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Hadlee Simons / Android AuthorityTaiwan-based MediaTek used to play second fiddle to silicon rival Qualcomm, but the company is now the number one chipmaker globally. And some of the Taiwenese company’s chips even feature on our list of the best mobile processors. Figuring out the naming conventions and capabilities of these MediaTek processors can be a little daunting, though.Don’t fret, as our MediaTek chipset guide tries to break things down for you. Read on for all the information you’ll need on MediaTek processors. Flagship MediaTek 5G chipsets: Dimensity 9000 seriesDhruv Bhutani / Android AuthorityMediaTek’s latest and greatest flagship processor is the Dimensity 9400. This chip already powers a few notable high-end phones and will take the fight to the Snapdragon 8 Elite. The Dimensity 9400 sports a 3nm TSMC design for improved efficiency and performance, a powerful CPU that has a lot in common with its predecessor (1x Cortex-X925, 3x Cortex-X4, 4x Cortex-A720), and a flagship-grade Arm Immortalis-G925 GPU.Other features worth knowing include support for a so-called Agentic AI Engine framework, 8K/60fps video capture capabilities (beating Qualcomm to the punch), and support for triple-screen foldable phones. The good news is that we’ve already tested one of the first phones with this chip, namely the OPPO Find X8 Pro. We discovered that the processor was a notable CPU upgrade over the previous chip but still lagged behind Apple and Qualcomm’s best. Fortunately, the OPPO phone was a match for the Snapdragon 8 Elite-toting ROG Phone 9 Pro when it came to graphical performance while actually running cooler. So we’re keen to see how other Dimensity 9400-toting phones perform. The Dimensity 9400 doesn't quite beat the Snapdragon 8 Elite for CPU performance, but GPU performance is another matter. MediaTek’s previous flagship processors were the 4nm Dimensity 9300 and Dimensity 9300 Plus. These chips were designed to take on the Snapdragon 8 Gen 3. This chipset eschewed little CPU cores entirely in favor of big and medium cores (four Cortex-X4 and four Cortext-A720 cores), while the Immortalis-G720 GPU was no slouch, either. The latter supports hardware-based ray tracing, much like Qualcomm’s silicon.The Dimensity 9200 and Dimensity 9200 Plus landed in 2022 and are also important entries. Perhaps the main reason for that is because these were the flagship MediaTek chips to support mmWave 5G, coming a while after rival Qualcomm supported the fast but temperamental standard. These were also the first MediaTek processors to support hardware ray-tracing tech for more immersive graphics. Otherwise, the Dimensity 9200 series offered a powerful octa-core CPU (1x Cortex-X3, 3x Cortex-A715, 4x Cortex-A510), a capable Mali-G715 MC11 GPU, and cooling improvements. Dimensity 9400Dimensity 9300Dimensity 9200CPU ConfigDimensity 94001x Cortex-X925 @ 3.63GHz3x Cortex-X4 @ 3.3GHz4x Cortex-A720 @ 2.4GHzDimensity 93001x Cortex-X4 @ 3.25GHz3x Cortex-X4 @ 2.85GHz4x Cortex-A720 @ 2.0GHzDimensity 92001x Cortex-X3 @ 3.05GHz3x Cortex-A715 @ 2.85GHz4x Cortex-A510 1.8GHzGPUDimensity 9400Arm Immortalis-G72512-coreHardware ray-tracingDimensity 9300Arm Immortalis-G72012-coreHardware ray-tracingDimensity 9200Arm Immortalis-G71511-coreHardware ray-tracingCachesDimensity 940012MB L310MB system-level cacheDimensity 93008MB L310MB system-level cacheDimensity 92008MB L36MB system-level cacheAIDimensity 9400Dimensity 9300APU 790(added INT4 support and hardware compression)Dimensity 9200APU 690RAM supportDimensity 9400LPDDR5X @ 10,667MbpsDimensity 9300LPDDR5T @ 9600MbpsDimensity 9200LPDDR5X @ 8333MbpsStorageDimensity 9400UFS 4.0 with MCQDimensity 9300UFS 4.0 with MCQDimensity 9200UFS 4.0 with MCQ4G/5G ModemDimensity 9400LTE/5G (integrated)Sub6GHz and mmWave7,000Mbps down (sub-6GHz)Dimensity 9300LTE/5G (integrated)Sub6GHz and mmWave7,900Mbps downDimensity 9200M80-based LTE/5G (integrated)Sub6GHz and mmWave7,900Mbps downOther networkingDimensity 9400Dimensity 9300Dimensity 9200Bluetooth 5.3Wi-Fi 7 ReadyProcessDimensity 9400TSMC 3nm N3PDimensity 9300TSMC 4nm+ N4PDimensity 9200TSMC 4nm N4P We haven’t seen a ton of flagship phones with Dimensity 9000 series chips as many brands still prefer Qualcomm for their high-end devices, particularly in the US. In saying so, MediaTek gained a big win in late 2024 when the Galaxy Tab S10 series launched with the Dimensity 9300 Plus chip. Furthermore, there are a handful of high-end phones offering Dimensity chips in global markets.Mid-range MediaTek 5G chipsetsPaul Jones / Android AuthorityThe most prominent mid-range processor from MediaTek is the Dimensity 8300, announced in November 2023. It’s effectively an upgrade over the previous Dimensity 8200. The CPU offers 1x Cortex-A715 @ 3.35GHz, 3x Cortex-A715 @ 3GHz, and 4x Cortex-A510 2.2GHz cores. That’s roughly 20% more performant in CPU tasks. It gets even better in GPU workloads, where the Dimensity 8300’s Mali-G615 MC6 GPU offers a claimed 60% performance boost over the Dimensity 8200.The chip also supports generative AI features, including the ability to run large language models (LLMs) and image generators entirely on the device. However, it’s up to device manufacturers and the likes of Google to incorporate these features in software. This processor isn’t quite on par with the rival Snapdragon 7 Plus Gen 3 SoC on paper, but it’s still a powerful mid-range SoC.MediaTek also launched the Dimensity 8350, which seems to be an incremental upgrade over the 8300. Expect the same CPU, GPU, APU, and camera features, but the Taiwanese brand says it has a 4% and 13% boost to single-core and multi-core CPU performance, respectively. So, you really aren’t missing out if you opt for a Dimensity 8300 phone instead. MediaTek Dimensity 8300/8350MediaTek Dimensity 8200MediaTek Dimensity 8000/8100MediaTek Dimensity 8050/8020CPUMediaTek Dimensity 8300/83501x Cortex-A7153x Cortex-A7154x Cortex-A510MediaTek Dimensity 82004x Cortex-A784x Cortex-A55MediaTek Dimensity 8000/81004x Cortex-A784x Cortex-A55MediaTek Dimensity 8050/80204x Cortex-A784x Cortex-A55GPUMediaTek Dimensity 8300/8350Arm Mali-G615 MC6MediaTek Dimensity 8200Arm Mali-G610 MC6MediaTek Dimensity 8000/8100Arm Mali-G610 MC6MediaTek Dimensity 8050/8020Arm Mali-G77 MC9ModemMediaTek Dimensity 8300/83505.17Gbps downloadSub-6GHzMediaTek Dimensity 8200MediaTek Dimensity 8000/8100MediaTek Dimensity 8050/8020CameraMediaTek Dimensity 8300/8350320MP single32MP+32MP+32MP tripleMediaTek Dimensity 8200320MP single32MP+32MP+32MP tripleMediaTek Dimensity 8000/8100200MP single32MP+32MP+16MP tripleMediaTek Dimensity 8050/8020200MP single32MP+16MP dualMachine learningMediaTek Dimensity 8300/8350NPU 780MediaTek Dimensity 8200APU 5.0MediaTek Dimensity 8000/8100APU 5.0MediaTek Dimensity 8050/8020APU 3.0ProcessMediaTek Dimensity 8300/83504nmMediaTek Dimensity 82004nmMediaTek Dimensity 8000/81005nmMediaTek Dimensity 8050/80206nm Moving down a notch, MediaTek also offers the Dimensity 8200, 8050, and 8020 chips. Expect older CPUs and respectable mid-range or old flagship GPUs. So you should still get a good level of power if you buy a phone with these chips.Budget MediaTek chipsetsRyan Haines / Android AuthorityMediaTek also offers a host of more budget-focused 5G chipsets, all with middling