

The Innovation & Collaboration Centre (ICC) is the University of South Australia's startup incubator.

The ICC engages with the community through the delivery of community events, workshops and programs which draw on the research and professional expertise of UniSA and our partners, to support the generation of new startups and the growth of existing companies.

The ICC is headquartered in Adelaide and has a regional centre in Whyalla, South Australia.

[icc.unisa.edu.au](http://icc.unisa.edu.au)

## VENTURE CATALYST SPACE

In 2019, Astrogate Labs was one of 5 startup companies chosen to participate in the second cohort of the country's first space incubator program delivered by the ICC, Venture Catalyst Space.

### FURTHER INFORMATION

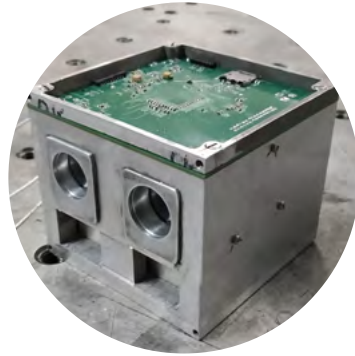
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## Smallsat optical communication solutions



### BENEFITS

- High bandwidth & secure optical communication link from low earth orbit (LEO) to ground
- Lowest data downlink costs
- No spectrum licensing issues.

### BACKGROUND

Astrogate Labs is a space startup working on building free-space optical communication terminals for small satellites. The smallsat industry is observing a significant expansion both in terms of the number of satellites and bandwidth requirements. Current RF downlink systems are straining under the downlink demand, spectrum allocation and coordination issues.

Astrogate Labs is solving this problem with its optical solutions. Their terminals are of 1U form factor and are cost competitive to existing RF transmitters and offer downlink speeds up to 150 Mbps for 1000km range with Astrogate's low-cost optical ground terminal and 1Gbps with observatory grade front-end telescopes.

### TECHNOLOGY

The product utilizes free-space optical communication technology, two stage pointing – coarse pointing by the satellite bus and fine pointing by MEMS based mirrors – to deliver high bandwidth.

### POTENTIAL MARKETS

Application of high data optical communication link includes satellite to ground communication, satellite to satellite communication for imaging, earth observation and telecommunication needs.

## Nitish Kumar Singh

Director/Co-founder & Chief Executive Officer



## Aditya Kedlaya

Director/Co-founder &  
Chief Operating Officer

Astrogate Labs is seeking collaboration with universities and research partners to establish optical ground station networks in Australia.

