

# A Multibeam Lens Antenna for In-Flight Applications Using High Throughput Satellite Systems at V-band

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## Abstract

The Q/V band communication systems open new avenues for next generation of High Throughput Satellite (HTS) systems. More specifically, they are attractive due to their high bandwidth for user and gateway links. Having a wide bandwidth at Q/V band makes it permissible to offload the links between the satellite and its earth station hubs (gateway) from the Ka band to the Q/V band. This enables additional bandwidth available for HTS feeder links and user links of specific market verticals, which in turn results in reduction of cost per bit. In this paper, we are going to discuss different aspects of an In-Flight Connectivity (IFC) scheme for HTS. Developing a wideband and multibeam antenna is an essential part of this proposed system, which is also going to be discussed in this paper.

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