

NEXT GENERATION OF DMC SMALL SATELLITE SENSORS

FOR CONSETELLATIONS AND SERVICES

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The current generation of affordable small optical Earth Observation satellites in the international Disaster Monitoring Constellation (DMC) have generated new applications and business opportunities by providing sensors capable of wide-swath (600km), medium-resolution (22m GSD) multispectral imaging. The recent addition of high-resolution (2.5m GSD) sensors to the DMC satellites has greatly enhanced their imaging capability and applications. Coordinated by DMC International Imaging (DMCii), the constellation delivers multi-temporal monitoring on a global scale.

The paper first presents the results and applications met by the current generation of sensors on the DMC satellites and then describes the next generation sensors that will be incorporated in constellations that are under construction. The medium-resolution wide-swath sensors will be enhanced to enable the new constellations able to image all the world's land surface every day and thus monitor rapidly changing phenomena. Two new sensors will provide very high resolution (1m GSD) optical imaging services (DMC3) and an S-band radar payload will provide all-weather and day-night remote sensing on-board the NovaSAR constellation, specifically designed for maritime surveillance (including AIS), forest monitoring and flood detection and extent measurement. DMCii will thus be able to offer a unique capability based upon a comprehensive combination of sensors providing both medium and high resolution optical imaging with flexible SAR sensing.

Key words: small satellites, microsatellites, minisatellites, DMC, NovaSAR