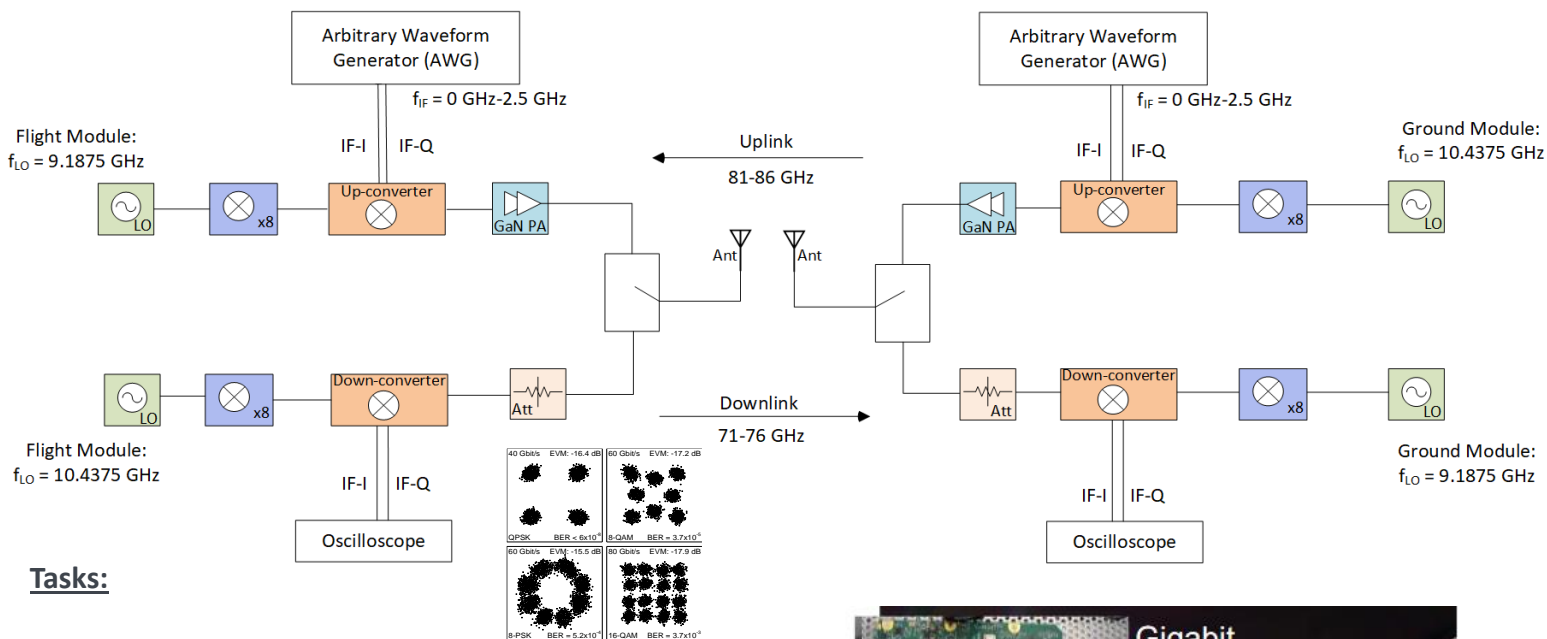


### Prior work:

- ILH has developed a high performance E-Band wireless transceivers and demonstrated state-of-the-art simplex transmission of up to 7 Gbit/s over 37 km terrestrial distances
- ILH is developing the high speed downlink for the EIVE satellite mission, to demonstrate the feasibility of the E-Band satellite communication systems

### Goal:

Implementation and characterization of an outdoor E-Band wireless duplex data transmission link (71-86 GHz and 81-86 GHz) using multi-Gigabit Modems



### Tasks:

- Set-up and integration of the E-Band transceivers for different modulation formats and data rates
- Comparison of different modulation techniques, performances and transmission quality as function of atmospheric effects and path loss
- System-Level Simulation with Matlab and/or SystemVue
- Live duplex E-Band data transmission over more than 1km for a long-term link stability analysis

