

Smartphone Apps Processor Market: 3Q 2021

23 December 2021

Report Snapshot

The global smartphone applications processor (AP) market grew 17 percent year-on-year in revenue terms to \$8.3 billion in Q3 2021. We analyse the smartphone AP market dynamics and outlook in this report.

1. Analysis

For the seventh straight quarter, the global **smartphone applications processor** (AP) market posted a double-digit revenue growth. The smartphone AP market grew 17 percent to an all-time high of \$8.3 billion in Q3 2021. **5G** continues to accretive to average selling prices (ASPs) and profit margins.

Qualcomm maintained its lead with a 34 percent revenue share. Qualcomm, MediaTek and Unisoc all posted double-digit AP shipment growth during the quarter. New entrant **Google** captured a 0.1 percent unit share in Q3 2021.

Qualcomm, Apple, MediaTek, Apple, Samsung LSI and Unisoc captured the top-five revenue share rankings in the smartphone applications processor (AP) market in Q3 2021.

MediaTek is on track to be the number one smartphone AP vendor in unit terms on an annual basis for the first time in 2021. In light of capacity constraints, Qualcomm shifted focus to premium and high tier and de-emphasised mid-range and low-tier APs. As a result, MediaTek gained volume share with the help of its Helio A/G/P chips.

In terms of top-selling APs, Apple's **A-series APs** once again led the rankings. On the other hand, Qualcomm's Snapdragon 888/888+ AP led the Android AP rankings in Q3 2021.

On the **foundry** front, TSMC manufactured 75 percent of total smartphone APs shipped in Q3 2021, followed by Samsung foundry. Smartphone APs continue to be at the forefront of advanced process technologies. We estimate that APs manufactured in 7 nm and below **process** technologies accounted for 47 percent of all smartphone APs manufactured in Q3 2021.

Strategy Analytics believes that the 4G AP capacity continues to be tight throughout the industry. We also expect this to be the case in 2022 as major AP vendors.

For the seventh straight quarter, the AP market posted a double-digit revenue growth, driven by 5G

4G AP capacity continues to be tight

Exhibit 1 shows smartphone AP vendor share by revenue. Qualcomm maintained its smartphone AP leadership with a 34 percent revenue share, followed by Apple with 28 percent and MediaTek with 27 percent.

Exhibit 1: Smartphone AP Revenue Share - Q3 2021

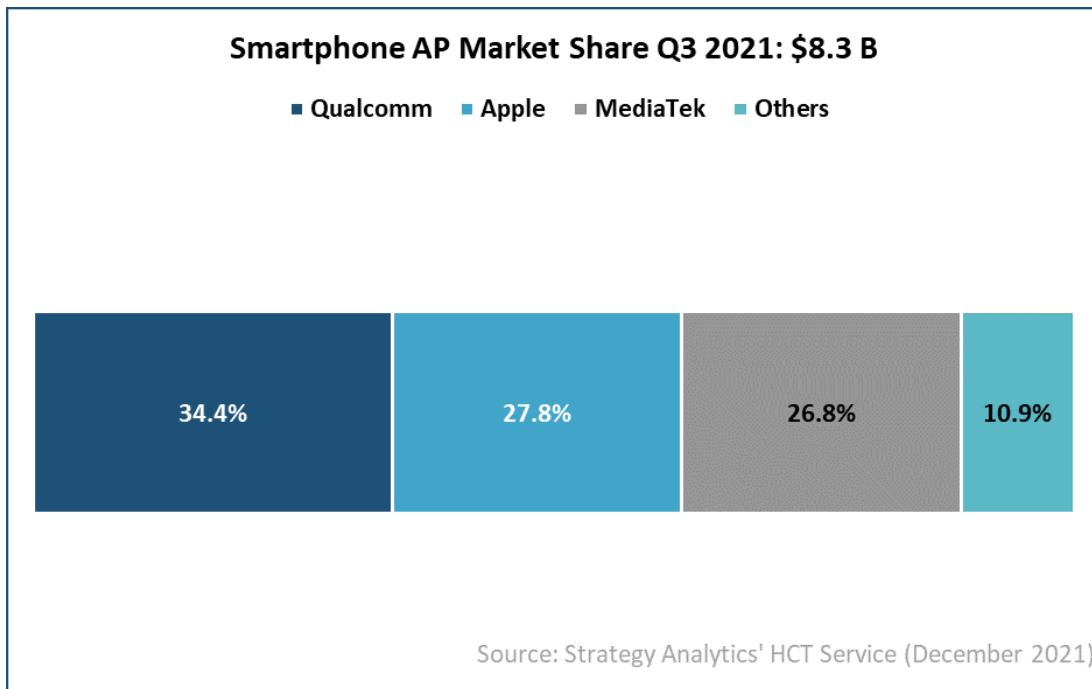


Exhibit 2 shows our estimates for smartphone AP revenue growth by vendor in Q3 2021.

