



# Enabling NextGen Smart Cards for Payments & Card-based Applications

February 2022



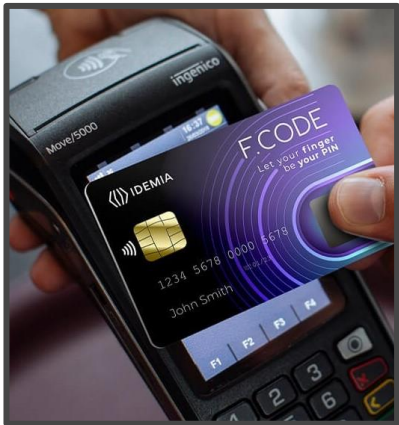
Oslo Børs: IDEX Nasdaq: IDBA

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# IDEX Biometrics – The Next Generation of Payments



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**Multi-billion Market Opportunity**



**Superior Biometric Performance**



**Disruptive System Costs**



**Capturing a Market Inflection Point**

# Highly Experienced Leadership Team



**Vince Graziani**  
CEO



**Catharina Eklöf**  
CCO



**Jamie Simms**  
CFO



**Stan Swearingen**  
SVP-Strategy



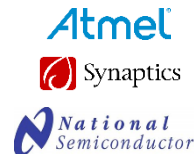
**Anthony Eaton**  
CTO



**Fred Benkley**  
SVP-Innovation



**Chris Ludden**  
SVP-Engineering



# The Case for Card-based Fingerprint Authentication

## Challenges

Fraud

Security

User Convenience

Card Economics



### Reduced fraud:

- ✓ Secure, high-value contactless transactions

### Identity protection:

- ✓ Encrypted biometric data; stored only on the card

### Ease of use:

- ✓ Simple, low-cost enrolment
- ✓ Seamless user experience

### Economic benefits:

- ✓ New customer acquisition
- ✓ “Top of Wallet” effect
- ✓ Direct Monetization

# The Opportunity



# Rapid Scaling of Biometric Payment Cards

## Total market: ~5 Billion smart cards per year

- Includes all cards with secure element

## Addressable Market: payment cards

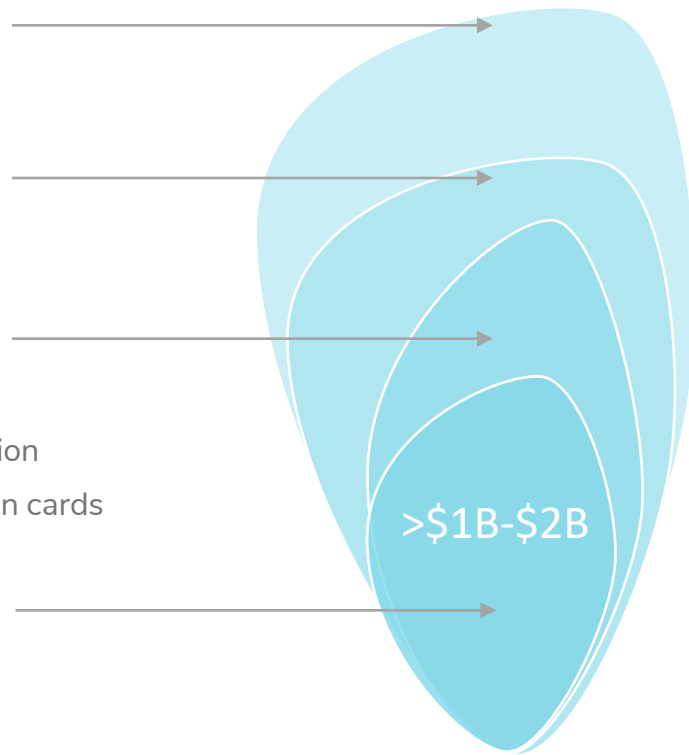
- >3.0 billion payment smart cards per year

## Serviceable Market: dual interface payment cards

- >1.9 billion contactless cards per year, growing at >8% CAGR
- Biometric penetration rate is rising faster than contactless adoption
- Forecasting 18% penetration by 2025, representing > 500 million cards

