LeEco, a rising star in smartphone design in China, has launched its latest flagship phone, the LeMax Pro, featuring the Snapdragon 820 chipset and the new fingerprint Snapdragon Sense ID. Both devices come from the world leader in mobile technologies, Qualcomm. The fingerprint sensor uses novel ultrasonic technology developed by Qualcomm, offering 3D imaging of the fingerprint.

The LeMax Pro from LeEco is the first to feature the ultrasonic fingerprint sensor from Qualcomm. The sensor is located on the back of the device under 400 µm of metal, allowing more convenient and frequent authentication.

The sensor itself is also the first of its kind. Powered by an ultrasonic-based fingerprint biometric solution, it provides a more secure, reliable alternative to capacitive-based fingerprint sensors. The solution also features a QBIC (Qualcomm Biometric Integrated Circuit), which is described in this report, designed to protect users’ biometric information. This enhances the user experience with a convenient and secure alternative to passwords, new device design options, and by consistently scanning through common fingerprint contaminants, including water and oil.

Complete chip fabrication processes and cost estimates are presented in the report. It also includes comparison with capacitive fingerprint sensors found in smartphones from Apple, Samsung, and Huawei.
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