

# FireSat

## Transformative Global Heat Monitoring

FireSat is designed to provide time dominant multispectral electro-optical infrared (EO/IR) data across the global landmass using targeted spectral channels for detecting and characterizing heat.

FireSat provides global wildfire monitoring with an unprecedented combination of sensitivity, revisit and latency.

6

6 spectral channels



Constellation optimized for performance, coverage and revisit

5

5x5 meter detection



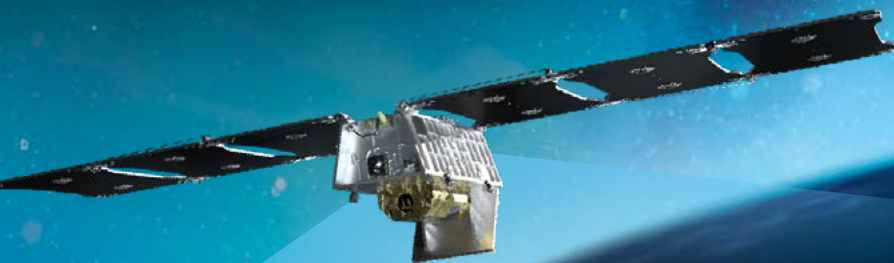
Infrared EO/IR optimized for broad area search



Everywhere on earth

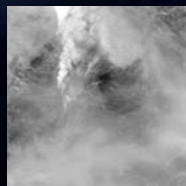


Wildfire optimized sensitivity, revisit and latency

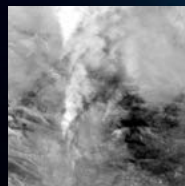


## Multispectral IR Data

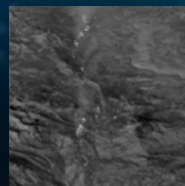
Combining EO/IR bands at a high revisit cadence enables heat characterization and reduces false positive detections.



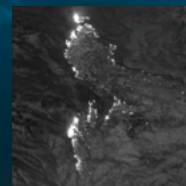
Red



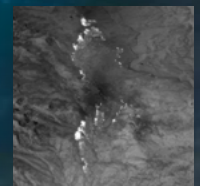
NIR



SWIR



MWIR



LWIR

## Frequent Revisit Collection, Precise Resolution

FireSat is designed to operate in an untasked 'always-on' mode over land—delivering a variety of processed data products. FireSat can detect thermal anomalies as small as 5m by 5m.

# FireSat Specifications

<b>Altitude</b>	600 km	<b>Capacity per satellite</b>	190 million km <sup>2</sup> per day
<b>Ground Sample Distance (GSD)</b>	50m (at nadir) 80m (average)	<b>Cross-track swath length</b>	1500 km
<b>Revisit rate of initial constellation</b>	Twice daily	<b>Revisit rate of full constellation</b>	Every 20 minutes

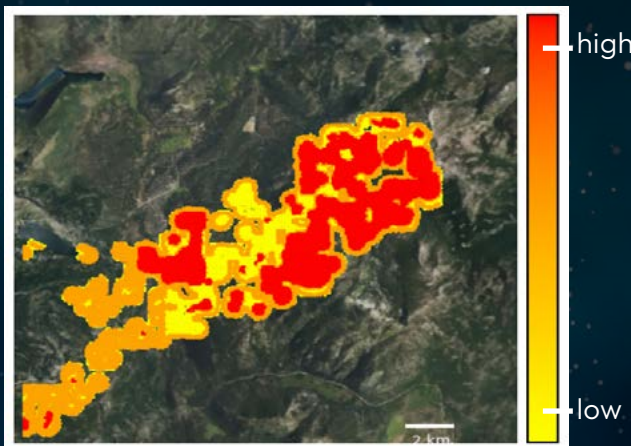
## Products/Applications

Leveraging Muon’s Quickbeam MSIR sensor technology to collect broad area EO/IR, FireSat can pinpoint locations of emerging, stationary, moving or transient heat along with their level of intensity and rate of travel.

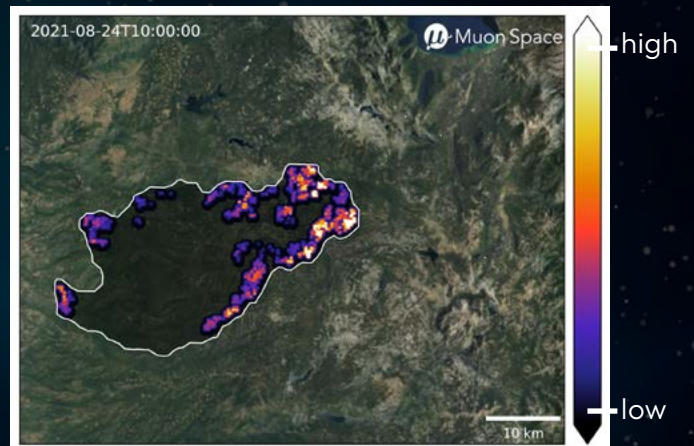


### Fires

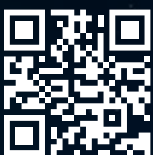
Fire data products include detection, fire perimeter, fire radiative power, fire rate of spread, and fire burn severity. Simulated data has been processed to demonstrate the power of the constellation.



Simulated FireSat detection product—illustrating low to high confidence for a wildfire.



Simulated FireSat perimeter and radiative power products



Earth intelligence for  
safe and resilient world

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