Fingerprint on Display (FoD) Solution

Key Features & Benefits:
- Scalable Solution: large area to full mobile display
- Slim fingerprint module thinner than 300 µm
- Support 1 to 4 finger authentication
- Robust FRR/FAR performance under various conditions including sunlight, wet and dry fingers
- Support curved-edged phone display with polymide-substrate sensor
- Future Ready: foldable display compatible
- Read-Out System Controller: 1-chip ROIC with GOA control, sequencer and single power supply

Differentiation:
- Easy phone integration - slim large area FoD module
- Curved and foldable display compatible
- Cost-effective solution for large area to full display
- High Security with Multi-fingers authentication
TECHNICAL DATA

FoD Module Stack Structure

Fingerprint Matching Time
- 200 ms or less

False Rejection Rate (FRR) and False Acceptance Rate (FAR)
- ≤1.5% with FAR < 1/50000 (in normal indoor condition)

N° of Channels in ROIC
- 620 per ROIC (2x ROIC for Full Display FoD)

Single external Power Supply
- 2.7 to 3.6 V (Separate internal LDOs for digital and analog circuits)

Power Consumption (Full Display)
- • 300 µA under 3.3 V in sleeping mode
- • 600 mA under 3.3 V in acquisition mode

Interfaces
- • SPI for inputs and outputs
- • Video port format for fast output

Readout IC Integration

Display light is:
- • Absorbed by the ridges
- • Reflected on the valleys location