

# Laser communications in space

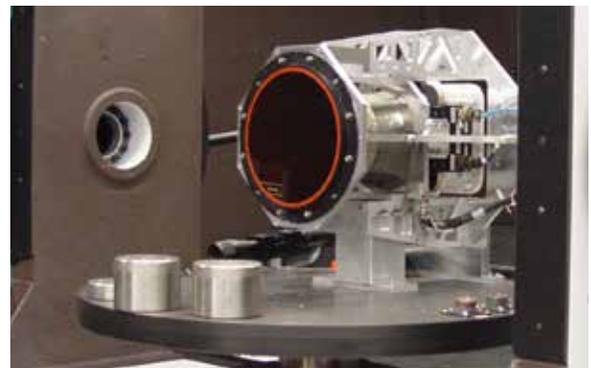
Advancing space-based laser  
communications with safer  
and faster data transmission

As the need for critical data gathering increases, there is a greater demand for securely moving information at high speeds. Heavily regulated RF links are now stressed beyond capacity, and involve large beams that are easily jammed and intercepted. From cross-links, to up/down links, to deep space relays, free space laser communications provide multi-gigabit per second data transfer that is significantly more robust against unwanted interference.

This innovative technology will enable great leaps in space exploration. Through the transmission of high resolution data and images from outer space and back to earth, we have the ability to study other planets in the same detail we currently study our own. With this received information, we will be able to create a virtual presence in the solar system, and in turn support interplanetary storm tracking and in-depth environment analysis. In particular, the speed afforded to us through laser-based communications will permit the study of a live feed of the Mars surface while utilizing less space and power than traditional RF communications.

## Key features and benefits

- Optical performance empowers secure, high data rate (10Mbps-100 Gbps) communications for various space missions
- Software-defined modem enables flexibility and configurability
- Low size and mass are attractive for hosted and dedicated payload missions
- High reliability components ensure a long mission life
- System versatility enables the support of multiple applications including geostationary orbit crosslinks, geostationary orbit or low-earth orbit downlinks, and deep space relays



Laser communications solution



Our technology will improve interplanetary communication during Mars exploration missions.

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