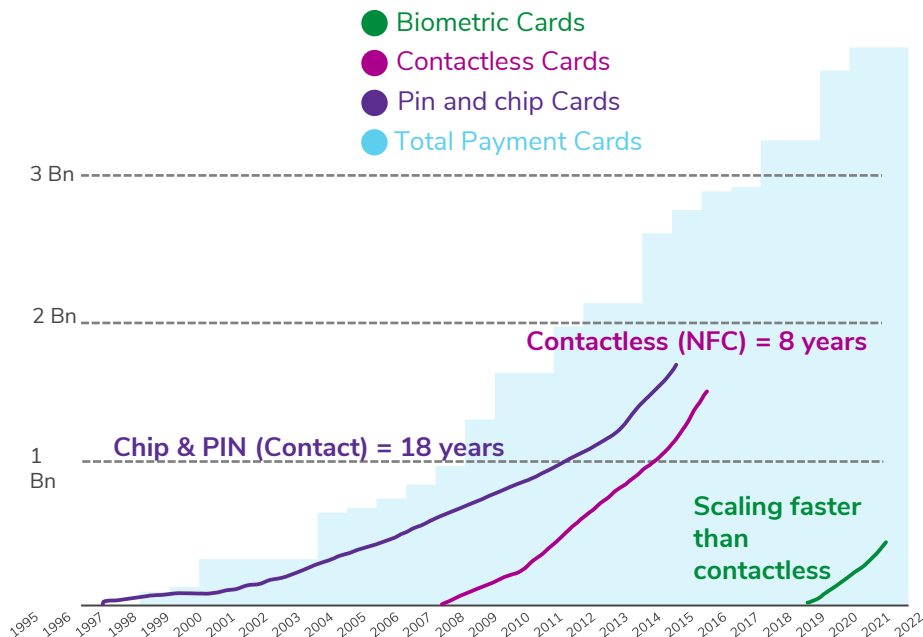
## Multi-Billion \$ SAM in payment cards alone

- Only two established competitors
- Market regulations limit threat of new low-cost competitors



# Primary Target: Biometric Payment Cards

Yearly Issuance of Payment Card Types



## 2021: A Market Inflection Point

- Payment Infrastructure Already in Place
- Standards established and certifications in place
- Banks and issuers launching:
  - Started with BNP Paribas in 2021
  - Several Swedish banks launching in 2022
  - Expecting double digit bank launches globally in 2022

VISA

IDEMIA  
augmented identity

THALES

Goldpac



CRÉDIT AGRICOLE



BNP PARIBAS  
The bank for a changing world



中国建设银行  
China Construction Bank



中国银行  
BANK OF CHINA

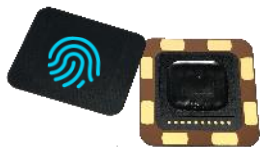
# China's Digital Currency Initiative Could Double our SAM

## China's central bank and digital currency: e-CNY

- >400 million people targeted by this central bank initiative (six participating regional banks)
- Initial deployment for Winter Olympics 2022

## Greater than \$1billion opportunity

- Digital currency requires enhanced security
- Secure off-line payment device:  
Hardware wallet



