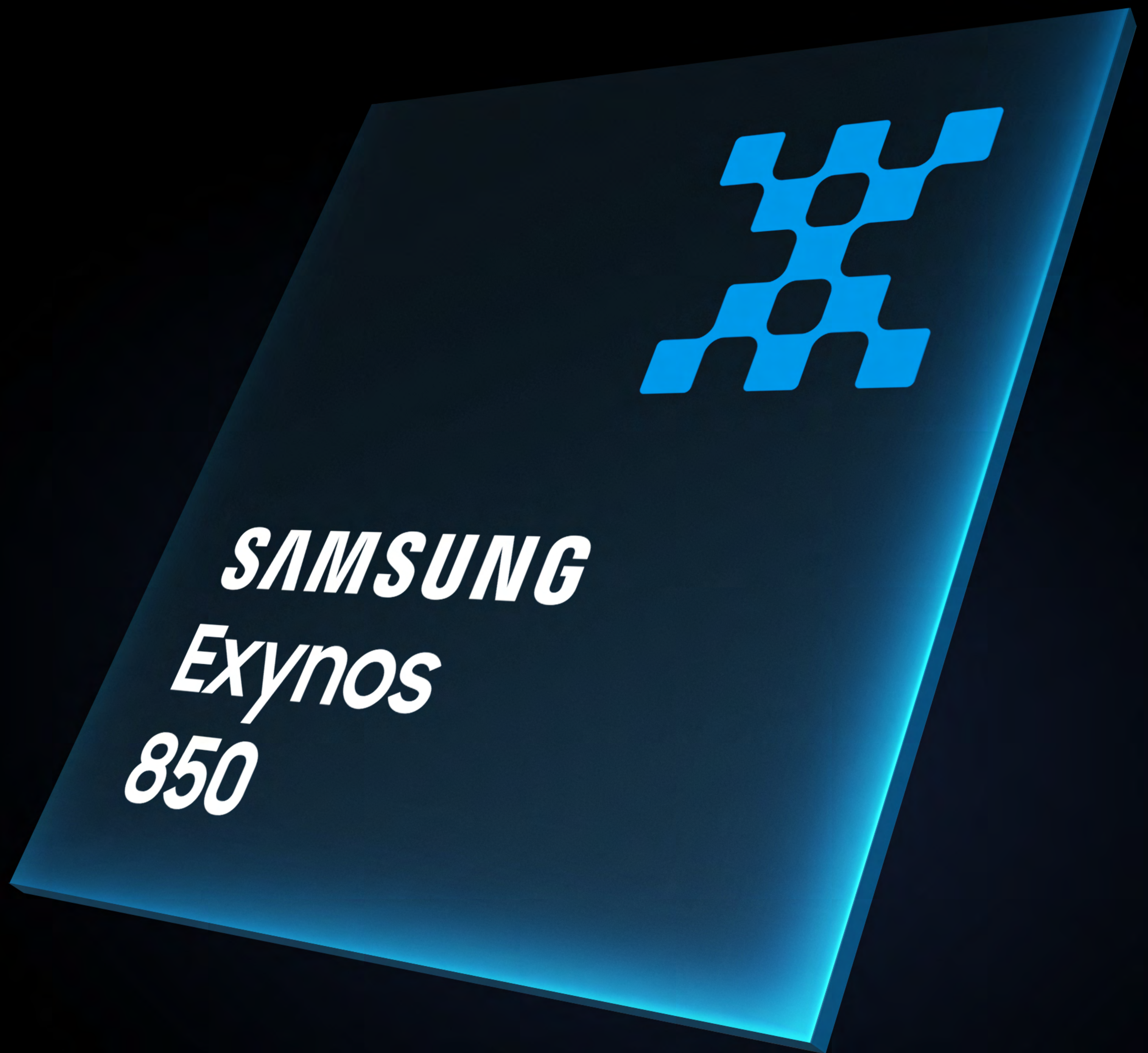


MOBILE PROCESSOR



| Exynos 850

A Versatile Processor You Can Trust

Seamless connectivity meets reliability in the Exynos 850 – an all-in-one mobile processor with excellent energy economy that opens the door for users to do more on their devices, more efficiently than before.

