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Qualcomm Technologies, Inc.

Qualcomm® Snapdragon Sense™ ID 3D fingerprint technology
Qualcomm® Snapdragon™ processors in the leading devices

825+ designs in development

85+ manufacturers shipping with Snapdragon

1,080+ devices announced or commercially available in FY’14

As of Sep. ’14; Qualcomm Snapdragon is a product of Qualcomm Technologies, Inc.
A mobile technology leader

Source: Qualcomm Technologies, Inc. data
Qualcomm Snapdragon, Qualcomm Gobi and MSM are products of Qualcomm Technologies, Inc.

1B+ Android smartphones

919M MSM™ chipset shipments in FY’14

5th Gen 3G/4G multimode modem announced
Qualcomm<sup>®</sup> Security Solutions
Robust, multi-dimensional security

- **Content Protection**: Trusted content protection, so users can enjoy the latest 4K Ultra HD content from movie studios.

- **Authentication**: Developing authentication alternatives such as biometrics and important related standards like FIDO.

- **Theft Deterrence**: Enabling users to remotely lock their mobile device if it’s lost or stolen, and then unlock it if it’s found.

- **Enterprise & BYOD**: Security solutions that help ensure that corporate networks can safely and securely connect with employee and corporate owned devices.
Proud Member of the FIDO Alliance

• Working with other FIDO members to create a world beyond passwords
• End-to-end security
• Incorporating the FIDO UAF Standard
Snapdragon Sense ID

Benefits of Ultrasonics

Convenience

Ease of integration

Accuracy and consistency

Ecosystem opportunity

Design opportunity

Security and privacy

Ease of integration

Accuracy and consistency

Ecosystem opportunity

Design opportunity

Security and privacy
Accuracy and consistency

Improved user experience by consistently scanning through various contaminants

- Sweat
- Lotion/Oils
- Condensation
Design opportunity

+ Ease of integration

[ ] glass
[ ] plastics
[ ] steel
[ ] aluminum
[ ] sapphire
Anti-spoofing

Ultrasonic-based technology captures 3-dimensional acoustic detail within the outer layers of skin for more complete, accurate detection of fingerprint ridges, unique characteristics and sweat pores, making it more difficult to deceive.

Surface-level impression

A common disadvantage of capacitive, 3D capacitive sensor is detail within the outer layers of skin for more complete, accurate detection of fingerprint ridges, unique characteristics and sweat pores, making it more difficult to deceive.
Device-based security

Data stays on the device

Device Material
Platen
Sensor

Based on SecureMSM Technology
Ecosystem opportunity

Interconnected with a myriad of FIDO-enabled devices and applications

Compatible across Snapdragon 400-800 processors

Expected in commercial devices 2H 2015
Snapdragon Sense ID

The mobile industry’s first comprehensive ultrasonic biometrics solution
Thank you

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