We estimate that the smartphone AP market grew 17 percent year-on-year in revenue terms. 5G APs, which command significant premium over 4G APs, continue to drive revenue growth. Qualcomm, MediaTek, Unisoc and Samsung all outgrew the overall market growth in Q3 2021. Apple posted a modest 2 percent year-on-year revenue growth, by our estimates.

HiSilicon, hit by trade restrictions, posted 97 percent in its smartphone AP revenue.

Exhibit 2: Smartphone AP Revenue Growth by Vendor - Q3 2021

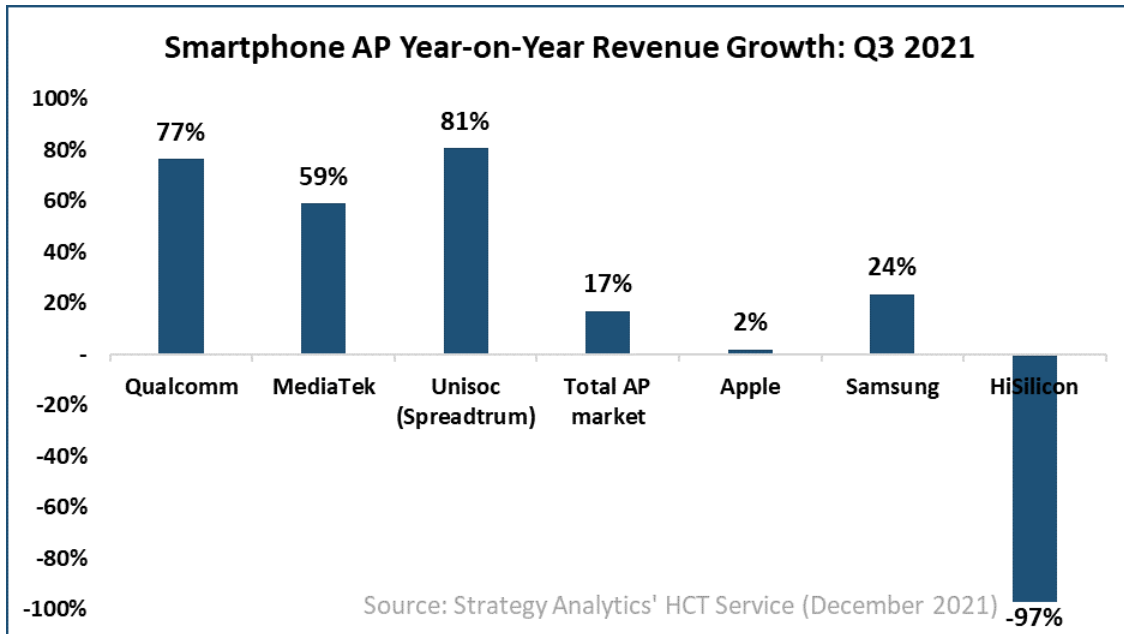
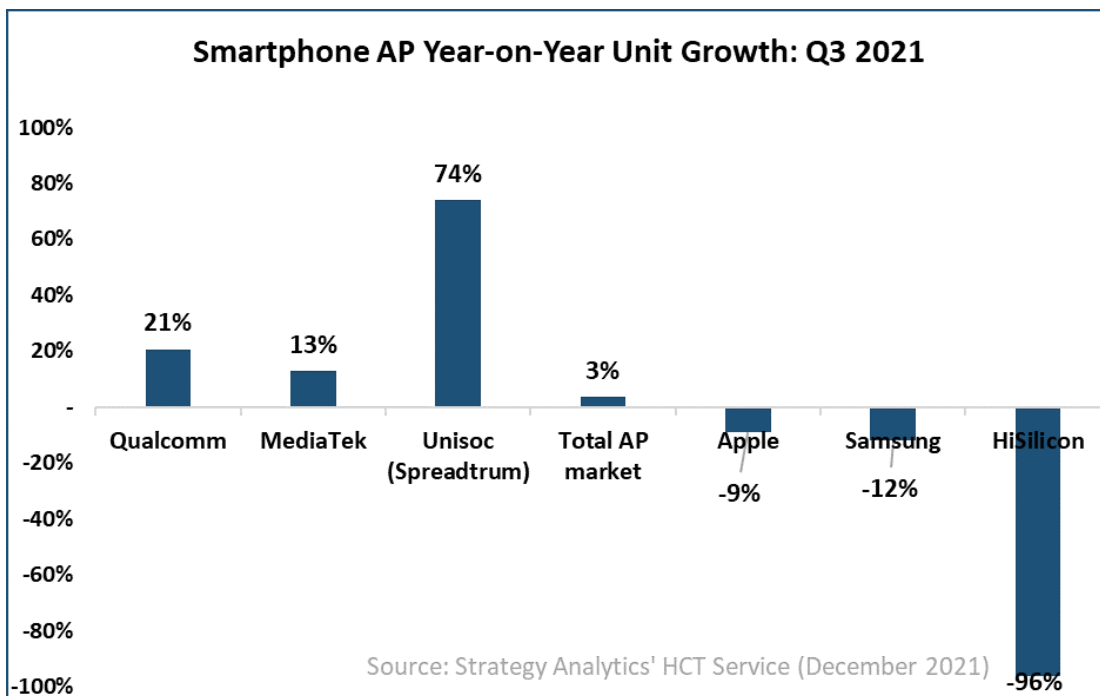