SAMSUNG



CPU and GPU

Swift computing and vibrant gaming

Experience better processing and gaming. Combining a pair of dependable processing units, the Exynos 850 delivers capable mobile computing and gaming on devices. With its Arm® Cortex®-A55 octa-core CPU, the Exynos 850 offers great combination of stable performance and power efficiency. In addition, the Exynos 850 contains a Mali™-G52 MP1 GPU that is based on Bifrost architecture, and provides stable, visually compelling gaming experiences with reduced lag.

* The depicted features shown are fictitious creations. No simulation of any real product and feature is intended.

Save your battery power for when you need it most. The Exynos 850 incorporates innovative power efficiency measures that enable users to make use of mobile features for longer. Designed with advanced 8nm FinFET processing technology, the Exynos 850 offers noticeably better power efficiency than processors built on legacy processes. When this innovation is combined with the power efficiency provided by the inclusion of the energy-efficient Cortex®-A55 CPU, the result is a mobile processing solution with excellent energy performance.

* The depicted device is a fictitious creation. No simulation of any real product is intended.



Power efficiency
**Cool under
pressure**

Camera Capture sharper pictures

Harness multi-camera arrays for well-defined photographs. The Exynos 850's onboard ISP (Image Signal Processor) supports both single and dual camera configurations to provide versatile camera performance. The advanced ISP supports single-camera resolutions of up to 48MP and dual camera resolutions of either 16MP and 5MP or 13MP and 8MP. With the Exynos 850, users can capture crisp pictures with multiple cameras while also benefiting from a range of image enhancement functions that include bayer transformation, demosaicing, noise reduction and image sharpening.

* The depicted device is a fictitious creation. No simulation of any real product is intended.

