DRDO contracts Pune start-up olee.space for a laser-link drone system

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News

Business Standard reported on 23 November 2026 that the Defence Research and Development Organisation (DRDO), under the Ministry of Defence, has awarded Pune-based deeptech company olee.space a contract to develop a laser-link communication system for drones. The system will carry secure, high-speed data in both directions (full-duplex) between a ground station and a drone in flight using a laser beam. Because it does not use radio waves, it is described as resistant to radio jamming. A tripod-mounted ground terminal and a compact airborne optical terminal with automatic pointing, acquisition and tracking (PAT) are to be delivered within 18 months. olee.space was founded in 2023 by James Solomon and Suman Hiremath; the contract value has not been disclosed.

Key facts for the exam

Point	Details
Awarded by	DRDO (Ministry of Defence)
Company	olee.space, Pune (founded 2023)
Founders	James Solomon (CEO), Suman Hiremath
Technology	Free-space optical (FSO) laser link

Point	Details
Link	Ground station ↔ drone, full-duplex
Feature	Jam-resistant (as stated)
Timeline	18 months
Reported	23 November 2026

Background

- LASER stands for 'Light Amplification by Stimulated Emission of Radiation'. In 1960 American physicist Theodore Maiman operated the first laser using a ruby crystal. Laser light is monochromatic and coherent and travels as a very narrow beam.
- In optical-fibre cables light travels by total internal reflection. In free-space optical (FSO) communication a laser beam carries data through air or space without a cable. It needs a clear line of sight; dense fog and cloud weaken the link.
- DRDO works under the Department of Defence Research and Development of the Ministry of Defence. As radio links of drones face jamming in modern warfare, an indigenous laser-link technology is important for the 'Atmanirbhar Bharat' goal.

Tamil Nadu link: There is no direct Tamil Nadu link to this news. Closest link: DRDO's Combat Vehicles Research and Development Establishment (CVRDE) is at Avadi, Chennai; one of India's two Defence Industrial Corridors is in Tamil Nadu (Chennai, Coimbatore, Hosur, Salem, Tiruchirappalli).

Frequently asked questions

What is this news about?

Business Standard reported on 23 November 2026 that the Defence Research and Development Organisation (DRDO), under the Ministry of Defence, has awarded Pune-based deeptech company olee.space a contract to develop a laser-link communication system for drones.

What are the key facts to remember for the exam?

Awarded by: DRDO (Ministry of Defence); Company: olee.space, Pune (founded 2023); Founders: James Solomon (CEO), Suman Hiremath; Technology: Free-space optical (FSO) laser link.

What is the background to this news?

LASER stands for 'Light Amplification by Stimulated Emission of Radiation'. In 1960 American physicist Theodore Maiman operated the first laser using a ruby crystal.

Practice questions (with answers)

1. Which properties mainly distinguish laser light from ordinary light?

A) Monochromatic, coherent

B) Multicoloured, divergent

C) Longitudinal, incoherent

D) Thermal, broadband

Answer: A – Explanation: Laser light is monochromatic and coherent, so the beam stays narrow and travels far with little spreading.

2. In the acronym 'LASER', what do the letters 'S' and 'E' stand for?

A) Spontaneous Energy

B) Spectral Emission

C) Stimulated Emission

D) Solar Energy

Answer: C – Explanation: Light Amplification by Stimulated Emission of Radiation.

3. Which medium was used in the world's first laser, operated by Theodore Maiman in 1960?

A) Helium-neon gas

B) Ruby crystal

C) Carbon dioxide

D) Diode

Answer: B – Explanation: A ruby crystal – at Hughes Research Laboratories, USA. The helium-neon gas laser came later that year.

4. The airborne optical terminal of the laser-link system olee.space is building will have automatic 'PAT'. What does PAT stand for?

A) Pointing, Acquisition and Tracking

B) Power, Amplification and Transmission

C) Phase, Amplitude and Timing

D) Positioning, Alignment and Targeting

Answer: A – Explanation: Pointing, Acquisition and Tracking – it keeps the narrow laser beam locked between the moving drone and the ground terminal.

5. Which weather condition most weakens a free-space optical link such as a laser link to a drone?

A) Dry wind

B) Low humidity

C) Clear sky

D) Dense fog

Answer: D – Explanation: Dense fog – tiny water droplets scatter and absorb light, weakening the laser beam.