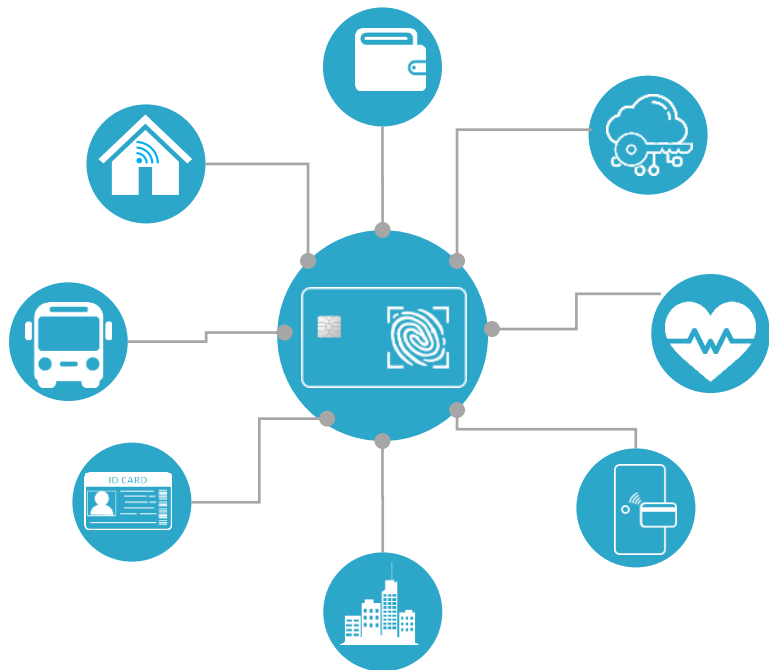
...IDEX partners engaged with all 6 regional banks;  
two bank trials announced so far...



...enabled by major Chinese partnerships



# Long-term Vision: Universal Security Device



*An off-cloud personal security device to protect a range of mobile and internet applications*

## Biometrically-enabled cards secure a range of applications

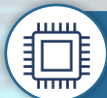
- 👤 Payment (card present and card not present)
- 👤 Cybersecurity / Data Access
- 👤 Access Control (Physical)
- 👤 Central Bank Digital Currency (CBDC) wallet
- 👤 Public Transportation / Ticketing
- 👤 Healthcare and Government ID

*Each application represents a multi-billion card opportunity*



# Competitive Advantage

# Superior Technology Drives Differentiation



**Disruptive card architecture**



**Disruptive cost**



**Performance leadership**

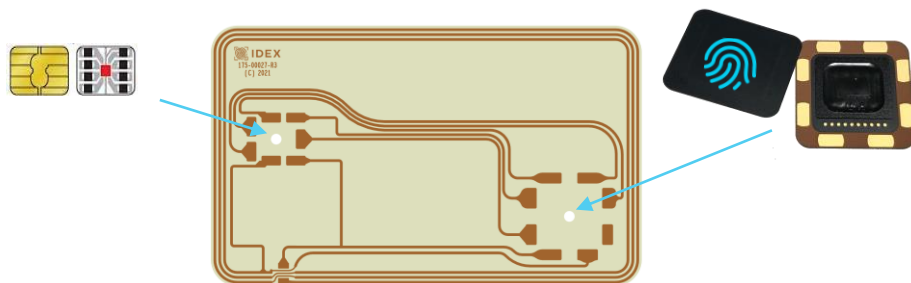


**Versatile enrollment options**



**Flexible and comprehensive solution**

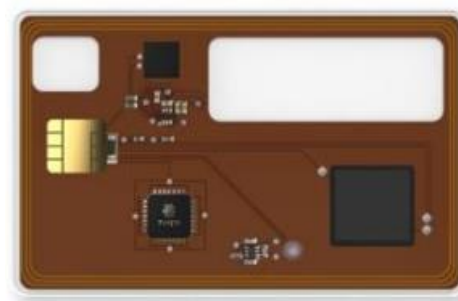
# The TrustedBio Architectural Advantage



**IDEX TrustedBio**  
Card Architecture

- ✓ Simple Bill of Materials (BOM) driven by integration:
  - TrustedBio System in Package
  - EMVco – Certified Secure Element
- ✓ **Passive** card inlay = lower cost & improved yield

Total Card Cost: ~\$5



**Commodity Sensor**  
Card Architecture

- ✗ Complex Bill of Materials required:
  - Silicon Sensor
  - MCU: biometric processor
  - PMIC: power management
- ✗ **Active** card inlay with numerous components

