SATELLOGIC

Bringing Space Down to Earth

Mission Overview

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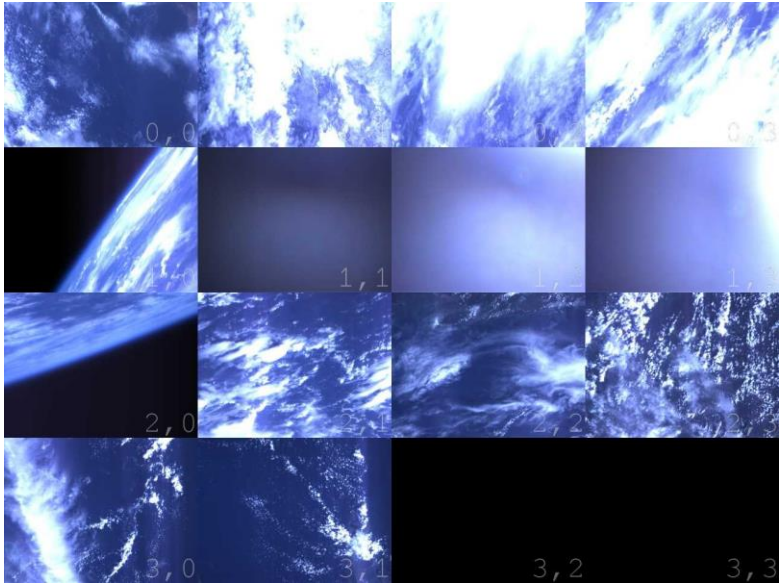


Some figures

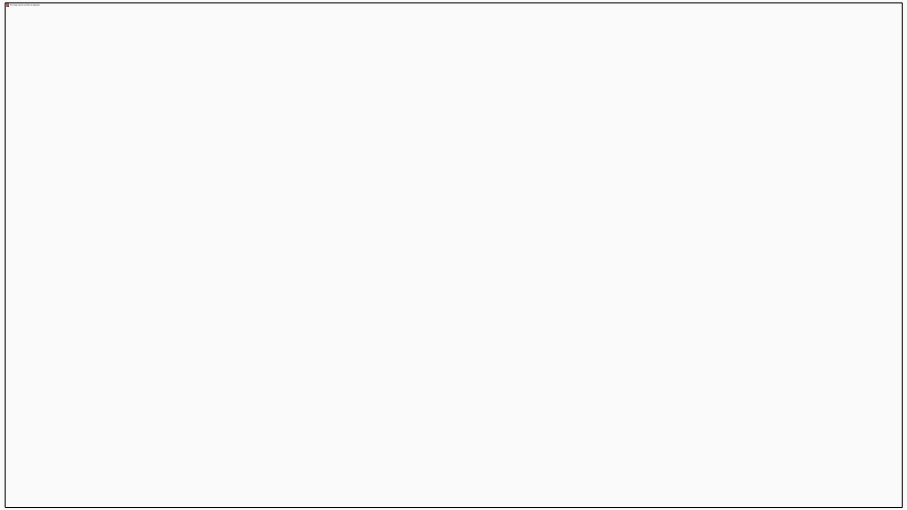
Current status...

Headquarters in Buenos Aires, Argentina for Ops and R&D, 65 employee's

Manufacturing Plant in Montevideo, Uruguay

Sales in USA, Images processing in Tel Aviv

10+ satellites planned in the next 18 months



Launch History

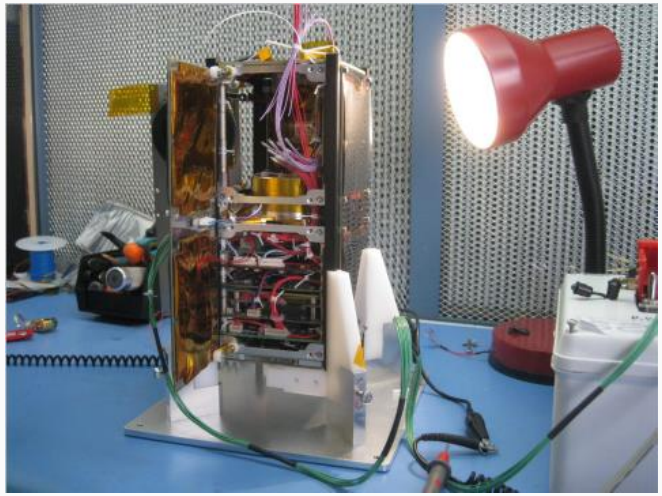
Cubebug 1, Capitan Beto

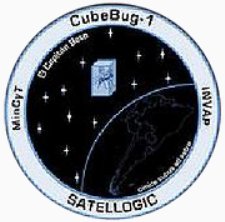
2U Cubesat, April 26th 2013
Built in 10 months, open architecture, documented and public domain

