NSSA AMAN PAYLOAD

Satellite systems are vulnerable to hacking due to the lack of security. Thus, having secure communication to protect our satellites and information is crucial due to the importance of space data. Therefore, the Aman payload will provide a very secure connection between the satellite and the ground station. The Payload is a Field Programmable Gate Array (FPGA) based Advanced Encryption Standard (AES) with low complexity and power consumption optimization to encrypt and decrypt data received from the IoT sensors and the ground station.

The payload can secure the uplink and downlink and be used for various types of information exchange, such as data from IoT devices, telemetry data, etc. The FPGA-based Payload will be a technology demonstration payload aiming to test the optimized reconfigurable cyber-security architecture to aid the data encryption for satellite systems and IoT devices that lack security and requires protection for the private and sensitive information from being breached and cyber attacked. The main objective of this Payload is to test this technology in space to be applied for securing IoT devices and space systems.

"AMAN IS THE FIRST BAHRAINI PAYLOAD"

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