Challenge
This digital printing manufacturer needed to upgrade its device and data communications security across its line of midrange printers. The company’s customers were concerned about the potential privacy breaches that could occur as a result of a cyber attack on printers that could expose confidential data and even copies of documents. With malware deployed on a printer, a hacker could simply read everything that was copied. The company's financial and legal customers, in particular, were concerned and demanded that the printers be NIST 140-2 validated, a high standard for cybersecurity developed by the National Institute of Standards and Technology.

While the global printer manufacturer had been using Mocana’s IoT Security Platform to secure the printers’ IPsec VPN communications, the company was using OpenSSL, an open source SSL library. The manufacturer was concerned because OpenSSL’s RSA key generation was not FIPS compliant. Because OpenSSL’s FIPS validation has not kept pace with FIPS 186-4 RSA key generation requirements, the manufacturer needed to find a solution to replace OpenSSL.

Additionally, the digital printing manufacturer was evaluating using Trusted Platform Module (TPM) secure chips embedded on the microprocessor boards to add a higher level of hardware-based embedded security. They needed a platform and a partner that could provide a path to support advanced cybersecurity technologies like TPM.

Mocana Solution
This manufacturer selected Mocana’s IoT Security Platform, an embedded security software solution optimized for use in industrial control and IoT devices. The software is designed to compile into the firmware of the printer. The Mocana solution provides the manufacturer with:

- FIPS 140-2 Level 1 validated crypto engine
- Compliance with FIPS 186-4 RSA key generation requirements
- Support for secure SSL and IPsec printer communications
- Path to use a common security platform to add new security functionality and support for TPM as the gold standard as a root of trust.

Impact
The global manufacturer was able to harden their printers with stronger crypto and remove OpenSSL, reducing the risks associated with open source vulnerabilities. The company’s product marketing team could communicate how their midrange printers were able to meet FIPS 140-2 and address customer concerns about data privacy and security. The company was able to provide a differentiated security value proposition for its financial and government customers.

About the Global Document Technology Manufacturer
This global manufacturer is a provider of document technologies, services and software. With more than $10 billion in revenue and 30,000 employees, the company manufactures printers, photocopiers and multi-function peripherals (MFP). The highly innovative company provides a broad set of solutions for enterprises of all sizes, governments and graphics communications providers.