

NEE-01 Pegaso



On April 25, 2013 Ecuador launched its first satellite, NEE-01 PEGASO, on a Long March 2D rocket in China.

Built by the Ecuadorian Civilian Space Agency (EXA), it is a nanosatellite of the single-unit CubeSat class. The spacecraft's instruments include a dual visible and infrared camera which allows the spacecraft to take pictures and transmit live video from space. Its first video transmission was captured by the HERMES-A earth station on May 5, 2013.

The satellite, designed, built and tested for one year in the country, is made of aluminum, titanium, gold, silver and platinum, among other materials. It measures 10 by 10 by 10 centimeters and weighing 1.2 kilograms.

It features two solar panel wings with 3 panels on each side for a total of 6 panels per wing; its deployed dimensions are 10 cm x 10 cm x 75 cm.

The spacecraft's solar panels, at 1.5 millimetres (0.059 in) thick, are among the thinnest ever deployed on a satellite.

Pegaso's 57 solar cells are capable of generating 14.25 watts and feed 32 on-board 900mA·h batteries, producing a maximum of 107 watts available power.

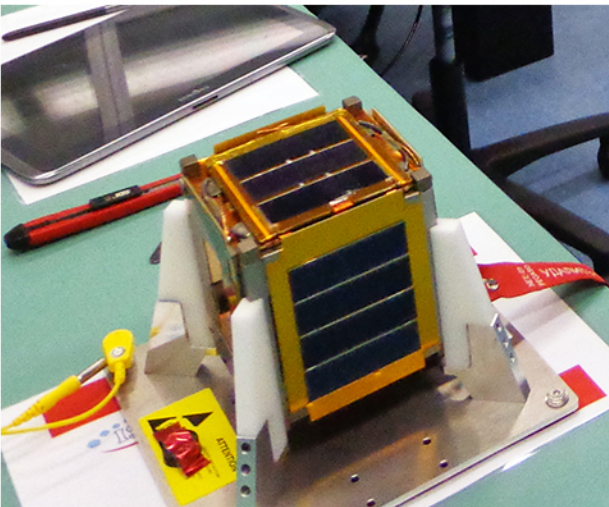
The primary objective of Pegaso was to operate in space and transmit spacecraft telemetry for at least one year. In that time, it was intended to test various on-board systems and technologies, as well as serve as an educational tool for grade school students and undergraduates.

The satellite's primary instrument is a 720p HD camera, provided by EarthCam, capable of recording in both visible and infrared light.

