Tianwang-1

**Overview**

3 CubeSats (3U, 2U, 2U)

Launched 25/9/16 - <http://www.n2yo.com/database/?q=%09+TIANWANG#results>

“Developed at the Shanghai Engineering Center for Microsatellites (SECM) in collaboration with Nanjing University of Science and Technology (NJUST), GomSpace from Denmark, Tekever Space from Portugal and NanoSpace from Sweden.” …

Missions is to test SDRs in space

“Using MEMS based cold-gas micropropulsion, it is planned to demonstrate formation flying by two of the CubeSats along with inter-satellite communication using GAMALINK 2.4 GHz spread spectrum technology from Portugal”

“The satellites will make inter satellite communication sessions using the **GAMALINK Portuguese technology** developed by the Portuguese company Tekever” - **Same tech will be on Proba-3!**

1B and 1C will formation fly using an ISL

**GAMANET** protocol? Downlink

**Technology & Capabilities**

Tianwang-1A (SECM-1) 3U CubeSat Antennas: stabilized (1 GPS/BD antenna +deployable VHF/UHF antennas)

Tianwang-1B (NJUST-2) 2U CubeSat Antennas: stabilized (1 GPS/BD antenna +deployable VHF/UHF antennas)

Tianwang-1C (NJFA-1) 2U CubeSat Antennas: stabilized (1 GPS/BD antenna +deployable VHF/UHF antennas)

32-bit ARM architecture and freeRTOS real-time operating system

Two regulated power buses with 3.3V@5A and 5V@4A are provided

9.6 kbps GMSK downlink/ uplink

**Performance**

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