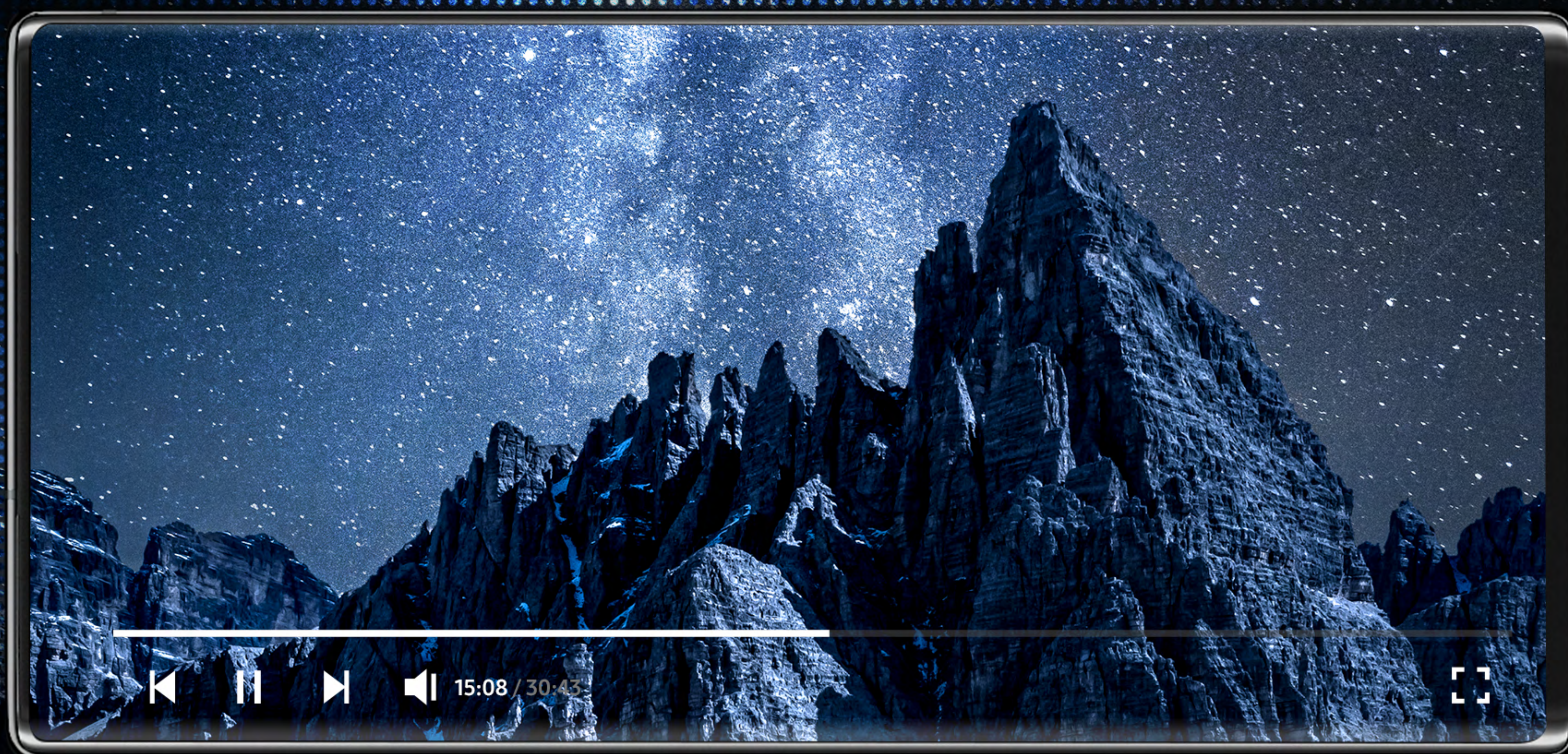


Multimedia

Get immersed in crisp video

Videos come to life before your eyes. The Exynos 850 enables high-quality display resolutions and playback that allows users to get truly immersed in their favorite videos. Providing support for up to FHD+ (2520x1080) resolution, the processor allows users to enjoy stunningly sharp video on their devices. The Exynos 850 processor also contains the HEVC (High Efficiency Video Coding) codec, which enables FHD (1920x1080) 60fps encoding and decoding to occur simultaneously, resulting in smoother video playback.

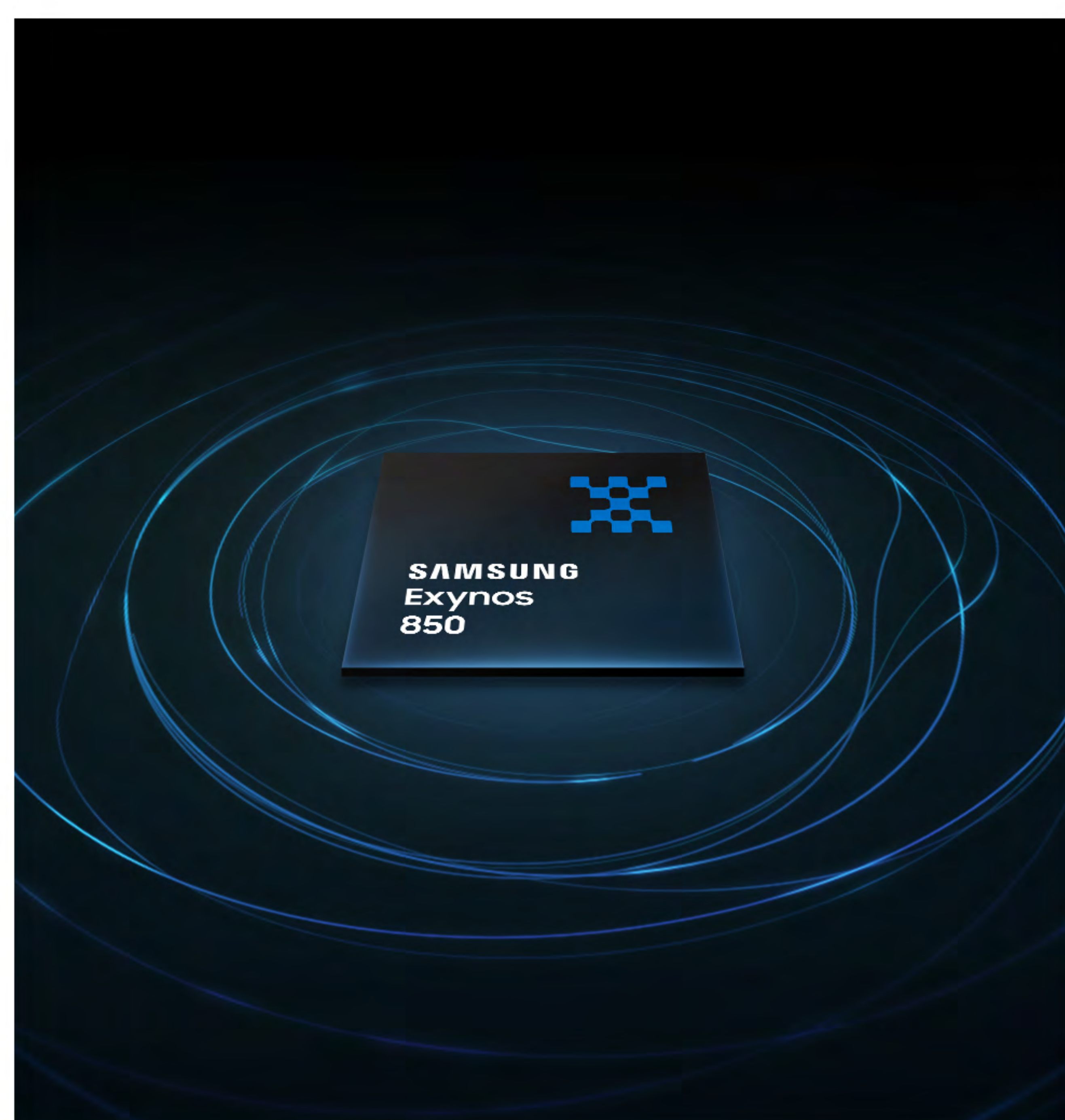
* The depicted device is a fictitious creation. No simulation of any real product is intended.



