

# MediaTek Helio G90 Series

Turbocharged Gaming, Awesome AI & Up to 64MP Camera

**MEDIATEK**

## MediaTek has not just built a powerful chip, but a complete platform of hardware and software enhancements that excels at smartphone gaming.

The upgraded octa-core CPU uses the latest Arm Cortex-A76 and Cortex-A55 processors in combination with a large L3 cache, which pushes the G90 series multi-threaded performance up to 9%<sup>1</sup> beyond direct competitors. The latest Arm G76 3EEMC4 GPU can play Fortnite and PUBG incredibly smoothly, blazing through Manhattan benchmark up to 26%<sup>1</sup> faster versus direct competitors.

Beyond gaming, the G90 series is the first to enable up to 64MP<sup>1</sup> 4-cell sensor cameras that can capture incredibly detailed photos or using quad-pixel technology provides the best low-light performance ever. Multi-camera framework allows brands to integrate a variety of lens and sensor options for vast product differentiation potential. It's incredibly fast AI processor (APU), which combined with its premium CPU and GPU, powers up to 1TMACs<sup>1</sup>

AI performance; ideal for AI-camera applications, OS enhancements, exciting apps and much more.

Fully integrated into its design for power and cost-optimization, the G90 series can listen for multiple wake-up words<sup>1</sup> that trigger virtual assistants such as Google Assistant, Amazon Alexa or other localized services.

Connectivity includes a Cat-12 4G LTE WorldMode modem with 3x CA and 4x4 MIMO and 256QAM, plus DS2S (dual SIM) for essential dual 4G VoLTE and 4G data that provides the best user experience. Advanced cellular features such as IMS (VoLTE\ViLTE\VoWi-Fi), is now supported by over 175 cellular operators worldwide, and other standards include global eMBMS, HPUE and Band 71 support in North America.

<sup>1</sup>Performance and features based on G90T.

Premium CPU, GPU & APU
<ul style="list-style-type: none"> <li>2X Premium Big CPU Cores (Arm Cortex-A76)</li> <li>6X Fast &amp; Efficient CPU Cores (Arm Cortex-A55)</li> <li>Premium Arm-Mali G76 3EEMC4 Graphics</li> <li>2X High-Performance MediaTek APU</li> </ul>

64MP Sensor & Multi-Camera Framework
<ul style="list-style-type: none"> <li>Triple-Camera Framework support</li> <li>64M High resolution 4-cell Sensor Support</li> <li>Fast and Precise AI Face Detection Engine (AIFD)</li> <li>Hardware Depth Engine</li> </ul>

World's First Dual 'Wake-up Word' Support
<ul style="list-style-type: none"> <li>Fully integrated: no extra components required</li> <li>Easy hardware design</li> <li>Easy software integration with MediaTek support</li> <li>Great consumer experience &amp; improved choice</li> </ul>

	MediaTek Helio G90T	MediaTek Helio G90
<b>CPU</b>	2x Arm Cortex-A76, up to 2.05GHz 6x Arm Cortex-A55, up to 2.0GHz	2x Arm Cortex-A76, up to 2.0GHz 6x Arm Cortex-A55, up to 2.0 GHz
<b>GPU</b>	Arm Mali-G76 3EEMC4 up to 800 MHz	Arm Mali-G76 3EEMC4 up to 720 MHz
<b>Camera</b>	3x ISP 64 MP @ 22.5FPS 24+16MP @ 30FPS	3x ISP 48 MP @ 30FPS 24+16MP @ 30FPS
<b>Voice Wakeup</b>	Built-in Dual wakeup words	Built-in Single wakeup word
<b>AI</b>	2X MediaTek APU up to 750MHz	2X MediaTek APU up to 750MHz
<b>Memory</b>	LPDDR4x up to 10GB, 2133MHz (4,266 GT/s effective)	LPDDR4x up to 10GB, 2133MHz (4,266 GT/s effective)
<b>Storage</b>	UFS 2.1 eMMC 5.1	UFS 2.1 eMMC 5.1
<b>Display</b>	Up to 2400 x 1080 (Full HD+) 21:9	Up to 2400 x 1080 (Full HD+) 21:9
<b>Display Refresh Rate</b>	Up to 90 Hz	60 Hz
<b>Modem</b>	4G LTE Cat-12 (DL) / Cat-13 (UL) (FDD/ TDD), 4x4 MIMO, 3CA, 256QAM, HUPE, IMS (VoLTE\ ViLTE\WFC), eMBMS, Dual 4G VoLTE (DS2S), Global Bands, TAS 2.0	4G LTE Cat-12 (DL) / Cat-13 (UL) (FDD/TDD), 4x4 MIMO, 3CA, 256QAM, HUPE, IMS (VoLTE\ ViLTE\WFC), eMBMS, Dual 4G VoLTE (DS2S), Global Bands, TAS 2.0