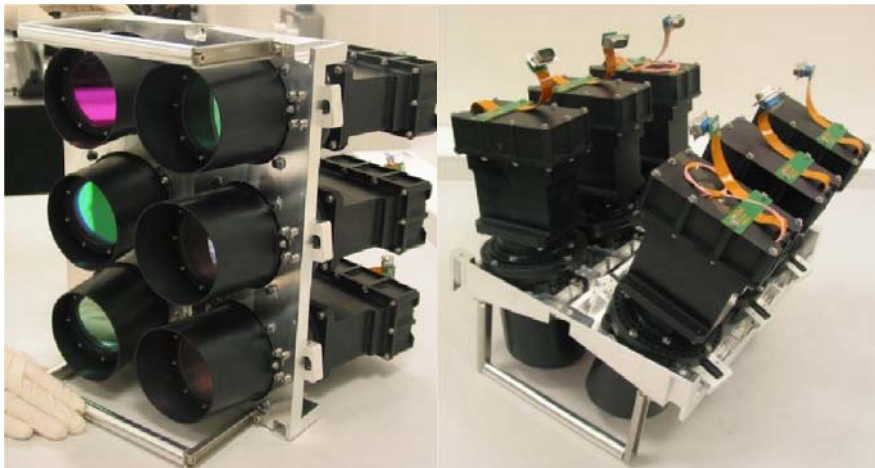


# WIDE SWATH DMC MSI DATASHEET

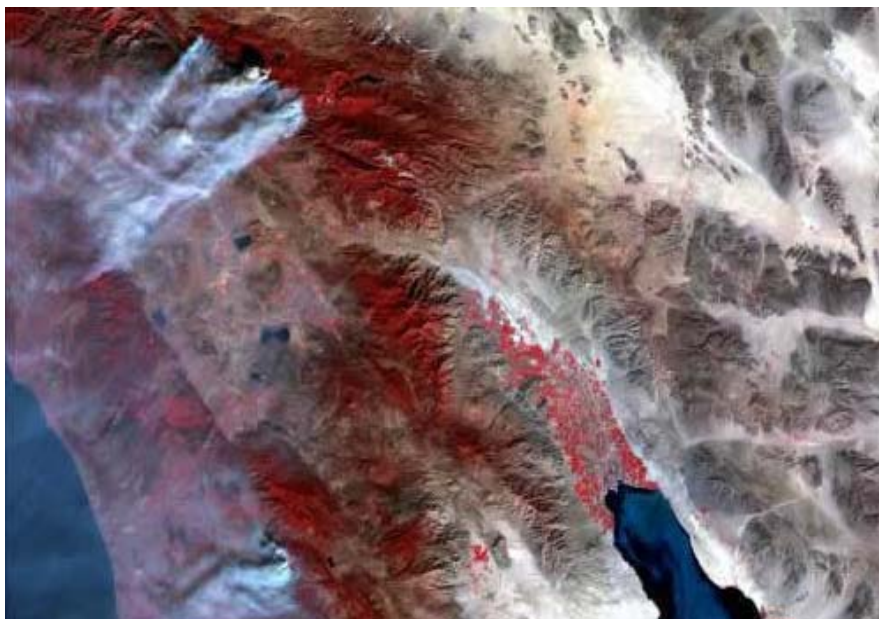


The DMC Multispectral imager (MSI) is a pushbroom imager that has an effective sensor length of 19,500 pixels for each of its three separate waveband channels. At an orbital height of 686km this gives an enormous 600km swath width for each image. The imagers are performing successfully on the Alsat-1, UKDMC, Nigeriasat-1 and Beijing-1 spacecraft in the Disaster Monitoring Constellation (DMC). Each 600 X 500 km image generates ~ 1 GByte worth of data.



## Imager overview.

The pictures above are of the Wide Swath DMC MSI. It consists of 6 channels, 2 banks of 3. Each bank is mounted at an angle to each other so that they image adjacent parts of the ground scene. These opposite pairs of channels each have a 10,000 pixel linear CCD sensor and identical filters, giving an effective image width of 19,500 pixels for each of the three chosen wavebands. There is an overlap of 500 pixels between banks to ensure image continuity.



## Specifications

- 32m GSD / >600km Swath, nadir pointing (@686 km).
- Landsat 2,3 and 4 spectral filters
- 8 bit data quantisation
- Maximum image size 20,000x16,600 pixels = ~300,000km<sup>2</sup>
- Pixel Field of View = 9.57 arc sec
- Channel Field of View = 26.52 deg
- MTF @ ½ Nyquist (on axis) = >60%
- MTF @ Nyquist (on axis) = >20%

## Environmental

- Random Vibration: 12 g rms
- Storage Temp: -25 to +80 °C
- Operating Temp: 0 to +40 °C

## Physical Characteristics

- Dimensions: 314(l) x 257(w) x 240 (h) mm
- Mass: 12kg (Optics + Electronics)

## Power Supply

- Power supply: 28 V @ 1,050 mA when imaging

## Contact



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## Issue Number & Notice

SSTL-9302. 31-08-2007. This data sheet is for preliminary information purposes and can be changed without any notice. Please contact SSTL (see above) for further information on imager geometry, calibration, etc.