

“EmvXCE from CreditCall - the world’s first Windows CE EMV Level 2 Kernel to gain global EMVCo certification.”



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ATM EMV software applications

Background

In 2003, CreditCall was contracted by US ATM manufacturer Triton to provide a solution that would enable EMV Level 2 functionality to be implemented on two different ranges of ATM. The first was Triton’s highly successful 9700 and the second was the newly released Windows CE based RL5000.

The challenge

As both of CreditCall’s EMV Level 2 Kernels are based around the same core technology, Triton’s requirements for there to be a common solution could be met, despite the platforms being very different. The 9700 range of ATMs are based on a very stable platform that has been deployed for some time. As there are almost 100,000 of these machines world-wide, ensuring that this machine could be upgraded to support the required EMV functionality was critically important to Triton.

Solution - Triton 9700 platform

Whilst the 9700 platform does not have the processing power of the RL range, it has sufficient capability to run EMV, particularly as ATMs are classified as online only terminals. This means that support for Data Authentication is not required and the processor intensive RSA recoveries required by this function did not need to be implemented.

The EMV Kernel implemented on this platform was CreditCall’s ANSI C EMV Level 2 library EMV.LIB which provided a relatively simple method of adding the required functionality. The integration work was completed jointly between Triton and CreditCall on schedule with CreditCall completing pre-certification prior to the solution being submitted for EMVCo testing with TUV in the UK. The 9700 succeeded in passing its Level 2 certification first time.



Solution - Triton RL5000

The EMV Kernel implemented on the RL was EmvXCE. This was the first Windows CE Kernel to gain global certification. The RL uses the Intel XScale microprocessor which provides ample computing power to run an EMV Level 2 Kernel. Whilst this machine is more than capable of completing the RSA recoveries required by Data Authentication, as they are not required they do not have to be supported. This also removes the need for key management. Again this Kernel went through pre-certification at CreditCall’s premises prior to being submitted for EMVCo testing with TUV, and also achieved a first time pass.