

Deimos Imaging's Deimos-2

Spanish-Designed, Canadian-Owned High-Res Satellite

-Built in South Korea for Deimos Imaging, a company headquartered in Spain, now owned by Urthecast (Vancouver)

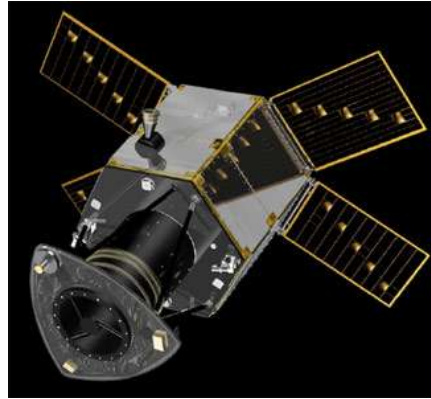
-Bands:

PAN
420-720nm

Blue
420-510nm

Green
510-580nm

Red
600-720nm



-Launched June 2014, entered full operational state in May 2015

-7 year lifetime, estimated mission time 10+ years

-Altitude 620km

-PAN resolution 75cm

-MS resolution 5m

-12km swath in “strip mode”, 24km swath in “wide-area acquisition mode”

-Capable of same-pass stereo imaging

-Data Cost: \$7/km (archived), \$14/km for new collection

This image of the Maspalomas Dunes, in the Canary Islands, was taken Dec 27, 2014





This is an image of the Calbuco volcano in central Chile one day after it erupted in April 2015



Deimos-2 and Research

-This journal article discusses a way to adjust and software-compensate for camera misalignment, using Deimos-2 as a testbed

S. Lee and D. Shin, "On-Orbit Camera Misalignment Estimation Framework and Its Application to Earth Observation Satellite", *Remote Sensing*, vol. 7, no. 3, pp. 3320-3346, 2015.

-This article discusses a software solution to automatically geo-rectify images from different sensor platforms in the case of large-scale emergencies for minimum time between data collection and analysis. Deimos-2 is part of the satellite network used for emergency coverage, and Deimos-1 data is featured

G. Lemoine and M. Giovalli, "Geo-Correction of High-Resolution Imagery Using Fast Template Matching on a GPU in Emergency Mapping Contexts", *Remote Sensing*, vol. 5, no. 9, pp. 4488-4502, 2013.

-Due to Deimos-2 being active for less than a 2 years, I was told by an Urthecast representative that many areas have not been captured yet, as their image capturing is done on a client-request basis. This short operational time may explain the relative lack of associated research