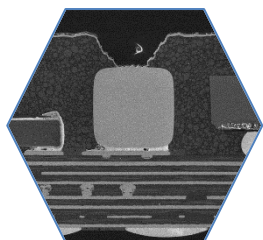
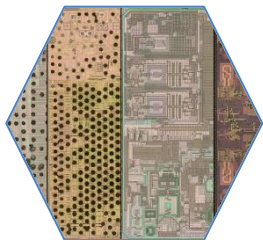
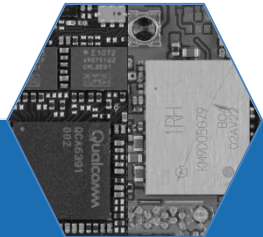


RF Front-End Module Comparison 2020 – Volume 3

Technical and cost overview of the latest Radio Frequency connectivity Front-End technologies, with deep analysis of Wifi 6.0 and Ultra-Wide Band architecture.



Each year System Plus opens hundreds of Front-End Modules (FEMs) and components to provide an overview of the Radio Frequency (RF) FEM market in selected flagship smartphones. Gathering the information into one report offers an opportunity to keep track of the evolution of this technology market. This year, System Plus Consulting offers different volumes on technical and cost comparisons of smartphone RFFEMs. Every report will focus on a specific subject, either a player's evolution, a specific technology or a comparison of flagship devices.

This third volume features a comprehensive overview of the connectivity architecture on the market, comparing Wifi ac/5.0 to Wifi ax/6.0. As the architecture is centered on the Systems-on-Chips (SoCs), a detailed analysis with cross section and technology analysis is included. Different choices of architecture are revealed between Mediatek, Broadcom, Qualcomm, and Huawei. Additionally, the analysis provides insight into Apple's Ultra Wide Band (UWB) technology from the antenna to the SoC.

With teardowns of the smartphones, the main RF modules and components have been extracted and physically analyzed,

from the output of the transceiver to the antenna. Packaging, sizes and technologies are studied to provide a large panel of technical and economical choices. Moreover, the report includes an overview of other flagship smartphones released by the end of 2019 and provides a statistical analysis for most connectivity modules. It also tries to explain the smartphone makers' choices and supplier tendencies. Analyses of FE modules for LTE and 5G modules are not included

COMPLETE TEARDOWN WITH

- Detailed photos
- Precise measurements
- Module opening
- Die measurements
- Complete bills-of-materials for the modules
- Selected SiP cross-sections
- Comparison between suppliers
- Comparison between OEMs
- Cost comparisons
- Detailed technical and cost analysis of 19 components
- Cost analysis of main Wifi 6.0 and UWB SoCs available on the market

Title: RF Front-End Module Comparison 2020 – Volume 3

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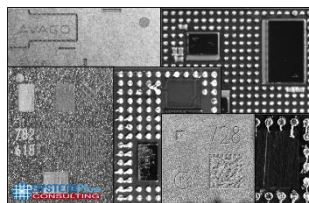
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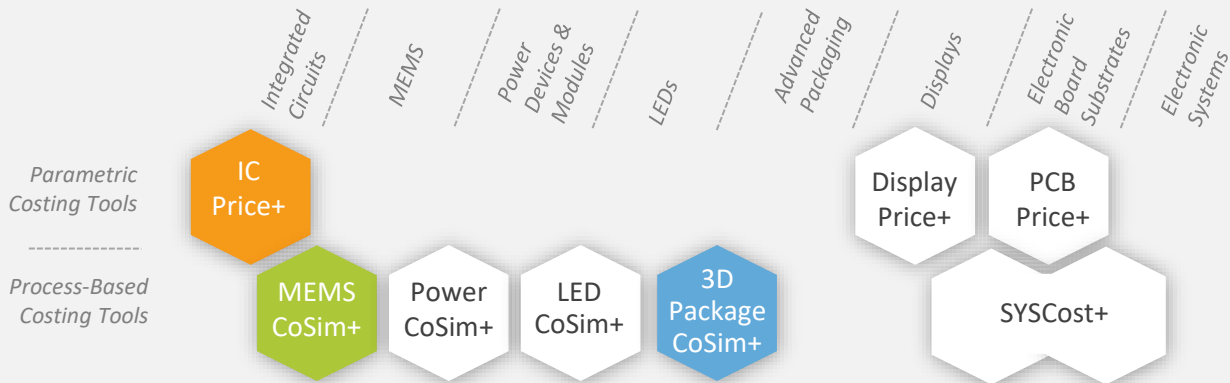


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