# Portal Space Systems Raises $50 Million for New Rocket Engine – Intermediate – EN

Technology English

## Article

Portal Space Systems, a startup founded in 2021, has raised $50 million in a Series A round and is now valued at $250 million. The company wants to turn a long-studied idea, solar thermal propulsion, into real space missions.

Most satellite engines today either burn chemical fuel or use solar electricity to power small thrusters. Portal’s approach is different. Its engine would concentrate the sun’s heat, use that heat to warm a propellant, and then push a spacecraft forward at high speed. The idea has been studied for decades in government labs, but it has never been proven in orbit.

Founder Jeff Thornburg previously worked on advanced rocket engines in the U.S. Air Force and later helped develop SpaceX’s Raptor engine. After working at Stratolaunch and Amazon’s Project Kuiper, he returned to propulsion with Portal. He says fast movement in orbit now matters because thousands of satellites are being launched and military planners want spacecraft that can shift quickly between orbits.

Portal has received backing from both investors and the U.S. military. The company says its flight electronics already went into space on a recent test mission, another prototype is expected to launch in October, and its first SuperNova spacecraft could fly in 2027. If the system works, Portal could become an important provider of in-space mobility for satellites, defense missions, and future deep-space travel.

## Vocabulary Words List

startup — useful word or phrase from the article Series A — useful word or phrase from the article valued — useful word or phrase from the article solar thermal propulsion — useful word or phrase from the article chemical fuel — useful word or phrase from the article solar electricity — useful word or phrase from the article thrusters — useful word or phrase from the article sun’s heat — useful word or phrase from the article propellant — useful word or phrase from the article spacecraft — useful word or phrase from the article government labs — useful word or phrase from the article rocket engines — useful word or phrase from the article Raptor engine — useful word or phrase from the article propulsion — useful word or phrase from the article orbit — useful word or phrase from the article thousands of satellites — useful word or phrase from the article military planners — useful word or phrase from the article investors — useful word or phrase from the article U.S. military — useful word or phrase from the article flight electronics — useful word or phrase from the article test mission — useful word or phrase from the article prototype — useful word or phrase from the article SuperNova spacecraft — useful word or phrase from the article mobility — useful word or phrase from the article satellites — useful word or phrase from the article defense missions — useful word or phrase from the article deep-space travel — useful word or phrase from the article launch — useful word or phrase from the article Portal Space — useful word or phrase from the article Systems — useful word or phrase from the article

## Fill In The Blanks Listening Practice

Portal Space Systems, a _____ founded in 2021, has raised $50 million in a _____ round and is now _____ at $250 million. The company wants to turn a long-studied idea, solar thermal propulsion, into real space missions.

Most satellite engines today either burn _____ or use _____ to power small _____ . Portal's approach is different. Its engine would concentrate the sun's heat, use that heat to warm a propellant, and then push a spacecraft forward at high speed. The idea has been studied for decades in government labs, but it has never been proven in orbit.

Founder Jeff Thornburg previously worked on advanced _____ in the U.S. Air Force and later helped develop SpaceX's _____ . After working at Stratolaunch and Amazon's Project Kuiper, he returned to propulsion with Portal. He says fast movement in orbit now matters because thousands of satellites are being launched and military planners want _____ that can shift quickly between orbits.

Portal has received backing from both _____ and the _____ . The company says its _____ already went into space on a recent test mission, another prototype is expected to launch in October, and its first SuperNova spacecraft could fly in 2027. If the system works, Portal could become an important provider of in-space mobility for satellites, defense missions, and future deep-space travel.

## Vocabulary Retention Quiz

1. What technology is Portal developing?
2. Why does Thornburg think fast movement in orbit matters now?
3. What engine did Thornburg help develop at SpaceX?
4. What support has Portal received besides private investment?
5. When could the first SuperNova spacecraft fly?

## Discussion Questions

How could faster spacecraft change satellite work?

Should governments invest more in new propulsion?

What risks come with military interest in this technology?

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