

## MediaTek T750 5G Sub-6 Platform For CPE Devices

*Extensive analysis of all components featured in the T750 chipset from MediaTek including modem, transceivers, PMICs and envelope tracker.*

In 5G communications systems, there are two frequency ranges, FR1 and FR2. FR1 is the most deployed frequency range in the world today. The 5G smartphone market is projected to have a Compound Annual Growth Rate (CAGR) of 72% in shipped units between 2020 and 2025. Several companies are gambling on this market, and by extension self-hosted applications like Fixed Wireless Access (FWA). Focusing on the FR1 market, in 2021 MediaTek is offering a new chipset dedicated to Customer Premise Equipment (CPE) for 5G sub-6, the T750.

The MediaTek T750 is a chipset used for FWA through 5G sub-6 communication technology. Including a study of the board and block diagram of the module, this report focuses on detailed analysis of the main components forming the MediaTek chipset. The analysis starts with the digital components processing the data, the MT6890, and the Power Management Integrated Circuits (PMICs), the MT6330 and the MT6315. Then, it goes to the next level with the transceivers, for 2G/3G/4G/5G, the MT6190 and, for the Wifi/Bluetooth/GPS, the MT6635. This last stage includes the envelope tracking IC, the MT6308.

In this chipset, several technologies are involved to provide power, efficiency,

low power consumption and cost effectiveness. The main innovation came from the modem that uses the 7 nm technology node, with several functions implemented including a quad-core Arm Central Processing Unit (CPU).

This report includes a full investigation of the system, a detailed study of the components, including die analyses, processes, and cross-sections. It contains a complete cost analysis and a selling price estimation of the chipset. Finally, it features a comparison with MediaTek's 5G smartphone chipset to understand the difference between the two applications.

### COMPLETE TEARDOWN WITH

- Detailed photos
- Precise measurements
- Materials analysis
- Manufacturing process flow
- Supply chain evaluation
- Manufacturing cost analysis
- Comparison with MediaTek 5G smartphone chipset

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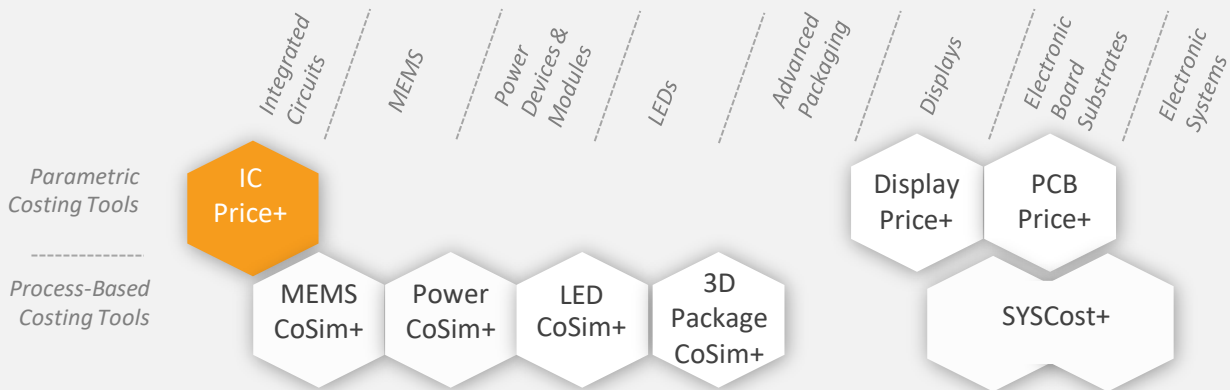
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