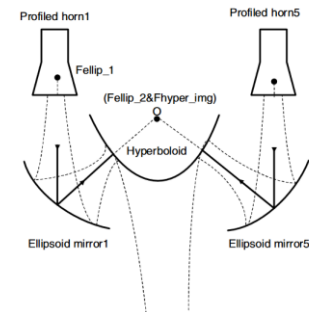
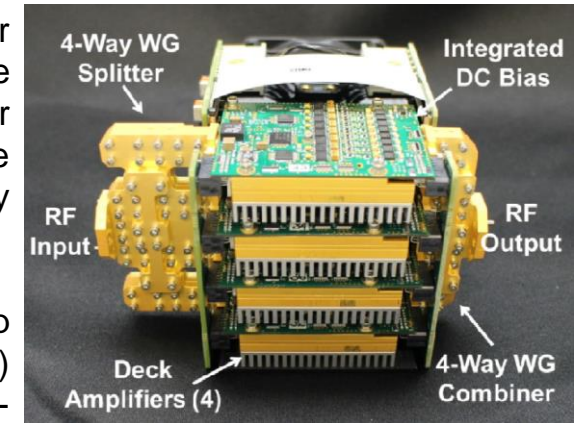


## Millimeter Wave Power Combining

Years of research and optimization have led to significant advances in semiconductor technologies. Nowadays, it is possible to design and fabricate millimeter wave integrated circuit (MMIC) amplifiers with unprecedented gain, output power and power added efficiency. But transistor size and on-die power combining losses still limit the maximum achievable output power. Therefore, off-chip power combining is necessary to achieve significant solid state mmW amplifier power levels.

In this seminar, you will research mmW power combining methods including on-chip and off-chip approaches. Besides traditional approaches (e.g. waveguide combiners) you will also take a look at more novel techniques such as transformers and in-antenna combining. You will understand and present the working principles and compare the advantages and limitations of every power combining approach. This will give you an understanding of which application requires which power combining method.



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