

# Gain a complete understanding of EMV Contact and Contactless technologies.

This masterclass offers a comprehensive understanding of EMV Contact and Contactless technologies. It examines their impact on the payments industry and organizations, as well as best practices for successful implementation.

By the end of the course, participants will be able to confidently lead EMV projects and make informed decisions about EMV adoption and operational deployment.

## Objectives

- Understand the functional architecture and security framework of EMV Contact & Contactless technologies.
- Gain insights into the cryptographic methods used in EMV transactions.
- Learn how EMV protects card-based transactions against fraud.
- Explore the evolution and future trends of EMV in the payments ecosystem.
- Develop the technical and business knowledge to lead EMV-related projects.

## Key topics

- EMV Contact & Contactless Functional Architecture.
- EMV Transaction flows and Tag-Length-Value (TLV) structures.
- Cryptography in EMV transactions.
- EMV security framework and fraud protection.
- Business considerations and implementation strategies.
- Trends in card payments: Tokenization, mobile CVM, and QR code payments.

## Audience

Business leaders, decision makers, project managers, system developers, test analysts.

## Payments

### EMV Masterclass.



## Price

Visit our website for more information about our training offer. For any specific requests, please contact us.

Duration	Location	Language
2 days (onsite) or 6 online sessions (~2.5 hours each)	Customer premises Online delivery Available worldwide	English Local language options may be available.

# Masterclass program

**On site 2 days.**

## Day 1

### M1. Introduction.

### M2. Payment industry basics.

- Getting overview of card payments: 3-party and 4-party schemes, processors, authorization, settlement.

### M3. EMV in a nutshell.

- Introduction to EMV specifications, adoption, and liability shifts.
- Distinctions between generic EMV specs and payment schemes (Visa, Mastercard, Amex, etc.)

### M4. EMV security framework.

- Security mechanisms of EMV and protection against transaction fraud.
- Understanding merchant-to-issuer liability shifts.

### M5. EMV functional architecture.

- Deep dive into POS terminal and card/mobile payment architecture.
- Introduction to EMV certification requirements.

### M6. EMV business considerations.

- Business decisions for issuers and acquirers: card personalization, issuance, and terminal setup.

### M7. EMV contact transaction flow.

- Understanding card-terminal interactions.
- Tag-Length-Value (TLV) command structure and Application Protocol Data Unit (APDU).
- Live demonstrations of real-time EMV transactions.

## Day 2

### M8. EMV contactless transaction flows.

### M9. Introduction to cryptography.

- Core cryptographic concepts and standard terminology for EMV security understanding.

### M10. Cryptography in EMV.

- Use and management of cryptographic keys in the EMV environment.
- Roles of Certification Authorities, switches, and personalization bureaus.

### M11. EMV project implementation.

- Impacts on operational setup for issuers and acquirers.
- High-level work breakdown structure for project planning.

### M12. Issuer online authorization.

- ISO 8583 messaging and how it is impacted by EMV transactions.
- Best practices for issuer authorization and EMV validation.

### M13. Trends in card payments.

- Emerging trends: tokenization, biometric verification, mobile CVM, and alternate payment methods (e.g., QR code payments).

### M14. EMV payments test.

**Online 6 sessions.**

### Session 1 | 2.5 hours

- M1. Introduction.
- M2. Payment industry basics.
- M3. EMV in a nutshell.
- M4. EMV security framework.

### Session 2 | 2.5 hours

- M5. EMV functional architecture.
- M6. EMV business considerations.

### Session 3 | 3 hours

- M7. EMV contact transaction flow.
- M8. EMV contactless transaction flows.

### Session 4 | 2.5 hours

- M9. Introduction to cryptography.
- M10. Cryptography in EMV.

### Session 5 | 2.5 hours

- M11. EMV project implementation.
- M12. Issuer online authorization.
- M13. Trends in card payments.

### Session 6 | 2.5 hours

- M14. EMV payments test.

## Contact

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EMV Masterclass

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