Total Card Cost: >\$15

# Infineon Partnership Enables Complete Solution

## Accelerates time to revenue and improves margins

Infineon SLC38  
Latest Generation  
Secure Element

IDEX  
TrustedBio Max



**Turnkey Card Design**  
Complete Solution

### Fully integrated design enables:

- Lowest cost profile of any solution
- Rapid time to market

### Game changing performance:

- Biometric process time: ~250ms
- Total transaction time (with EMV):~500ms
- Market-leading False Reject Rate
- EMV Pre-certification

*Infineon is the market share leader for security ICs globally*

# 2021: A Pivotal Year for Commercialization

**IDEMIA gaining significant market traction**



Building order backlog and mass production order to support commercial launches in 2022

**IDEX/Infineon platform with industry leading performance**



Infineon is the world's leading provider of secure elements.

6 new design wins since launch

**Network certification for IDEX solutions**



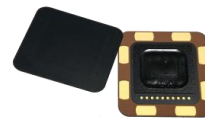
Rapid adoption of leading card makers and issuers

**Unlocking another \$1B+ SAM: e-CNY**



e-CNY biometric Hard Wallet roll-out anticipated in 2H 2022

**Staying ahead of competition**



TrustedBio MAX™: The most advanced and integrated biometric payment solution ever created

# Financial Profile



# Q4 2021 Financial Summary

## Revenue trends remain positive

- Continued growth in payments
- Sustained shipments for logical access
- First shipments for Cyber/Access control

## Sequential expense fluctuation:

- ~\$1.2M FX accounting – non-cash
- ESPP charge (non-cash)
- Achievement-based compensation accrual
- Transition from R&D to Commercial focus

## Cash balance

- \$33.8 million as of December 31

### Summary Profit & Loss Statement (\$000)

	Q4 2021	Q3 2021	Q2 2021	Q1 2021	Q4 2020
Product	\$ 787	\$ 731	\$ 696	\$ 623	\$ 593
Services	-	1	1	1	5
Total Revenue	787	732	697	624	598
Purchases, net of inventory change	430	300	304	220	178
Payroll expenses	6,280	5,044	4,682	5,101	5,206
Research and development expenses	532	659	881	608	(144)
Other operating expenses	2,142	1,729	1,763	1,713	2,157
Depreciation and amortization	428	460	460	454	439
Total Operating expenses	9,812	8,192	8,090	8,096	7,836
Loss from operations	\$ (9,025)	\$ (7,460)	\$ (7,393)	\$ (7,472)	\$ (7,238)

# Strong Operating Leverage in Long-term Model

## Potential for extraordinary revenue growth

- ✓ Expanding opportunity pipeline
- ✓ Rapidly increasing backlog and pending design wins

## Target Operating Model at Scale:

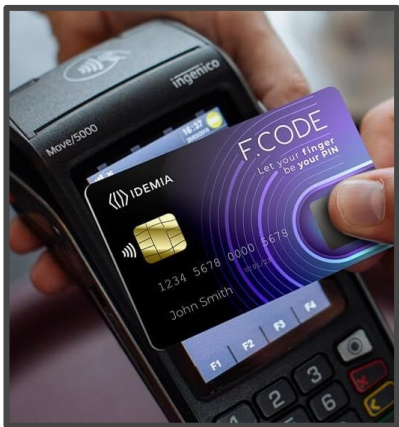
- ✓ Scalable fabless semiconductor model
- ✓ 50%+ gross margins
  - Consistent with fabless model
  - Reflects differentiation and solution cost leadership
- ✓ ~30% operating margins
- ✓ Scalable for sustained cash flow
  - Concentrated customer base limits channel expenses
  - Low CapEx and leveraged OpEx



# Summary



# IDEX Biometrics – Differentiated and Disruptive



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**Massive Addressable Market:** Payment cards, Cybersecurity / Data Access, Digital Currencies, and other adjacent markets



**Superior Biometric Performance:** Enabling a secure and seamless user experience at ground-breaking transaction speeds



**Disruptive System Costs:** Unique sensor architecture enables high integration and lowest possible cost



**Capturing a Market Inflection Point:** Commercial engagements with industry leaders driving market adoption

# Thank you!

