Qualcomm Haven™ Security Platform

Hardware-based protection, user authentication, and device attestation

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Qualcomm Haven Security Platform is a product of Qualcomm Technologies Inc
Qualcomm Haven Security Platform

Hardware-based protection, user authentication & device attestation

Qualcomm® Secure Execution Environment

Qualcomm® Snapdragon™ Smart Protect for apps
Secure Camera
Qualcomm Haven Token
High-Level Operating System

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Qualcomm Haven Security Platform
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User Authentication
1. Pin and Fingerprint
   - Secure UI
   - Secure Fingerprint
2. Eye based
   - Secure Camera

Device Attestation
1. Software Authentication
   - Secure Boot
2. Malware Detection
   - Smart Protect
3. Hardware Authentication
   - Hardware Token
Snapdragon Smart Protect
On-device intelligent threat detection in virtually real-time

Traditional signature-based detection
- Safe applications
- Transformed threats (Example: Photos taken while display is off)
- Unknown threats (Example: SMS sent without user interaction)
- Known threats

Snapdragon Smart Protect behavioral-based detection

Comprehensive Protection

Privacy protection
Superior detection of zero-day and transformational malware
Power efficiency (optimized for mobile)

Designed to support real-time detection of zero-day and transformed malware through advanced machine learning-based behavioral analysis
Eye authentication with Secure Camera

1. Eye Biometric Capture
2. Eye Biometric Processing and Storage
3. Eye Biometric Display

Secure biometric processing
Secure camera
Hardware Token
Secure hardware-based device attestation

User-based Authentication
- Password goes from user through device to backend

Haven-based Authentication
- User authenticates to device
  - Biometrics like fingerprint or iris
  - PIN

Device authenticates to backend
- Uses strong key material
- Attestation: preconfigured keys in the device

Device signals to risk engine
- Unique device identifiers
- Unique context data
- Malware detection

Relying Party / Payment Server
- Key database
  - Public keys (e.g. FIDO)
- Check device attestation
- Risk engine
  - Heuristic / algorithmic processing of risk signals
Qualcomm Haven platform provides a comprehensive security solution for user authentication and device attestation.

Security solutions for your data and your device.
Thank you

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