or older CPUs and squarely mid-tier graphics. The MediaTek Dimensity 7350 is probably the best recent entry. The chip sports a relatively modern if unspectacular CPU (2x Cortex-A715, 6x Cortex-A510), an Arm Mali-G610 MC4 GPU, Bluetooth 5.3, and Wi-Fi 6E. It’s basically identical to 2023’s Dimensity 7200 save for a higher CPU clock speed (3GHz versus 2.8GHz) and slightly better AI silicon.Meanwhile, the Dimensity 7300 and 7300X are a rung below the Dimensity 7350 in many ways. Expect an older CPU (4x Cortex-A78 and 4x Cortex-A55), the Mali-G615 MC2 GPU, slightly slower peak cellular speeds, but Bluetooth 5.4 instead of 5.3. All these mentioned chips also offer features like 200MP single-camera support, support for a 144Hz refresh rate, and 4K HDR capture. So they’re pretty well-rounded in terms of the feature-set. MediaTek is rejigging its mid-range chips, with Dimensity 6000 and 7000 series processors now being a thing.MediaTek Dimensity 7350MediaTek Dimensity 7300/7300XMediaTek Dimensity 6080MediaTek Dimensity 6020CPUMediaTek Dimensity 73502x Cortex-A7156x Cortex-A510MediaTek Dimensity 7300/7300X2x Cortex-A786x Cortex-A55MediaTek Dimensity 60802x Cortex-A766x Cortex-A55MediaTek Dimensity 60202x Cortex-A766x Cortex-A55GPUMediaTek Dimensity 7350Mali-G610 MC4MediaTek Dimensity 7300/7300XMali-G68 MC4MediaTek Dimensity 6080Mali-G57 MC2MediaTek Dimensity 6020Mali-G57 MC2ModemMediaTek Dimensity 7350MediaTek Dimensity 7300/7300XSub-6GHzMediaTek Dimensity 6080Sub-6GHz2.77Gbps downlinkMediaTek Dimensity 6020Sub-6GHz2.77Gbps downlinkCameraMediaTek Dimensity 7350200MP singleMediaTek Dimensity 7300/7300XMediaTek Dimensity 6080108MP single16MP+16MP dualMediaTek Dimensity 602064MP single16MP+16MP dualMachine learningMediaTek Dimensity 7350MediaTek Dimensity 7300/7300XAPU 550MediaTek Dimensity 6080TBCMediaTek Dimensity 6020TBCProcessMediaTek Dimensity 73504nmMediaTek Dimensity 7300/7300X6nmMediaTek Dimensity 60806nmMediaTek Dimensity 60207nm Two other recent releases are the Dimensity 6020 and 6080. These processors share features like an aging, low-power CPU (2x Cortex-A76 and 6x Cortex-A55), a Mali-G57 MC2 GPU, a sub-6GHz modem topping out at 2.77Gbps, and aging Wi-Fi 5 support. It also seems like these chips lack an APU for faster, more robust machine learning. The Dimensity 6080 differs from the 6020 by offering a smaller manufacturing process (6nm versus 7nm) and higher resolution camera support (108MP versus 64MP).MediaTek also has a host of older budget 5G silicon in its portfolio, such as the Dimensity 700/720/900/920/930. These chips, which usually have 2+6 core CPU layouts and old mid-tier GPUs, have waned in popularity in favor of the aforementioned processors, though. The company did, however, release the Dimensity 6100 Plus last year, which is basically a modified version of these chips.Nevertheless, these budget 5G chips have found favor with everyone from Motorola and Samsung to Nothing and Xiaomi. And Motorola has even used the Dimensity 7300 in its latest foldable phone.MediaTek’s 4G chipsThe company still offers 4G chipsets over five years after the first 5G phones were launched. The most capable chipsets here are the Helio G100, the G9x range, and the older Helio G8x series. Expect 2+6 core CPU setups here using Arm’s old Dynamiq technology, and very modest graphical performance. The Helio G100 and G99, in particular, stand out thanks to the small 6nm design for improved efficiency. By comparison, many of these low-end 4G chips are larger, less efficient designs.These chips often power 4G variants of smartphones from Samsung, Xiaomi, and other brands. For example, the Galaxy A15 4G and Redmi Note 