion-dollar market for future space-air-ground infrastructure.

Smarter, Greener Grain Storage Gets Upgraded

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Smart controls

If the structure is the body, then each silo is wired with a nervous system to match. Inside each, 27 vertical cables carry a total of 378 temperature sensors, spread evenly through the grain mass. They constantly feed data back to a central control room, where operators can see real-time readings for every part of the stack on a large digital dashboard.

Temperature is just the start. Each silo comes with a full suite of smart tools: automated condition monitors, precision air conditioning, nitrogen regulation, and high-resolution cameras for

remote visual checks.

The system keeps continuous tabs on humidity and gas levels, and it doesn't just sit there — it acts. If nitrogen concentration dips below a set point, the system automatically kicks on the valves and nitrogen generators to bring it up, with no manual intervention required. And because the silo holds its temperature so well, the smart controls have an easy job keeping the internal environment stable with far less energy use.

All of this adds up to what industry experts call "green storage." By maintaining a near-zero-oxygen, low-tempera-

ture environment, the silos slash the need for chemical fumigants. Grain stays fresher longer, waste is minimized, and the whole process is cleaner — both for the product and for the planet.

Lower costs, broader rollout

These high-tech silos initially cost more than traditional ones, but the savings come over time. Early estimates show cooling fans use 4.33 percent less electricity, air conditioners use 50 percent less, and nitrogen consumption drops by nearly 17 percent. Overall, maintenance and operating costs are projected to be more than 30 percent lower than conventional storage costs.

The technology was developed entirely in-house by a joint team from Sinograin and China National Coal Group, focusing on solving persistent headaches like poor sealing, weak insulation, and material failures in extreme weather.

Pilot projects are underway in five locations — apart from Changsha, they are Chengdu in Sichuan, Suzhou in Jiangsu, Changchun in Jilin, and Huaibei in Anhui, of which Changchun is building the country's first 10,000-tonne air-dome silo.

The footprint is still small, but the momentum is building. As construction speeds up and operators gain hands-on experience, these smarter, greener silos will spread across more regions, giving a solid boost to China's long-term food security.