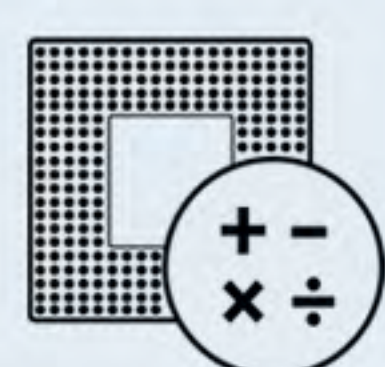
Modem and connectivity

Versatile connectivity and broad compatibility

Stay connected to boost capabilities. Exynos 850 enables fast mobile internet and a host of IoT solutions. Supporting networks from 2G through to LTE, the modem-integrated mobile processor allows LTE downlink speeds of up to 300Mbps and LTE uplink speeds of up to 150Mbps with 2x carrier aggregation.¹ While carrier aggregation (CA) allows for the combination of multiple LTE carriers into a single data channel to increase network capacity and data rates, the comprehensive SoC supports a range of networks including Wi-Fi 5, Bluetooth® 5.1, ANT+ and quad GNSS.



Specifications



CPU

Octa-core (Cortex®-A55)



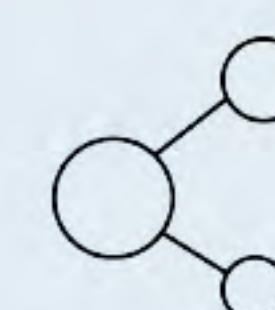
GPU

Mali™-G52 MP1



Modem

LTE Cat.7 2CA 300Mbps (DL)
/ Cat.13 2CA 150Mbps (UL)



Connectivity

Bluetooth® 5.1, Wi-Fi 802.11ac,
FM Radio



GNSS

GPS, GLONASS, BeiDou,
Galileo



Camera

Single-camera up to 48MP
(21.7MP at 30fps),
Dual-camera up to 16MP+5MP



Video

FHD 60fps encoding and
decoding with HEVC(H.265),
H.264, VP9



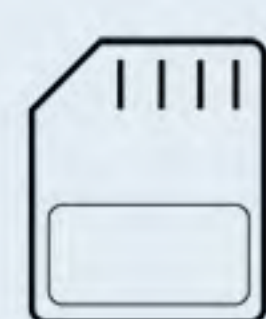
Display

Full HD+ (2520x1080)



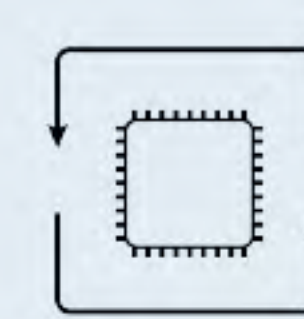
Memory

LPDDR4X



Storage

eMMC 5.1



Process

8nm LPP

1) Actual performance may vary depending on device and user environment.

※ All functionality, features, specifications and other product information provided in this document including, but not limited to, the benefits, components, performance, availability, and capabilities of the product are subject to change without notice or obligation.

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