13 Pro 4G are powered by Helio G9x processors. However, the Helio G8x chips don’t really get used anymore. MediaTek Helio G100MediaTek Helio G99/G96MediaTek Helio G95CPUMediaTek Helio G1002x Cortex-A766x Cortex-A55MediaTek Helio G99/G962x Cortex-A766x Cortex-A55MediaTek Helio G952x Cortex-A766x Cortex-A55GPUMediaTek Helio G100Mali-G57 MC2MediaTek Helio G99/G96Mali-G57 MC2MediaTek Helio G95Mali-G76 MC4 AIMediaTek Helio G100N/AMediaTek Helio G99/G96N/AMediaTek Helio G95APU 2.0CameraMediaTek Helio G100200MP single16MP+16MP dualMediaTek Helio G99/G96108MP single16MP+16MP dualMediaTek Helio G9564MP single24MP+16MP dualConnectivityMediaTek Helio G100Cat-13 LTEMediaTek Helio G99/G96Cat-13 LTEMediaTek Helio G95Cat-12 LTE Manufacturing processMediaTek Helio G1006nmMediaTek Helio G99/G96MediaTek Helio G9512nm MediaTek also offered ancient Helio G35, G25, and A25 processors, featuring no big cores whatsoever and low-end PowerVR GPUs. The bad news is that smooth system performance wasn’t guaranteed with these chips. The good news is that Android phone makers have largely abandoned these SoCs for a while now.Notable phones: Motorola Moto G72 POCO M6 Pro Redmi Note 13 Pro 4G Samsung Galaxy A15 4G That’s about it for our MediaTek chipset guide! We’ll be updating this article periodically to add new chipsets from the Taiwanese silicon designer. For some categories, we look at insights from our switching data or from other organisations, like Opensignal and Ofcom (that’s the regulator for telecoms in the UK) to crown the right winners.Fastest Mobile Network Overall: UK: Mobile Network Experience report September 2024 based on independent analysis during the period Jun 01 - Aug 29, 2024 © 2024 Opensignal Limited.Best Network Coverage: Analysis derived from Opensignal Awards – UK: Mobile Network Experience report September 2024 based on independent analysis during the period Jun 01 - Aug 29, 2024 © 2024 Opensignal Limited.Most Reliable Broadband Network: Analysis derived from Opensignal Awards – UK: Fixed Broadband Experience report December 2024 based on independent analysis during the period Jul 01 - Sep 28, 2024 © 2024 Opensignal Limited. Experience smartphone excellence with MediaTek Dimensity a pioneer in innovation with reliable, global 5G, professional imaging, incredible gaming, and advanced AI. Our ultra-efficient chips redefine possibilities for everything from entry-level to flagship smartphones, ensuring an incredible connected experience for all. The term MTK frequently appears, especially when discussing smartphones and their processors. If you’ve ever wondered what MTK stands for and which Android phone makers use MTK processors, this comprehensive guide has all the answers.What Does MTK Mean?MTK stands for MediaTek, a Taiwanese semiconductor company that designs and produces chipsets for a wide range of devices, including smartphones, tablets, smart TVs, and IoT gadgets. MediaTek chipsets, also referred to as MTK processors, are known for their affordability and performance balance, making them a popular choice for budget and mid-range smartphones.Key Features of MTK ProcessorsCost-Effective: MTK chipsets are generally cheaper than their competitors, such as Qualcomm Snapdragon, making them ideal for budget devices.Multi-Core Designs: They often feature more cores to enhance multitasking and gaming performance.AI Integration: Many MTK processors include AI enhancements for photography, voice recognition, and app optimization.Energy Efficiency: MediaTek’s advanced fabrication processes help optimize power consumption.5G Connectivity: Modern MTK processors, like the Dimensity series, support 5G networks, ensuring