

MediaTek Helio A22

Powering attractive smartphones with advanced cameras, rich connectivity and light AI

MEDIATEK

MediaTek Helio A22 provides a highly capable mainstream smartphone platform that uses an ultra-efficient 12nm fabrication process. It pairs a quad-core ARM Cortex-A53 up to 2.0GHz with an IMG PowerVR GE-class GPU, and either high-speed LPDDR4x or cost-efficient LPDDR3. CPU and GPU performance are up to an impressive 30% and 72% faster respectively than competitor alternatives.

Its ultra-low power sensor hub avoids the main CPU complex to provide significant power savings. It is ideal for apps that require always-on sensor readings such as pedometers or vocal-triggers.

A 13+8MP dual camera system with twin ISP can capture professional-grade photos with Depth of Field (Bokeh) effects. A single camera mode of up to 21MP also supports Bokeh through AI-enhanced assistance. The MediaTek Imagiq camera system enables incredible low-light performance, with multi-frame noise reduction and a clear-image zoom technology. It can automatically minimize aliasing, grain, and provides defect/distortion correction techniques. 3A includes MediaTek's Instant Auto Exposure (AE): anti-over exposure hardware with accurate point focusing.

MediaTek's 4G LTE WorldMode modem brings dual 4G SIM support with advanced IMS (VoLTE/ViLTE/WFC), HPUE, eMBMS, Band 71 support and performance at Cat-7/13 (DL/UL) 4G LTE speeds. MediaTek's TAS 2.0 smart antenna technology uses the best antenna combination to provide optimal signal quality at lowest power use.

Connectivity upgrades from the previous generation include multi-GNSS options (GPS, Glonass, Beidou, Galileo) with core-enhancements providing 57% improvement in Hot TTFB, 10% accuracy improvement and up to 24% lower power operation thanks to a new, dedicated sub-processor. For the latest Smart Home devices, Bluetooth 5 is available sporting up to 2X speeds and 4X range and 8X broadcast capacity over the previous generation. BT and Wi-Fi (now 802.11ac) simultaneous co-existence can provide up to 5X Wi-Fi throughput boost over the previous generation.

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Fast & Efficient	<ul style="list-style-type: none">Best-in-class CPU and GPU mixMediaTek CorePilot 4.012nm FinFET productionLow-power sensor hub
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Supreme Imagiq Camera	<ul style="list-style-type: none">Advanced 3AAI-enhanced Single-Cam BokehMin Aliasing & GrainDefect & Distortion Correction3DNR
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Better, Faster Location Awareness	<ul style="list-style-type: none">4-Satellite multi-GNSS57% Improvement in Hot TTFB10% Accuracy Improvement24% Lower Power
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Bluetooth 5.0	<ul style="list-style-type: none">2X Speed4X Range8X Broadcast5X Wi-Fi throughput (over prev. gen. with BT/Wi-Fi co-exist)
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CPU	4x ARM Cortex-A53 up to 2.0GHz
Memory	LPDDR3 (Up to 4GB, 933MHz) or LPDDR4x (Up to 6GB, 1600MHz)
Storage	eMMC 5.1
GPU	IMG PowerVR GE-class
Camera	13+8MP or 21MP
Video Decoding	1080P @ 30FPS, H.264/HEVC
Video Encoding	1080P @ 30FPS, H.264
Display	1600 x 720 (HD+) 20:9
Modem	LTE Cat-7 (DL) / Cat-13 (UL) (FDD/TDD) or Cat-4 (DL), TAS 2.0, HPUE, IMS (VoLTE/ViLTE/WFC), eMBMS, Dual 4G VoLTE (DSDS), Band 71
Connectivity	802.11 a/b/g/n/ac, Bluetooth 5, GNSS options, FM
MediaTek Technologies	NeuroPilot, CorePilot 4.0, Imagiq, MiraVision, Pump Express, Pump Express Wireless, Low Power Sensor Hub

**Maximum capable values listed*