

Masterarbeit / Master's Thesis in a team of 3 students

# High-Range Gigabit Ethernet Wireless Link

## • Prior work

- ILH has developed a high performance E-Band wireless transceivers and demonstrated state-of-the-art transmission of up to 7 Gbit/s over 37 km terrestrial distances
- Recent developments include the full-duplex transmission of realtime Ethernet data using multi-Gigabit Modems

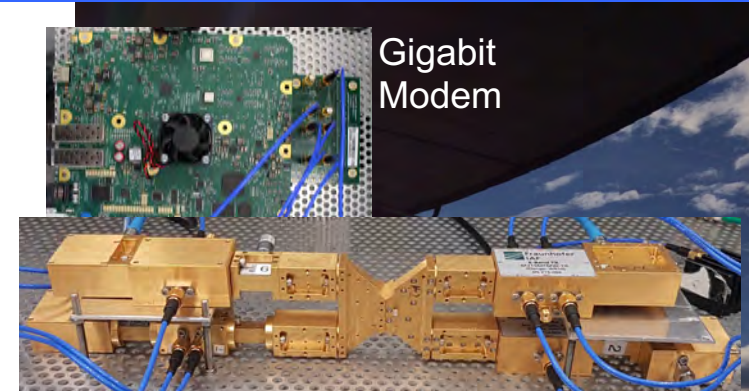
## • Goal: Outdoor, Long-Range Ethernet Wireless Link

- up to 1 km distances
- inclusion of GaN SSPA in Tx and AGC in Rx
- seamless Ethernet integration
- long-term link stability analysis (weather effects)

## • MSc thesis 1: Analog Frontend Impairment Analysis and Linearity Enhancements

## • MSc thesis 2: Digital Baseband Electronics and DSP

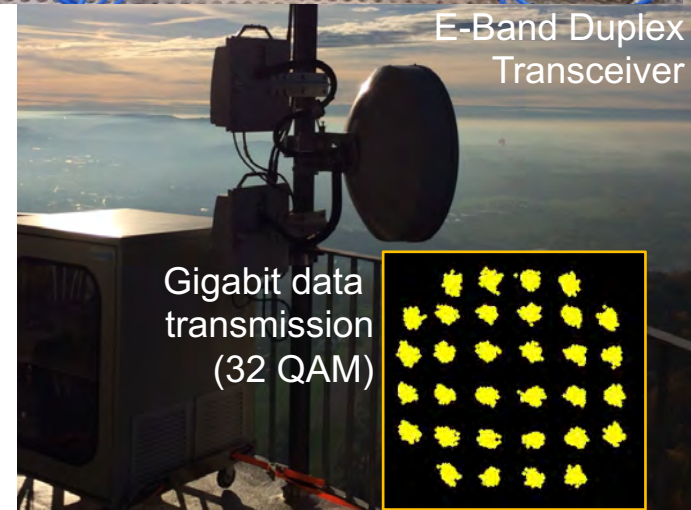
## • MSc thesis 3: Channel Effects and Modeling



Gigabit Modem



E-Band Duplex Transceiver



Gigabit data transmission (32 QAM)

Contact

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