Exhibit 3 shows our estimates for smartphone AP unit growth by vendor in Q3 2021.

Exhibit 3: Smartphone AP Unit Growth by Vendor - Q3 2021



For the third straight quarter, the smartphone AP market saw shipment growth in Q3 2021.

Qualcomm, MediaTek and Unisoc all saw double-digit shipment growth.

Qualcomm and MediaTek benefitted from HiSilicon's exit. Unisoc capitalised long-tail 3G/4G demand in emerging markets. After struggling for two years, Unisoc finally broke into tier-one OEMs' supply chains and gained momentum. Samsung LSI saw its AP shipments decline 12 percent as its parent company shifted orders to Qualcomm, MediaTek and Unisoc.

Smartphone APs represent a significant percentage of TSMC and Samsung Foundry's revenue. We estimate that TSMC led the smartphone AP foundry market with a 75 percent share in Q3 2021, followed by Samsung Foundry. UMC and SMIC held a minor share as they couldn't ramp up their FinFET wafer manufacturing.

TSMC led the smartphone AP foundry market with a 75 percent share

The Smartphone AP segment is a key driver for advanced process technologies. We estimate that APs manufactured in 7 nm and below process technologies accounted for 47 percent of total smartphone APs shipped in Q3 2021.

In terms of air interface technology, 5G continues to be a growth driver. We estimate that 5G APs accounted for 49 percent of total smartphone APs shipped. In addition, 5G-attached AP shipments grew 82 percent year-on-year, driving a 19 percent growth in overall AP average selling prices (ASPs).

Google entered the smartphone AP market with its Pixel Tensor, which was designed with the help of Samsung LSI and Samsung Foundry. We estimate that Google captured a 0.1 percent unit share in the smartphone AP market in Q3 2021. The company currently lacks scale and 5G modem technology. We believe that Google needs to acquire 5G modem technology to strengthen its competitive position.

2. Outlook

We forecast smartphone AP revenue to show low single-digit growth in Q4 2021 on a sequential basis. However, in unit terms we forecast the smartphone AP market to stay relatively flat compared to Q3 2021. We forecast Qualcomm to see a big jump in and revenue terms sequentially, driven by increased traction in premium and high-tier Android APs. The year 2021 proved to be another all-time-high year for smartphone APs.

We expect 2022 will see further growth with increased 5G traction. In addition, rapid adoption of new modem technologies (5G Release 16), process technologies (6 nm and 4 nm) and Armv9 CPU (Cortex-X2) cores will help. New chips such as Snapdragon 8 Gen 1 and Dimensity 9000 will drive ASP growth in 2022. Despite the increased competition between Qualcomm and MediaTek, ASPs remain healthy, and we expect this to be the case in 2022.

3. Links

Our Handset Component Technologies (HCT) has been tracing the AP and baseband markets for a long time. Please let us know if you would like to explore this topic in detail.

4. Analyst Contacts

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