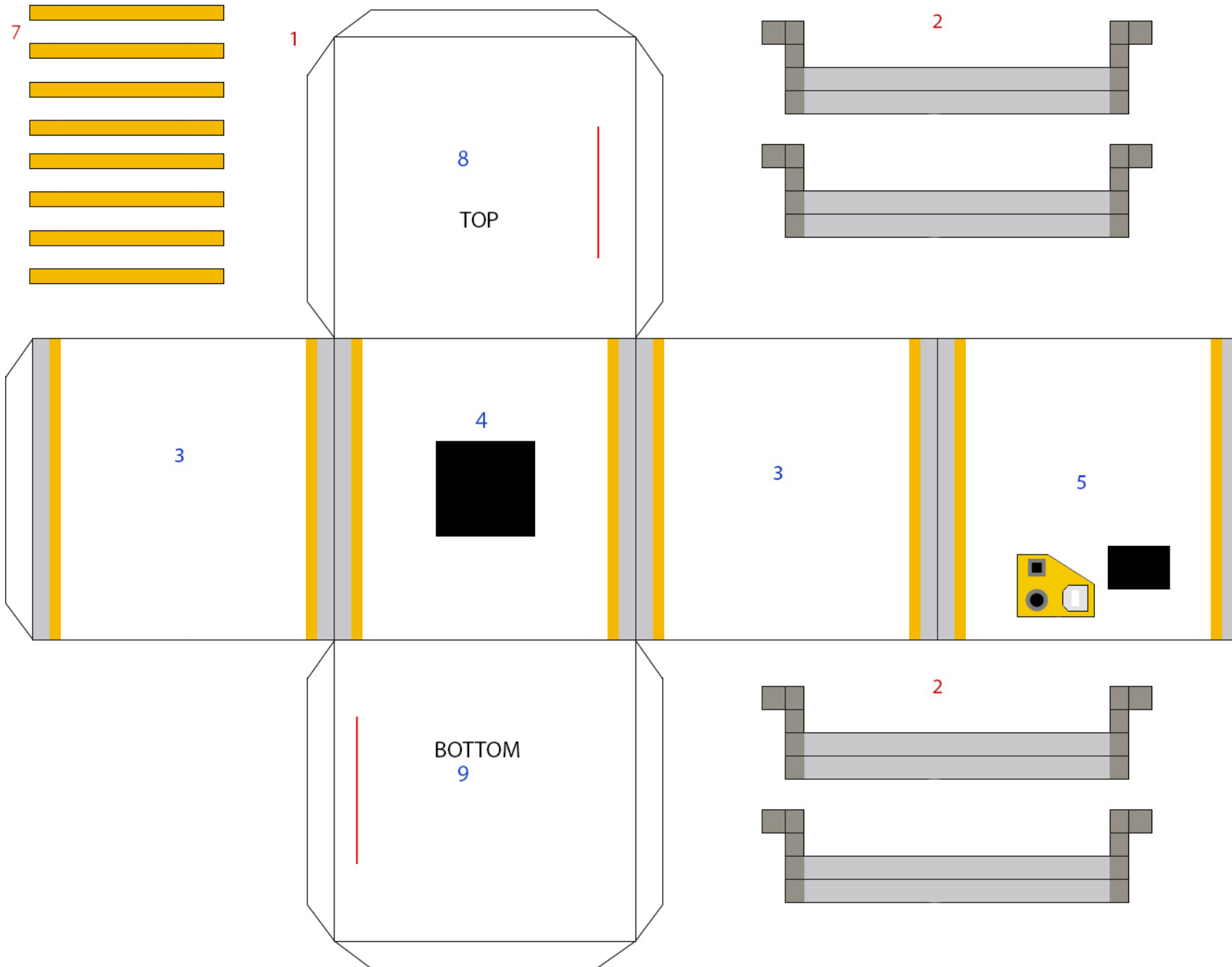
On May 23, 2013 the NEE-01 PEGASO suffered an anomaly in orbit that caused a loss of attitude and physical damages in the satellite, but it survived the anomaly and remains in orbit.

Due to this problem, its antenna could not point correctly and stably towards the earth station and although it continued transmitting and working, its signal could not be decoded. The Ecuadorian Civilian Space Agency worked tirelessly to stabilize the NEE-01 and recover the use of their signal.

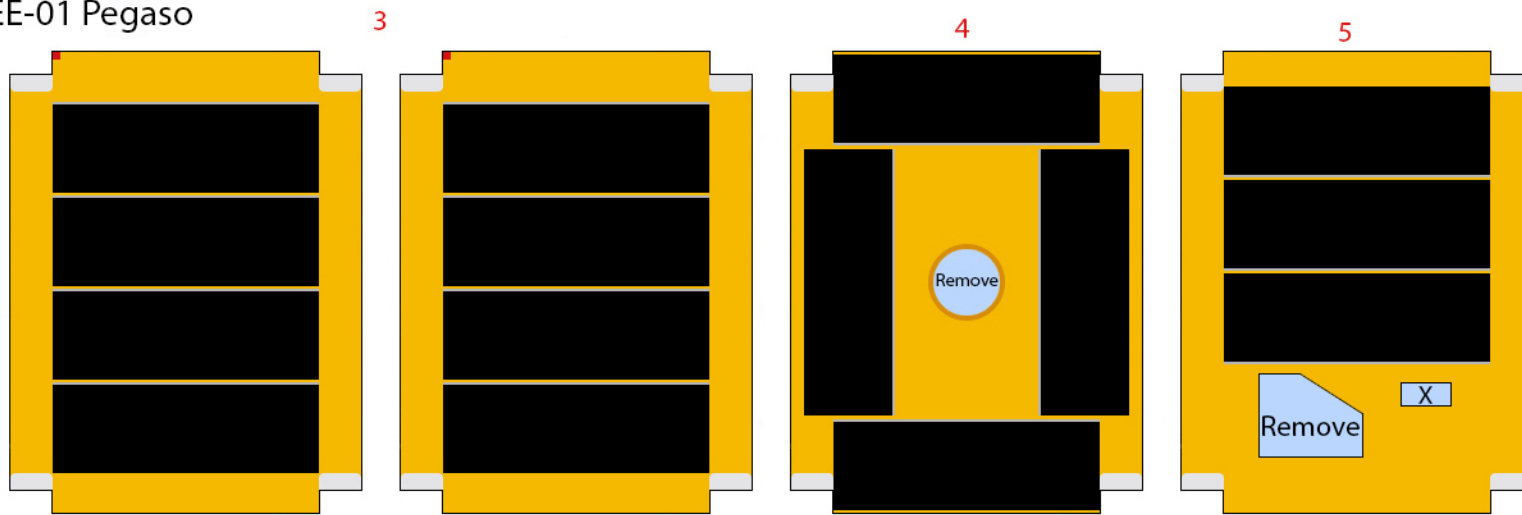
The satellite carries many advanced technologies which by themselves are firsts for this kind of spacecrafts: It became the first nanosatellite able to transmit live video from space, is the first of its kind in being equipped with a multilayer shield composed by polymers and alloys that allows the spacecraft to withstand solar flares and other space hazards, it is the first to have a thermal stabilization system based in carbon nanotubes, it has the world's most thin solar panels, measuring only 1.5 millimeters thick, made of 99.98% pure titanium and it's the first in its class to have multiple deployable solar panels, also it has the biggest power matrix ever carried by a 1U cubesat with 28.8 amperes of total installed capacity in a volume of only 200 cubic centimeters.



