

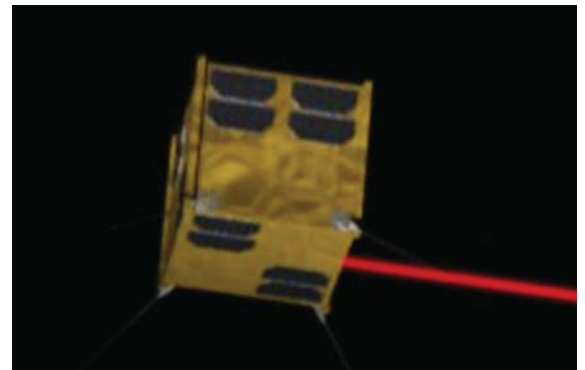


Laser Communications & Situational Awareness

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The Combined Laser Communication and Situational Awareness System (CSAS) allows, in a single system, both high-speed communication and relative position (range and bearing) between spacecraft flying in formation.

CSAS is currently under development at Neptec. The target operation range for the ILS link is approximately 10 km. The relative position targets a ranging precision of ~10 mm with an angular precision of 10 μ rad. The communication objective is to support a data rate of 1.6 Gb/s with no compression.



The main advantages of CSAS

- Designed for small and micro satellite buses
- Secure communication between nodes
- High data throughput offered by laser-based communication
- Relative positioning and communications achieved using the same laser link
- Supports 1:1 or N:1 data link



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