



A Novel Solution: Utilizing EMV cards for Strong Customer Authentication

Convego®tap: Utilizing EMV cards for authentication

With the Convego®tap solution you can offer strong customer authentication in a cost efficient way. Consumers can use their existing, familiar and well-trusted banking card as a secure and convenient authentication factor for online banking. No need to handle extra hardware or inconvenient TAN/ one-time password (OTP) generators or apps.

For secure app onboarding, the user is asked to enter the known online banking credentials (e.g. account number and online banking PIN) and then to tap the banking card as a secure second factor authentication.

For the card activation use case, when the consumer receives a new card, this can be easily activated by logging into mobile banking and tapping the card against the phone. No need to visit a bank branch or to activate the card at an ATM.

THE SECURITY AND CONVENIENCE LIES WITHIN THE G+D TECHNOLOGY:

- With the G+D end-to-end security design and a dynamic challenge being sent to the card, Convego®tap provides a strong and dynamic proof that a customer is in possession of the bank card.
- The technology meets legal requirements for two-factor authentication such as PSD2, supports FIDO-compliant authentication solutions, and can be used to authorize high-value transactions with hardware level security.

Connect to Convego®tap

Convego®tap leverages the hardware security of modern banking cards and authenticates the card based on dynamic signatures and the card trust hierarchy. The solution provides end-to-end security between a secure server component and a client SDK and operates with several layers of security to make manipulations or replay of authentication data impossible.

If combined with a FIDO solution, Convego®tap provides a FIDO-compliant two-factor authenticator (FIDO UAF) based on a FIDO key derived from authenticated card data.



Did you know?

Giesecke+Devrient (G+D) technology is unconsciously used by billions of people every day! With more than 700 global Banks putting their trust in G+D and our offerings, we enable secure and convenient transactions for everyday usage.

Founded in 1852 in Leipzig as a printer of bank notes, now with HQ in Munich, G+D is a global powerhouse in payments - be via cash, card or digital services. Our safe payments technology, elegantly combined with smooth customer experiences throughout the whole customer journey, secures the daily life use of financial services. And also creates customer obsession for our clients!

We are: pioneers in payments, industry leader and innovating partner for the financial sector.

Why Convego®tap

Our future-proof tokenization and authentication solutions are serving billions of users daily. As a premium partner of both Mastercard and Visa, G+D are a one-stop shop for secure provisioning of customer data.

The customer experience is convenient and fast as the customer can easily activate and authenticate services whilst benefitting from a high level of security that this solution provides. There is no longer any need to wait in line at a bank counter or ATM in order to activate a new card.

Moreover, online banking requires no additional hardware, while complex and costly TAN and OTP generators or apps become superfluous.

Banks don't need to modify or replace previously issued cards for the new method. Furthermore, there is no cost for additional hardware. Convego®tap thus currently represents the most cost-effective means of providing

bank customers with hardware-based security for online authentication.

In summary G+D Mobile Security has developed a novel solution for using bank cards for Strong Customer Authentication (SCA). With Convego®tap, customers simply activate their cards by tapping them against their smartphone.

BENEFITS IN A NUTSHELL:

- Intuitive, convenient and secure authentication
- Higher card activation rates and service onboarding
- Compliant two-factor authentication
- Higher TRX values thanks to a simplified two-factor authentication scenario
- Cost efficient as using existing hardware and no need to send TAN/OTP
- A digital first approach putting your brand on top of competition

Use cases



- Secure 2-factor login to account
- PIN/PW as knowledge factor
- Card as possession factor



- Leverage HW security of card for high-value transactions
- Card as possession factor
- PIN/PW as knowledge factor



- PSD2 compliant authentication to trigger card activation
- Card as possession factor
- Can be combined with separate PIN/PW as knowledge factor



- PSD2 compliant 2nd factor for user enrolment
- Card as possession factor (device independent)
- Can be combined with separate PIN/PW as knowledge factor

Technical Specifications

Supported card types	Mastercard M/Chip Advance with CDA Mastercard M/Chip Select 4 with DDA or CDA Visa qVSDC with fDDA American Express Expresspay with CDA China Union Pay (Union Pay International) qUICS with fDDA RuPay qSPARC Dynamic Data Authentication Girocard Germany (in preparation)
Supported mobile OS	Android, API level 23 and above
Architecture	Client-server architecture with client SDK Server microservice architecture
SDK modes	Online mode: direct SDK communication with server backend, Offline mode: communication handled by mobile app.
Security	End-to-end protection with JWE/JWS on data layer Server-generated challenge, challenge integrity protection Replay protection Certificate-based client authentication Transport security with TLS
Certifications	FIDO UAF certified PCI-DSS ready
Product versions	Standalone version (one authentication factor), FIDO UAF authenticator version (two authentication factors)
Server administration	Administration portal
Server features	Card name request, last 4 digits request, PAN/BIN black-/whitelisting

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