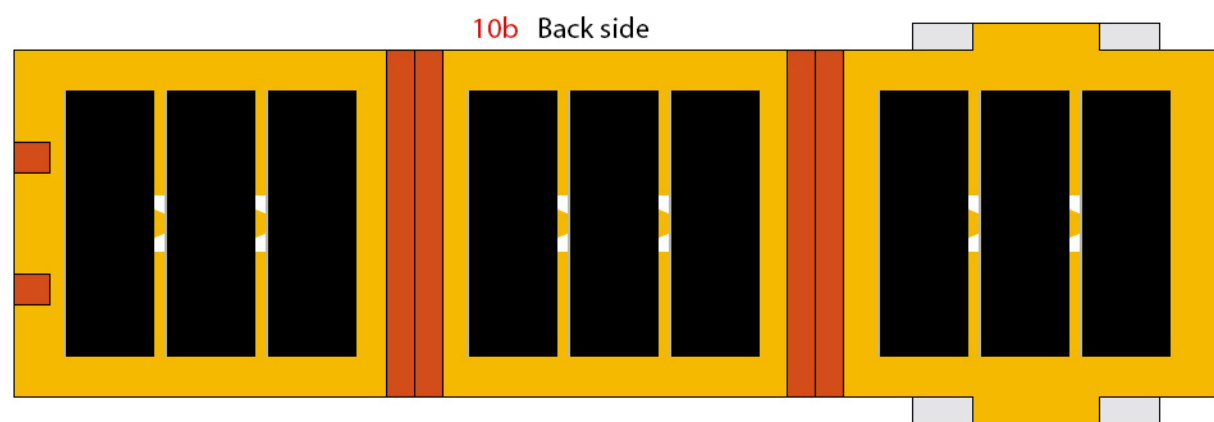
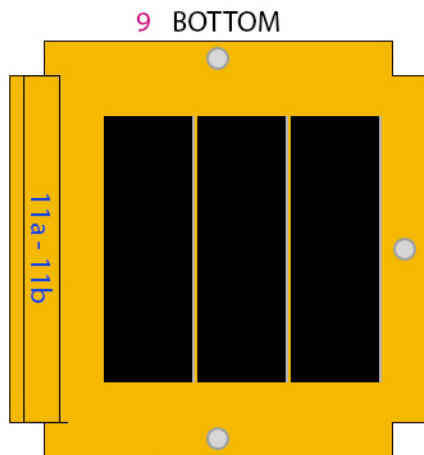
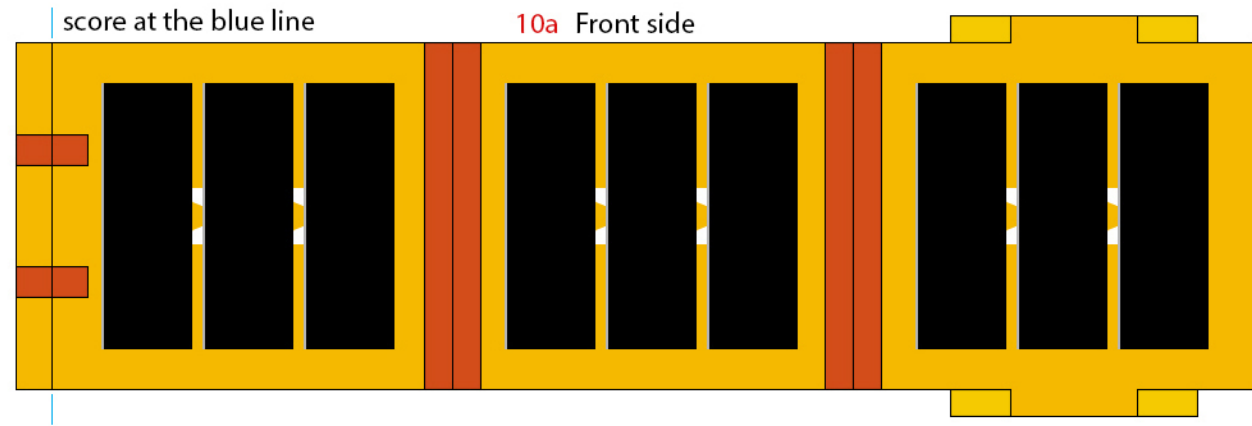
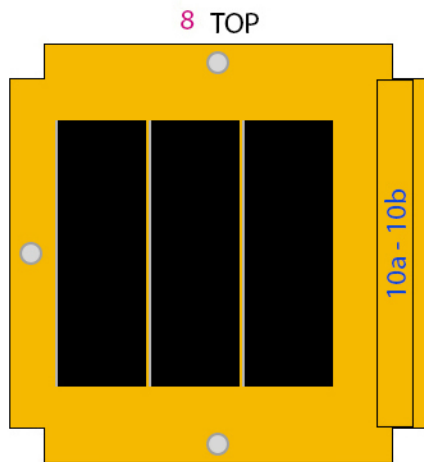
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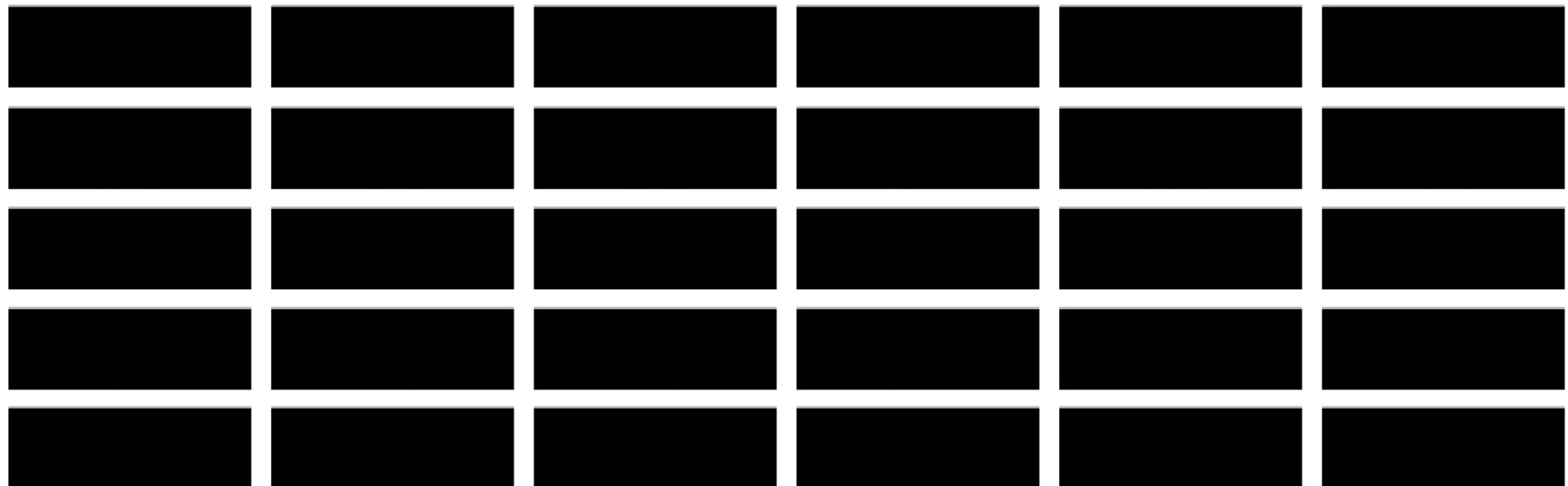
