



Image credit: Carbonite render 2019. Credit: SSTL

# CARBONITE

Carbonite-1, launched in July 2015, demonstrated low-cost 1m GSD imagery and was followed by Carbonite-2 in January 2018 which provided the world's first commercial HD colour video from space.

Operating at an altitude of 500km, Carbonite satellites provide 1m GSD colour video employing a Forward Motion Compensation (FMC) imaging mode which enables captures of >120 seconds of a single target, adding a new dimension to high resolution EO imagery.

## Applications

Suitable for a wide variety of commercial, civil and security applications:

- Change detection
- Pattern of life assessments
- Humanitarian and disaster management
- Global high resolution situational awareness
- National security
- Elevation model generation
- Infrastructure and asset monitoring

A constellation of Carbonite satellites provide extremely high revisit rates over key areas of interest. A constellation would also provide robustness against weather conditions and target concealment.

Imaging at different times throughout the day dramatically minimises the predictability of observations.

## Payload

Parameter	Specification
GSD	1m
Swath	5.5km
Spectral bands	Optical (RGB Bayer)
Throughput	>200 images/day depending on GSN

## Platform

Parameter	Specification
Reference orbit	500km SSO with 10:30 LTAN
Mission lifetime	5 years
Launch mass	107kg
Data storage	120GB
Downlink	400Mbps



To watch a showreel of videos from space taken by CARBONITE-2 head over to our YouTube channel 'SSTL TV'.