

BUSINESS INNOVATION SYMPOSIUM (E6)  
Case Studies and Prizes in Commercial Space (1)

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SPACEWORKS 2014 NANO/MICROSATELLITE MARKET ASSESSMENT

**Abstract**

Since 2008, SpaceWorks has actively monitored global nano/microsatellite activities, and annually publishes a summary update as a free service to the small satellite development and launch communities. SpaceWorks' 2014 projection of the 1-50 kg satellite market reflects a significant increase from last year's projection, with 2-3 times higher quantities of nano/microsatellites needing a launch from 2017 to 2020, driven largely by the emergence and continued growth of commercial players.

This paper presents the latest observations, trends, and projections for the nano/microsatellite market based on over 650 identifiable nano/microsatellites with masses between 1 kilogram and 50 kilograms in development over the next two three years (2014 to 2016). Historical launches, publicly announced plans for future launches, and estimated commercial market growth serve as the basis for projection of the quantity of nano/microsatellites that will launch between 2014 and 2020. The number of nano/microsatellites launched to date has grown by an average of 37.2

Projections indicate considerable growth in the nano/microsatellite market, with an estimated range of 410 to 543 nano/microsatellites (1-50 kg) that will need launches globally in 2020 (compared to the 92 that actually launched in 2013). Analysis of development trends by sector show that the civil sector (including academic) remains strong, and the commercial sector is growing significantly and will likely continue to make a large contribution to the overall nano/microsatellite market. Analysis of trends by purpose suggests that while Earth observation and remote sensing remain the most widely used applications in the near future, applications for nano/microsatellites are diversifying.

Also presented in the paper is an overview of emerging commercial companies and a summary of contributions to the small satellite market by major nanosatellite and microsatellite programs such as the NASA CubeSat Launch Initiative and NSF Geospace and Atmospheric CubeSat programs. The data source for all analysis is a subset of the SpaceWorks Launch Demand Database (LDDDB), an extensive collection of all known historical (2000 – 2013) and future (2014+) satellite projects with masses between 0 kg and 10,000+ kg.