EMV® Contactless Kernel Specification
Frequently Asked Questions (FAQ)

1. What is EMVCo announcing?

EMVCo is developing an EMV® Contactless Kernel Specification to simplify and advance global contactless payment acceptance. Following a detailed review with EMVCo Associates in February and March 2022, the draft EMV Contactless Kernel Specification is now available on the EMVCo website for public review. EMVCo aims to release the final specification later in 2022 once feedback from the public review has been addressed and its publication is approved by the EMVCo Board of Advisors.

2. Why is EMVCo developing an EMV Contactless Kernel Specification?

EMVCo is developing an EMV Contactless Kernel Specification to address industry demand for an EMV contactless kernel that is made available in the same way as EMV Contact Chip to streamline global payment acceptance

3. What is a contactless kernel?

A contactless kernel provides a set of functions for software in the payment acceptance device to process contactless transactions for a specific payment system. Payment acceptance devices include point-of-sale (POS) terminals, ATMs, transit and tap-to-mobile devices.

Currently, there are more than 20 different payment system contactless kernels in use around the world.

Kernel and device vendors provide products based on these kernels that enable merchants to accept contactless payments.

4. What does the EMV Contactless Kernel Specification provide the industry that it does not currently have?

The current multi-kernel environment for contactless is complex for all industry stakeholders, including merchants and hardware terminal vendors to support and maintain.

The EMV Contactless Kernel Specification will provide an alternative that makes it possible, after a transition period, for stakeholders to use an EMV kernel for contactless acceptance. This will create opportunities for merchants, hardware providers and

payment systems to over time simplify and broaden acceptance, reduce costs, and improve roll-out speed and time to market.

By incorporating new security and payment technologies, the EMV Contactless Kernel Specification provides a strong foundation for delivering secure contactless payments into the future.

5. **Will the EMV Contactless Kernel Specification be managed and licensed in the same way as the EMV Contact Kernel?**

   Yes, like the EMV Contact Chip Specification, the EMV Contactless Kernel Specification will be owned and managed by EMVCo and licensed by EMVCo royalty free.

   EMVCo will also provide approval testing for the EMV Contactless Kernel Specification through EMVCo accredited and audited laboratories, using EMVCo qualified test tools, exactly as the payment industry has relied on EMVCo to do for contact chip for over 25 years. Additionally, the EMVCo website will publish the list of all approved EMV contactless kernels that are able to pass EMVCo's robust testing process.

6. **What are key requirements/features of the Specification?**

   The specification incorporates advanced security and technology features to help protect against future threats and support the next generation of contactless and mobile payments, including the use of Secure Channel for privacy protection of sensitive data, Elliptic Curve Cryptography (ECC) for card authentication, biometric and mobile card verification methods, an architecture that supports physical or cloud implementations, and on-card data storage.

7. **How is the EMV Contactless Kernel Specification different than existing EMV Specifications for contactless kernels?**

   Currently, each global payment system has its own specification for a contactless kernel. EMVCo publishes these individual specifications on the EMVCo website as C-X Book Specifications.

   With the EMV Contactless Kernel Specification, EMVCo for the first time will develop and maintain an EMV Specification for a contactless kernel, under the same terms as the EMV Contact Chip Specification.

8. **Will existing contactless specifications be replaced by the EMV Contactless Kernel Specification?**

It will be up to each respective payment system to determine whether they continue using their own kernel specification or over time replace it with the EMV Contactless Kernel Specification. Payment systems that use the EMV Contactless Kernel Specification will also determine their own transition timeline for supporting the EMV Contactless Kernel Specification. EMVCo will continue to maintain the C-X Book Specifications accordingly on the EMVCo website.

9. What are the key benefits of the EMV Contactless Kernel Specification for the payments industry?

The EMV Contactless Kernel Specification aims to provide the industry with an EMV contactless kernel that can be licensed directly from EMVCo under the same terms as the EMV Contact Chip Specification.

This may over time create new opportunities for merchants, POS and other hardware system providers and other payment industry stakeholders to simplify acceptance, reduce costs, and improve roll out speed and time to market.

10. What is the process for developing the EMV Contactless Kernel Specification?

As with all EMV Specifications, the development of the EMV Contactless Kernel Specification is shaped by the needs of the payments industry.

EMVCo has engaged extensively with EMVCo stakeholders and the wider payments industry to understand marketplace needs and determine the best approach for a contactless kernel specification. This included a feasibility study, conducted by two independent consulting research firms.

The development process has included a number of consultative meetings with EMVCo Associates, a request for comments from EMVCo Associates, and a public review. The Board of Advisors will review the final specification and vote on whether to approve its publication.

11. Will the use of the EMV Contactless Kernel Specification be mandatory?

No. EMVCo does not mandate the use of any EMV specification.

12. Will the global payment systems adopt the EMV Contactless Kernel Specification?

This is a decision for each payment system individually, in which EMVCo is not involved. Any questions on this topic should be directed to the specific payment system.

13. What will the transition process involve for industry stakeholders to begin using the EMV Contactless Kernel?

The EMV Contactless Kernel Specification will be available for technology providers to implement once it is published by EMVCo.

Additionally, EMVCo will provide approval testing for the EMV Contactless Kernel Specification through EMVCo accredited and audited laboratories, using EMVCo qualified test tools, exactly as the payment industry has relied on EMVCo to do for EMV Contact Chip for over 25 years. EMVCo will announce the availability of approval testing for the EMV contactless kernel at a later date.

If a payment system chooses to adopt the EMV Contactless Kernel Specification, they will manage and communicate transition plans for their respective kernel specifications. Any questions on this topic should be directed to the specific payment system.

14. Will EMVCo provide testing/ approvals for the EMV Contactless Kernel?

EMVCo will provide approval testing for the EMV Contactless Kernel Specification through EMVCo accredited and audited laboratories, using EMVCo qualified test tools, exactly as the payment industry has relied on EMVCo to do for EMV Contact Chip for over 25 years. Additionally, the EMVCo website will publish the list of all approved EMV contactless kernels that are able to pass EMVCo's robust testing process.

EMVCo will announce the availability of approval testing for the EMV contactless kernel at a later date.