

A close-up photograph of a credit card. The top half shows a gold-colored EMV chip with its intricate circuitry. Below the chip, the card's surface is blue with a fine, pebbled texture. In the foreground, the numbers '174' are embossed in a raised, metallic silver font. To the right, the number '60' is partially visible but out of focus. A solid red rectangular box is positioned on the left side of the image, containing the title text in white.

EMV Contact & Contactless Payments Masterclass

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The EMV Contact & Contactless Masterclass is a two-day training course that will bring you true understanding of EMV Contact & Contactless technologies, their effects on the industry, your business and practical implementations of the underlying technology. This EMV education program is suitable for business leaders, decision makers, project managers, system developers, and testers. There is no easier way to prepare you and your employees for a role in an EMV project than the EMV Masterclass. Upon completion of the 2-day training, the attendees will be capable of making well-informed decisions related to EMV implementations and management for their organization and sufficiently skilled to steer or be assigned to EMV projects straight away.



What will you learn

- The Functional Architecture, security framework and business decisions needed to benefit from EMV Contact & Contactless implementations
- Relevant technological insights to the cryptography used in EMV
- How EMV Contact & Contactless technologies protect card-based transactions against fraud
- Evolution of EMV technologies with an emphasis on the new trends of EMV in the payments space
- Cryptographic and security algorithms used in EMV Contact & Contactless transactions



Key topics

- EMV Contact & Contactless Functional Architecture
- Tag-Length-Value (TLV)
- EMV Contact & Contactless Transaction Flows
- Cryptography in EMV Contact & Contactless payments



Who should attend?

- Business leaders
- Decision makers
- Project managers
- System developers
- Test analysts



Agenda

Payment Industry Basics

- Basic understanding of card payment: 3 and 4-party scheme, processor, authorization, settlement, single message etc. are given a place in this easy-to-understand frame of reference.

EMV in a Nutshell

- The 'EMV in a Nutshell' presentation shows the relation between generic specifications (EMV) and scheme specifics (Visa, MasterCard, Amex etc.) is explained. We also discuss EMV adoption and liability shifts.

EMV Security Framework

- A look at the security mechanisms provided by EMV Contact & Contactless, understands the security impact of EMV Contact & Contactless migration, why the liability shifts from merchant to issuer and how EMV Contact & Contactless protects transactions against fraud.

EMV Functional Architecture

- Functional aspects of an EMV Contact & Contactless transaction, giving insights to whole architecture covering both POS terminals and Card/Mobile payments.
- Introduction of the various EMV Contact & Contactless certification requirements

EMV Transaction Flows

- In this module we will start from the basic of EMV Contact transaction, to understand how commands are structured and exchanged between cards and terminal. The attendees will learn how the hexadecimal is used, what Tag-Length-Value (TLV) command structure is, what Application Protocol Data Unit (APDU) is and how it is used. After this module, attendees will be able to understand and interpret the conversation between cards and terminals.
- Every EMV Contact or Contactless transaction follows a predefined sequence of smart card interactions – the EMV Contact / Contactless Transaction Flows. This presentation covers in detail the steps of this transaction flow, for both contact and contactless interfaces, and explains in a clear way the 'inner workings' of EMV Contact & Contactless technologies. The difference in transaction flows between different schemes is also covered. Real-time EMV-card transactions will be demoed, and professional interpretation software are used to make the link between theory and reality!

EMV Business Considerations

- This module focuses on the business decisions that both issuers and acquirers are required to make for their EMV Contact & Contactless products. Topics such as card personalization, card issuance and terminal configuration will be highlighted.

Agenda

EMV Project Implementation

- In this module the impacts of EMV Contact & Contactless implementations on the issuers and acquirers environment, setup, and operations are discussed including high level work breakdown for issuers and acquirers.

Introduction to Cryptography

- This training module familiarizes the attendees with all relevant cryptographic concepts required for understanding the EMV Contact & Contactless security architecture (see next module). Relevant cryptography methods, their related algorithms and standard terminology are covered.

Cryptography in EMV

- In this module, attendees will be shown to the use of cryptography in EMV Contact / Contactless. Effective explanations will be given for the type of keys and algorithms used in EMV Contact / Contactless transactions and for how they are managed in the wider payments' environment. The role of stakeholders such as Certification Authorities, processing switches and personalization bureaus, is explained.

Issuer Online Authorization

- ISO 8583 is the main inter-banking message specifications used in the card payment ecosystem. In this module, the attendees will learn how the ISO 8583-based protocols are impacted by EMV Contact & Contactless transactions, how the EMV data is transmitted and how the transactions are validated by the Issuer (best practices on authorization validation in issuer authorization host will be discussed).

Trends in Card Payments

- Learn about the latest developments in card payments. Key topics such as Digitization/Tokenization, new Cardholder Verification Methods (CVM) such as biometrics and mobile CVM, and Alternate Payment Methods such as Mobile Payments, to show how EMV is used over internet, and QR Code Payments will be covered in the context.

Practical Exercises

- The course is concluded with a series of exercises to be completed by the attendees. The exercises focus on both business decisions and technical transaction flows, not only in regards to EMV Contact & Contactless in particular, but also with card-based-payments in general.



General Information

Course format: Course can be delivered in-person / onsite, or online

Course duration: 2 days for onsite, or 6 sessions each is around 2.5 hrs for online (where the 2 days agenda will be split and provided upon request)

Language: English

Location: Worldwide

Registration