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# HyperSat – new standard for open hardware/software microsatellite platform – phase B1 – first tests of the laboratory models.

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HyperSat MINI (HSN) project was set up with an intention to develop a new satellite platform which would facilitate space mission preparation and implementation in shortest time possible. Satellites will be offered in a modular format – the smallest module size being 35x35x10 cm and having a mass of up to 10 kg. The structure will be scaled up to the limit size of 35x35x60 cm and the mass of 60 kg. All necessary satellite subsystems such as power system, on-board computer or RF communications system (using S-band and X-band up to 50 Mbps) will be designed and built with new standardization in mind. All subsystems will be connected by HyperSat Data Network (HDN) which is compatible with Space VPX and SpaceWire standards. The main advantage of the platform lies in its modularity and repeatability so that the customer can freely configure the satellite according to their needs by using ready-made, off-the shelf modules. The philosophy behind the development of HyperSat is in analogy to a cubesat project, although HyperSat is designed for satellites of larger sizes and mass. An upcoming platform is to be backward compatible with cubesat modules. It is proposed that all satellite development comprising its structure, electronic systems and software is to be made available for free under an open source license (Open Hardware License, Open Software). The HyperSat project is funded by the Polish National Centre for Research and Development and led by a private company Creotech Instruments S.A. New partners are welcome to join the development of a new bus standard or modules compatible with it. Current status of the project is as follows: Phase A (Platform Definition) has been completed and work concentrates on Phase B (Platform Design).

At the beginning of Phase B1 first prototypes (laboratory models) and simulations of satellite subsystems were created. This paper presents the results of initial test.

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