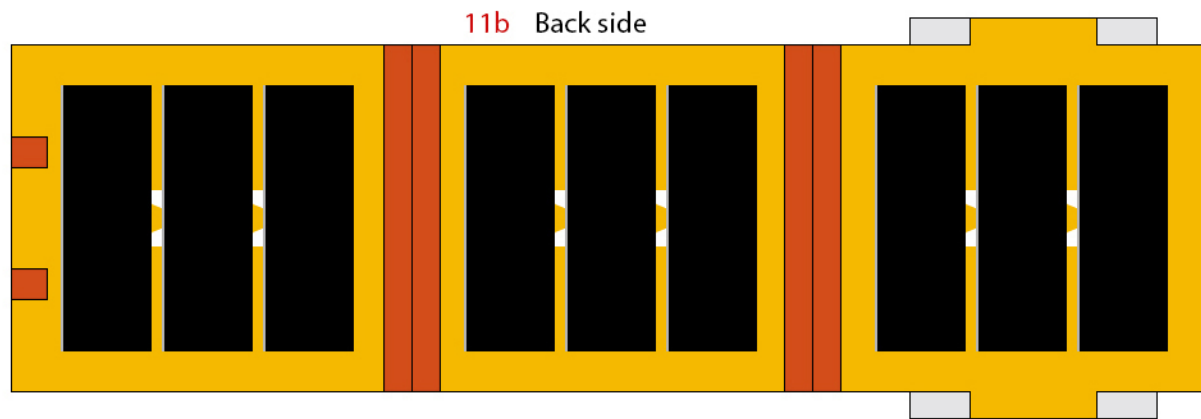
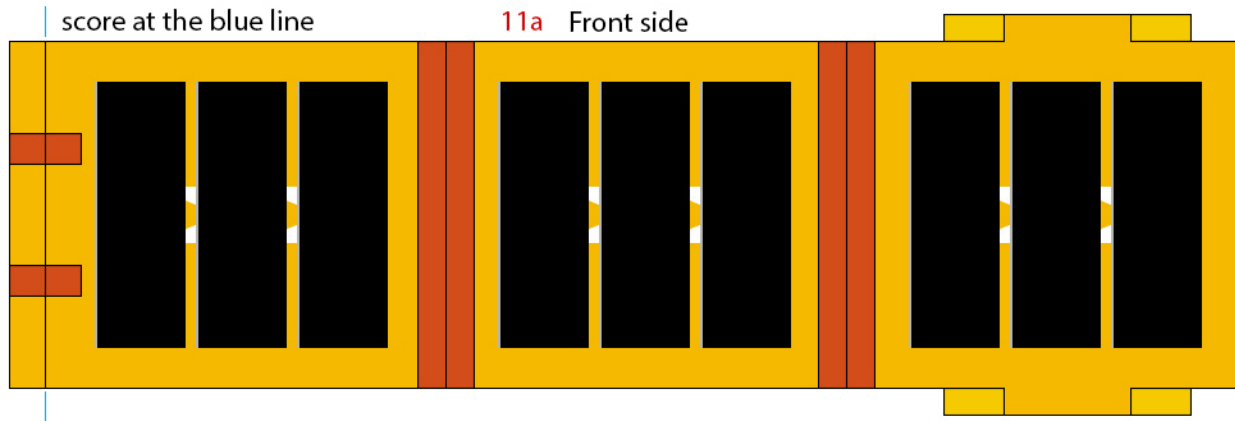


6 Color back black



NEE-01 Pegasus

Optional Detail parts



NEE-01 Pegasus



Optional Detail parts
includes 1 spare