high-speed internet access.Why Are MTK Phones Popular?MTK processors offer a good balance between cost and functionality. This makes them highly appealing to smartphone manufacturers looking to deliver feature-rich phones at competitive prices. Additionally, MTK-powered phones cater to users who prioritize affordability without compromising on essential performance metrics.List of MTK Android Phone MakersNumerous Android phone makers rely on MTK processors to power their devices. Below is a list of prominent manufacturers:1. Tecno MobileTecno is a leading brand in Africa and Asia, producing affordable smartphones with MTK processors. Popular models include the Camon and Spark series.See also NIN code How to get your details on your phone (Fix Invalid error)2. InfinixKnown for its budget-friendly phones, Infinix frequently uses MTK processors in its Hot, Zero, and Note series.3. XiaomiXiaomi incorporates MTK chipsets in some of its Redmi and Poco models, particularly in budget and mid-range offerings.4. RealmeA sub-brand of Oppo, Realme uses MTK processors like the Helio G-series in many of its phones, focusing on gaming performance and affordability.5. OppoOppo features MTK processors in several entry-level and mid-range models, ensuring smooth performance at a reasonable price.6. VivoVivo integrates MTK processors in its Y-series and other mid-tier devices, focusing on camera and multimedia capabilities.7. SamsungWhile Samsung primarily uses Exynos and Snapdragon processors, some budget devices in the Galaxy A and M series feature MTK chipsets.8. NokiaHMD Global, the manufacturer of Nokia phones, uses MTK processors in its affordable and mid-range Android One smartphones.9. ItelItel, a brand targeting emerging markets, powers its ultra-budget smartphones with MTK chipsets to keep costs low.10. LenovoLenovo uses MTK processors in several of its budget smartphones and tablets, combining affordability with performance.11. MotorolaSome Motorola devices, especially in the G and E series, come equipped with MTK processors.12. DoogeeDoogee, known for its rugged smartphones, incorporates MTK processors in models designed for durability and tough environments.13. UlefoneAnother rugged phone manufacturer, Ulefone uses MTK chipsets in many of its devices, offering reliability and solid performance.14. CubotCubot phones often feature MTK processors, targeting budget-conscious users with decent specifications.MTK Processor Series ExplainedMediaTek processors are divided into several series, each catering to different user needs:Dimensity Series: High-performance processors with 5G support, ideal for flagship and upper-mid-range phones.Helio G-Series: Gaming-focused processors that provide smooth graphics and enhanced gameplay.Helio P-Series: Power-efficient chipsets for mid-range devices.Helio A-Series: Entry-level processors for budget-friendly smartphones.See also Nike Air Force One: Here Is Everything You Need to KnowConclusionMTK phones are an excellent choice for users who want affordable devices with reliable performance. MediaTek’s partnership with various phone manufacturers ensures that there’s an MTK-powered phone for every budget and need. From gaming-focused devices to entry-level smartphones, MTK chipsets provide the foundation for a wide range of Android devices.When choosing your next smartphone, consider whether an MTK-powered phone aligns with your performance and budget requirements. With so many brands leveraging MediaTek processors, you’re bound to find a device that fits your needs. Powerful performance, highly efficient energy use, and advanced AI features that enhance the whole user experience.