

# Frictionless Checkout. Safer Operations.

Biometric authentication is rapidly becoming essential to enabling security-rich payments, access control, and identity verification across a broad range of industries. From retail and transportation to government and enterprise environments, organizations require fast, security-rich, and privacy-focused solutions that can scale globally while minimizing complexity.

However, deploying biometric systems at scale presents challenges including integration across diverse hardware environments in real time. Organizations must also defend against evolving cybersecurity threats and comply with regional identity and privacy regulations. As the transaction value obtained through biometrics grows, the risk of de novo attack vectors that are sustained and targeted at both cloud and edge environments rises significantly. Known attacks include malware, replay, cold-boot, man-in-the-middle, code tampering, app vulnerabilities, privilege escalations, zero-day vulnerabilities, and cryptographic attacks.

## Security-focused Biometric Identity at the Edge

To address these challenges, Qualcomm Technologies, Inc. provides a comprehensive and security-focused biometric solution that supports facial and palm authentication. Built on the Qualcomm Dragonwing™ processor platform, the solution delivers high-performance, low-power AI processing for real-time, on-device biometric recognition with enhanced data privacy and reduced latency. The platform is supported by a trusted software stack and an extensive global ecosystem of software providers, system integrators, and reference hardware partners. Pre-integrated drivers security-rich camera frameworks, and machine learning toolkits further simplify development and accelerate deployment, enabling customers to implement tailored biometric solutions across a wide range of environments.



## Benefits

- **Frictionless Experiences:** Authenticate users in seconds via facial, fingerprint, and palm
- **On Device Data:** No biometric data leaves the device—maintaining identity at the edge
- **Fast Time to Market:** APIs and pre-integrated camera drivers streamline development
- **Cybersecurity-ready:** Built-in anti-spoofing, liveness detection, and security-rich execution environment
- **High Accuracy, Low Latency:** AI inference is performed on-device using dedicated compute blocks
- **Works Anywhere:** Optimized for security-focused entry and payments in airports, stadiums, banks, and retail

## Use Cases

- **Retail and Payment Terminals:** Touchless biometric checkout with facial or fingerprint recognition
- **Transportation:** Ticketless, biometric boarding, and e-gate access at stations and airports
- **Government:** Biometric passport checks and security-focused ID authentication
- **Events and Venues:** Fast-track stadium entry with palm or face-based access
- **Hospitality and Corporate Facilities:** Staff and visitor check-in with biometric validation
- **Age Verification:** Verify customer age for restricted products or services with on-device checks

## Powered by Qualcomm® technology

At the core of these solutions are our advanced silicon platforms and AI software frameworks, engineered to deliver high-performance edge intelligence with power efficiency and scalability:

- **Dragonwing Processors:** A family of low-power, high-performance system-on-chips (SoCs) designed specifically for edge AI inference in embedded and industrial environments. List of SoCs: Dragonwing QCS/QCM6490, Dragonwing QCS/QCM5430, Dragonwing QCS/QCM2290.

## What Could Security-rich, On-device Identity Do for You?

Our Dragonwing Solution for biometric payments and access control is here to help you build scalable, security-focused biometric systems with the technology, tools, and ecosystem you need to move forward with confidence.

**To learn more or begin development, contact our team today.**