Cubebug 2, Manolito

2U Cubesat, 21st November 2013
Reaction wheels, Star tracker, attitude Control

UHF communication radio in semi duplex 9600/1200 Bps in ham bands, AX25



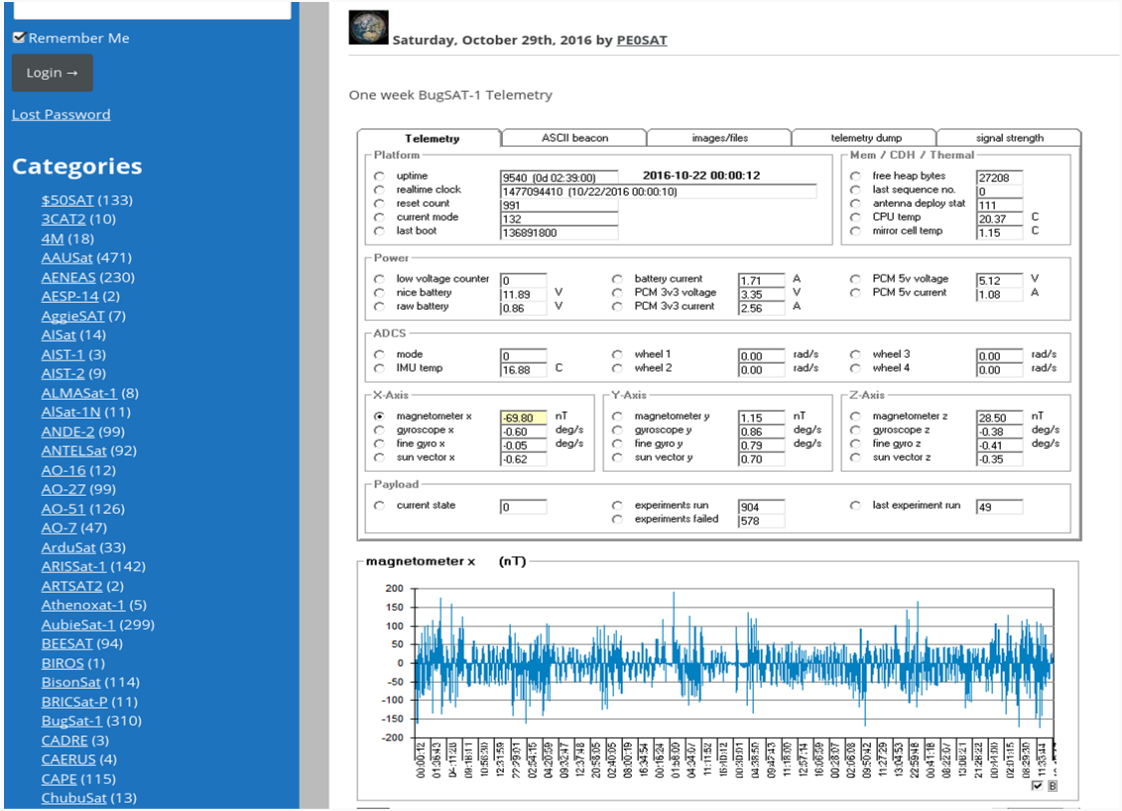


Launch history

Bugsat 1, Tita

New platform, 22 Kg launched on 19th June 2014 from Dombarovsky Russia by Dnepr rocket.
The mission tests a number of custom designed components: three antennas, a mid-resolution camera system, a GPS receiver, a UHF radio based on COTS components, C band for HBR downlink

Telemetry



Telemetry and payload images, software and demodulating tools, are available on the web see DK3WN web site.

Aleph-1 Constellation

Real-time imaging of the entire planet on a daily basis

One-meter resolution for multispectral imaging

Precision agriculture food production

O&G Pipelines monitoring

Cartography Urban planning

Natural resources / Climate change

Disaster response

Infrastructure monitoring

Ñusat 1 (Fresco) and Ñusat 2 (Batata)

Launched in May 30th 2016 from China
40 cm × 43 cm × 75 cm, 37 kg mass
Orbit is 500 km sun synchronous orbit with an inclination of 97.5° with a 10:30 LTAN.

Currently in commissioning phase

Ñusat 1 (Fresco) and Ñusat 2 (Batata)

TT&C:
Uplink in S band
Downlink in X Band @100 Kb/s custom protocol

Payload:
Downlink in X Band DVBS-2

Also has a semi duplex UHF Ham frequencies @ 20Khz BW for experiments and linear transponder UHF/VHF @30 Khz BW

Ñusat 3 (Milanesat)

Spacecraft is similar to Ñusat-1/2

Orbit 500 km 43 deg

Expected launch in March 2017

Currently on manufacturing plant

Ground Segment

Downlink telemetry in X band 8030 Mhz @ 1 Mhz BW RHCP (Custom Protocol)
Uplink Telemetry in S band in 2080 Mhz @ 1 Mhz BW RHCP (Custom Protocol)
Downlink Payload Data in X band 8050 to 8100 Mhz @ 40 Mhz BW RHCP in DVBS2 protocol.

Ground Station requirements:
Payload: Downlink gain 44 Dbi, Noise figure 0.8 Db, DVBS2 Modem

TT&C: Uplink gain 32 Dbi, Uplink S band power 30 Dbm, USRP to our own equipment

Ground Segment

Ground Stations in Svalbard, Norway

Provide more than 10 passes per day, 2 antennas to support 2 satellites at the same time

Tortuguitas, Argentina
Our development feed, using standard components, custom converter, Ettus usrp and off the shelf SSPA to reduce ops cost

Frequency Coordination

UHF channels in ham radio frequencies, were coordinated through AMSAT-LU to IARU, we had to adjust some parameters in BW

S/X bands via local administration with API preparation application SpaceCap

Coordination request were received from different countries to avoid harmful interference.

Thanks for your attention

Questions ?