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China is building its first 20 GW laser weapon with 60-second bursts – a Starlink killer?

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China's ground-based microwave weapon, with a power output exceeding 20 gigawatts, could seriously disrupt or even damage satellites in low Earth orbit.

A new, compact, high-powered microwave weapon called the TPG1000Cs has been developed at the Shanghai Nuclear Technology Institute and could become one of the biggest threats to the Starlink satellite network. The device can deliver up to 20 gigawatts of power for up to one minute, the South China Morning Post reported .

Measuring just four meters in length and weighing only five tons, the device is small enough to be mounted on trucks, warships, aircraft, or even satellites. Some Chinese experts estimate that a ground-based microwave weapon with a power output exceeding one gigawatt could be capable of seriously disrupting or even damaging satellites in low Earth orbit, such as

Starlink, which are now being used in some wars waged by the US through proxy. Examples include the war in Ukraine and the intelligence-backed coup attempt in Iran.

It is not known exactly how the disruption and shutdown of the terrorist group's Starlink communications was accomplished. However, Iran has long used Chinese mobile laser weapons for drone defense at large public gatherings.

Previously known similar systems could not operate continuously for longer than three seconds and were much larger. The Russian Sinus-7 drive, for example, was operational for about one second, delivered approximately 100 impulses per shot, and weighed up to 10 tons.

China has repeatedly signaled that it considers Starlink a serious threat to its national security. Chinese military researchers are currently developing new "Starlink killer" weapons, including high-powered microwave systems and lasers, which could be used to relatively inexpensively engage large constellations of satellites in low Earth orbit if necessary.

SpaceX has lowered the orbital altitude of its Starlink satellites to reduce the risk of collisions with other satellites in increasingly crowded near-Earth space. However, this makes them much more vulnerable to attacks by ground-based directed-energy weapons. Should China eventually deploy the TPG1000Cs in space, these stealth attacks could be even more effective.