

Phased-Array Transceiver Chipsets and Modules for 5G FR2 and 60-GHz Fixed Wireless Access – A Commercial Perspective

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ABSTRACT

As the demand for affordable, reliable, and high-speed wireless connectivity continues to increase, millimeter-wave fixed wireless access (FWA), i.e. customer premises equipment (CPE), is expected to play a much more significant role in bridging the “digital gap” and providing seamless connectivity in underserved areas and communities. This talk will provide an overview of a 5G FR2 single-chip beamformer that supports dual-band and dual-stream operation in the 24.25-29.5 GHz and 37-43.5 GHz bands. It will also highlight key technical challenges and considerations necessary to achieve a commercial “sweet spot” for cost efficiency while meeting the stringent performance requirements. Lastly, the talk will discuss the existing deployment of 60-GHz unlicensed wireless networks utilizing Peraso’s 16-element phased-array turnkey solution (full 57-71 GHz band) that can transmit over 20 km with a throughput of >1 Gbps, and their potential to serve a key role in the next phase of 5G NR-U PtP/PtMP broadband wireless proliferation.