

# MediaTek Dimensity 820

Incredible 5G Experiences with this Best-in-Segment Performer

MEDIATEK

**The MediaTek Dimensity 820 is the super-star of premium 5G smartphones. Featuring essential 2CC Carrier Aggregation, MediaTek 5G UltraSave technologies, dual 5G SIM with VoNR services and a comprehensive 5G modem feature list such as DSS, TDD/FDD, EN-DC and global carrier certifications.**

Its 'Big Core' powerhouse includes four super-speed Arm Cortex-A76 cores operating up to 2.6GHz within its octa-core CPU, giving up to 37% more multi-core performance versus alternatives. A premium 5-core GPU with flagship-class IP plus MediaTek HyperEngine 2.0 whole smartphone enhancements gives the Dimensity 820 a best-in-class gaming experiences.

Fantastic 120Hz displays deliver a faster response with zero-blur and smoother visuals, while MiraVision video

technologies amplify the quality of video playback using MediaTek AI-PQ, HDR Composer, Enhanced HDR10+ quality.

MediaTek APU 3.0 provides up to 300% faster ETHZ AI benchmark performance than direct competitors. A unique FP16 and INT16 capable design generates the most precise AI-camera actions for the best quality video capture or streaming results, while also maximizing power efficiency.

<b>Big Core Powerhouse</b>	<ul style="list-style-type: none"><li>4X Arm Cortex-A76 up to 2.6GHz</li><li>4X Arm Cortex-A55 up to 2GHz</li><li>5X Arm Mali-G57</li></ul>
----------------------------	---------------------------------------------------------------------------------------------------------------------------------------------

<b>MediaTek 5G UltraSave</b>	<ul style="list-style-type: none"><li>MediaTek 5G UltraSave Network Environment Detection</li><li>MediaTek 5G UltraSave OTA Content Awareness</li><li>Dynamic BWP</li><li>C-DRX (Connected Mode DRX)</li></ul>
------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<b>MediaTek HyperEngine 2.0 Gaming Technology</b>	<ul style="list-style-type: none"><li>Network Engine 2.0</li><li>Rapid Response Engine 2.0</li><li>Picture Quality Engine 2.0</li><li>Resource Management Engine 2.0</li></ul>
---------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<b>MediaTek MiraVision</b>	<ul style="list-style-type: none"><li>AI-PQ</li><li>HDR Composer (SDR to HDR)</li><li>Enhanced HDR10+ Video Playback</li></ul>
----------------------------	--------------------------------------------------------------------------------------------------------------------------------

<b>MediaTek Imagiq</b>	<ul style="list-style-type: none"><li>80MP Camera Support</li><li>Multi-frame 4K video HDR</li><li>HDR-Native, Multi-Core ISP</li><li>Multi-Camera Smartphones</li></ul>
------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## MediaTek Dimensity 820

<b>CPU</b>	Octa-Core: 4x ARM Cortex-A76 up to 2.6GHz; 4x ARM Cortex-A55 up to 2.0GHz
<b>Memory</b>	LPDDR4x up to 16GB, 2133MHz
<b>GPU</b>	Arm Mali-G57 MC5
<b>AI</b>	MediaTek APU 3.0
<b>Camera</b>	80MP @ 30fps or 32+16MP @ 30fps
<b>Video Decoding</b>	4K 60fps, H.264/265/VP9
<b>Video Encoding</b>	4K 30fps, H.264/265
<b>Display</b>	2520 x 1080 (Full HD+) @ 21:9, up to 120Hz
<b>Storage</b>	UFS 2.1
<b>Modem</b>	5G 2CC, NSA & SA, Sub-6GHz, DSS, EN-DC, FDD/TDD
<b>Connectivity</b>	Wi-Fi 5 (802.11 a/b/g/n/ac), Bluetooth 5.1, GPS+Glonass+Beidou+Galileo