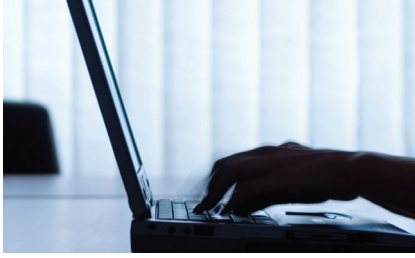




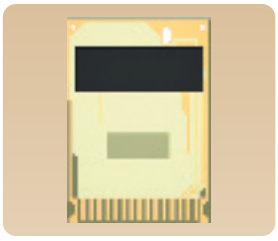
LiveFlex® Technology Brief

VALIDITY®

High Frequency RF Fingerprint Imaging Technology

INTRODUCTION

Validity's patented LiveFlex® Technology is the foundation for developing fingerprint sensors with the highest levels of performance, durability, cost-effectiveness, and manufacturing flexibility.



Validity Chip-On-Flex Fingerprint Sensor

LIVEFLEX®

- LiveFlex® supplies superior image quality with high-frequency RF imaging into the live layer of the finger
- LiveFlex® solves durability issues by separating the actual fingerprint sensor from the silicon die, combined with a Kapton® plastic surface that is extremely resilient
- LiveFlex® resolves fundamental cost challenges, while maintaining excellent image quality
- LiveFlex® is the only solution with a flexible form factor and small footprint, providing maximum flexibility for OEM product integration

IMAGE QUALITY

- Superior image quality allows sensor to work with any 3rd party matcher
- High Frequency (16MHz) RF sensor delivers more finger print details
- Differential pickup performs essential "noise cancellation"
- World-class RF receiver coupled with multiplexing transmitters enable delivery of full 8 bit grayscale images
- 9 bit internal analog to digital (A to D) conversion delivers the broadest dynamic range
- LiveFlex® provides the superior images, and superior images deliver the best False Accept / False Reject (FAR/FRR) performance
- RF sensing penetrates deep into the living tissue of a finger

DURABILITY

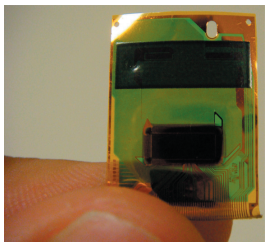
- Fingerprint sensing area is mechanically decoupled from the silicon drive chip
- Users always touch plastic, never silicon
- True Chip-On-Flex Soution: sensor area is made of plastic, not silicon covered by plastic
- Plastic surface provides industry leading impact performance: sensor capable of surviving strikes from a sledge hammer or pen drops of over 2 meters
- Resistantance to abrasion, liquids, and chemicals
- High resistantance to Electro-Static-Discharge (ESD)

COST-EFFECTIVENESS

- Moving the fingerprint sensing elements completely off the silicon die allows Validity to offer more cost-effective sensors over time by following a traditional die-shrink product roadmap. Fingerprint sensors that image using direct contact silicon sensors cannot shrink beyond the width of an industry standard fingerprint without degrading imaging performance.

FLEXIBILITY & CUSTOMIZATIONS

- Small Footprint with flexible z-height options
- Multiple standard fingerprint sensor module reference designs
- Sensor surface can be colorized to any Pantone color, providing aesthetics flexibility
- Many convenient usability features such as on-screen navigation and scrolling are available as options



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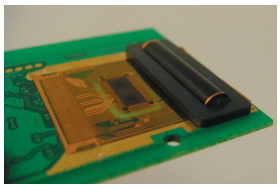
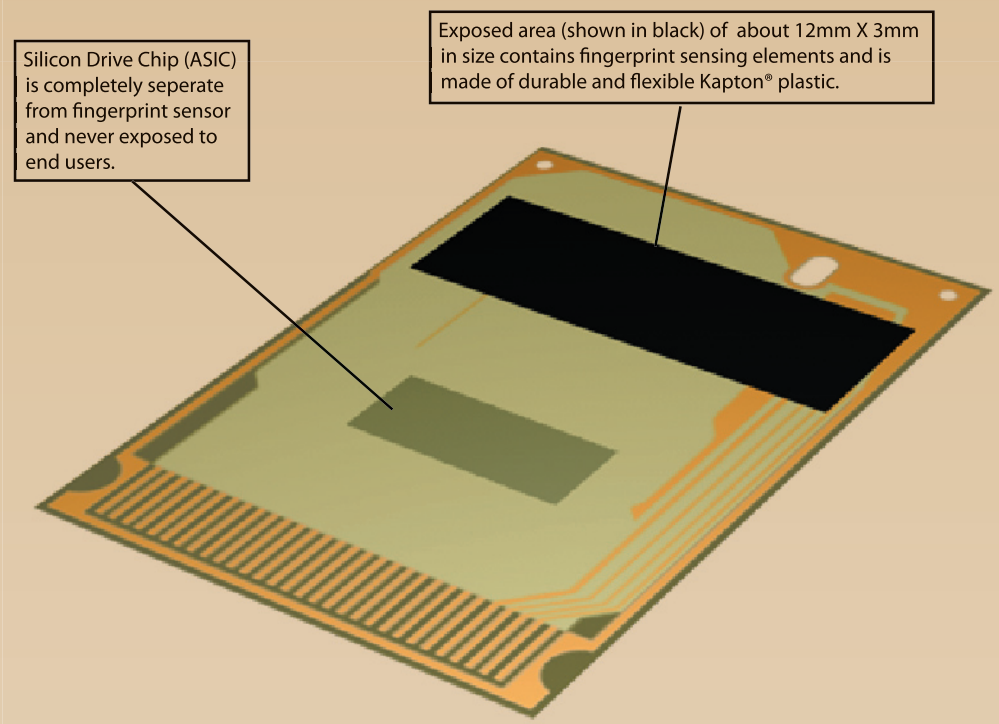


Example of fingerprint sensor after module attachment

LiveFlex® Overview



"Our Vision is to be the leader in enabling secure and reliable access to personal information for anyone, anywhere"

LIVEFLEX®

VALIDITY®

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