

## Input section design in multi-beam high throughput satellite (HTS) payloads

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### Abstract

High throughput satellite (HTS) systems are in demand by taking advantage of frequency reuse and multiple spot beams to increase throughput and reduce the cost per bit delivered. Payload design concepts are different compared to conventional bent-pipe and limited wide-beam payloads due to nature of HTS complexity and connectivity of the links inside satellite payload, regardless of spectrum choice. This study is focused on different input section design schemes in multi-beam HTS payloads by investigating advantages and drawbacks of multipack and shared power supply concepts.



### Biography:

M.Mehmet Nefes has graduated from Bilkent University, Turkey as Electrical and Electronics Engineer and also has a MSc degree in Engineering Management (MEM) from Turkish Aeronautical Association University (THK University, Turkey). He has been working at TURKSAT Satellite Communication AS for more than 14 years in the area of satellite projects including operation, planning, R&D, design and manufacturing. Currently he is working as Technical Expert focusing of satellite payload and TCR subsystems under Türksat-5A and Türksat-5B satellites program. He also served as a Member of Scientific Committee for RAST 2019 (9th international conference on recent advances in space technologies).

### Speaker Publications:

1. M Mehmet, Reliability and Cost Focused Optimization Approach for a Communication Satellite Payload Redundancy Allocation Problem, ICSCCS 2018
2. M Mehmet Reliability-based TT&C subsystem design methodology for complex spacecraft missions, 2008. CISS 2008.
3. M Mehmet, Determination of the Evaluation Criteria Weights for a Commercial Communication Satellite Program by Using AHP Method, 2015.
4. M Mehmet, UYDU TEST MERKEZİ VE TESTLER, Conference: IV. ULUSAL HAVACILIK VE UZAY KONFERANSI (UHUK 2012)



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