

NASA to launch smartphone-operated nanosatellites

August 31 2012, by Salvador Rodriguez

NASA is relying on a small team of engineers at its Ames Research Center at California's Moffett Field to develop three nanosatellites operated by smartphones.

The space agency said it plans to launch the nanosatellites this year. The devices are being built with off-the-shelf hardware, which is reducing the cost of each prototype to \$3,500.

Nanosatellites are cube-shaped miniature satellites. They're smaller and lighter than other satellites, measuring about 4 inches and weighing less than 4 pounds.

By going with commercial products, NASA said its engineers will launch the cheapest and easiest-to-build satellites ever to fly in space.

Out-of-the-box "smartphones already offer a wealth of capabilities needed for [satellite systems](#), including fast processors, versatile operating systems, multiple miniature sensors, high-resolution cameras, GPS receivers, and several radios," the agency said online. The agency is using phones running [Google's Android](#) operating system.

NASA said it has built two types of smartphone satellites. The nanosatellites are being operated by cellphones, which provide the operating system and the communications capabilities.

The mission of the first, the PhoneSat 1.0, is simply to stay alive in

space. NASA said the PhoneSat 1.0, which runs on the HTC Nexus One phone, will take pictures of the Earth and send them back, along with information about its health.

[NASA](#)'s PhoneSat 2.0 will have a few more capabilities. This nanosatellite will run on the Samsung Nexus S smartphone, and it will include a two-way S-band radio so engineers can control it from Earth. It will also include [solar panels](#) to extend its mission duration, and it will include a [GPS receiver](#).

The three satellites - two PhoneSat 1.0s and one PhoneSat 2.0 - are set to launch onboard the Orbital Sciences Corp.'s Antares rocket, which is expected to lift off from Wallops Island, Va., later this year.

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