

MediaTek Helio P22

MEDIATEK

Create AI-advantaged, advanced dual-camera photography smartphones with rich connectivity

'Wow' with a stunning and affordable 20:9 HD+ all-screen smartphone, powered by MediaTek Helio P22. Inside, an exciting mix of octa-core ARM Cortex-A53 CPU with MediaTek CorePilot, new IMG PowerVR GE8320 GPU, and flexible LPDDR3/LPDDR4x memory controller are combined; and using the TSMC 12nm FinFET production process it ensures a new bar in long battery-life smartphones.

Its 13+8MP dual camera system, or 21MP single camera setup, is backed by a hardware depth engine for professional-grade Depth of Field (Bokeh) effects. MediaTek's Electronic Image Stabilization (EIS) has been upgraded with a new Rolling Shutter Compensation (RSC) engine, which cleverly mitigates warped ('jello effect') video when capturing fast action or scene panning. In line with the existing MediaTek Helio P series, the new P22 has incredible low-light performance, 3DNR and clear-image zoom technology, while a hardware Camera Control Unit (CCU) is considerably faster at focal exposure adjustment when environmental lighting conditions change suddenly.

Light AI-enhancements such as Face ID (Face Unlock) and smart photo albums bring new experiences to mainstream smartphones. With MediaTek NeuroPilot support, developers and device makers have the best possible AI-ecosystem, with

support for common AI frameworks and full compliance with Android Neural Networks API (Android NNAPI).

MediaTek's latest generation 4G LTE WorldMode modem integrates dual 4G SIM with VoLTE/ViLTE, MediaTek TAS 2.0 smart antenna technology and essential new standards such as eMBMS, HUPPE, Band 71 and advanced IMS. Connectivity upgrades include a new, dedicated sub-processor for 4-Satellite multi-GNSS (GPS, Glonass, Beidou, Galileo). Providing a 57% improvement in Hot TTFF, 10% accuracy improvement and up to 24% lower power operation. For the latest Smart Home devices, Bluetooth 5 now provides up to 2X speeds, 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 also.

Fast & Efficient

- CorePilot 4.0
- TSMC 12nm FinFET production
- Power/Performance optimized CPU & GPU mix
- Low-power sensor hub

Supreme Imagiq Camera

- 'MediaTek Helio X30 Grade' Twin ISP
- Advanced 3A
- Camera Control Unit
- Light AI-enhancements
 - › Face ID (Face Unlock)
 - › Smart Photo Album
 - › Single-Cam/Dual-Cam Bokeh
- EIS and RSC Engines
- Min Aliasing & Grain
- Defect & Distortion Correction
- 3DNR

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CPU	Octa-Core: 8x ARM Cortex-A53 up to 2.0GHz
Memory	LPDDR3/LPDDR4x (Up to 4/6GB, 933/1600MHz)
Storage	eMMC 5.1
GPU	IMG PowerVR GE8320 up to 650MHz
Camera	13+8MP or 21MP
Video Decoding	1080P @ 30FPS, H.264/HEVC
Video Encoding	1080P @ 30FPS, H.264
Modem	LTE Cat-7 (DL) / Cat-13 (UL) (FDD/TDD) or Cat-4 (DL), TAS 2.0, HUPPE, 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

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Better, Faster Location Awareness

- 4-Satellite multi-GNSS
- 57% Improvement in Hot TTF
- 10% Accuracy Improvement
- 24% Lower Power

Bluetooth 5.0

- 2X Speed
- 4X Range
- 8X Broadcast
- 5X Wi-Fi throughput (over prev. gen. with BT/Wi-Fi co-exist)