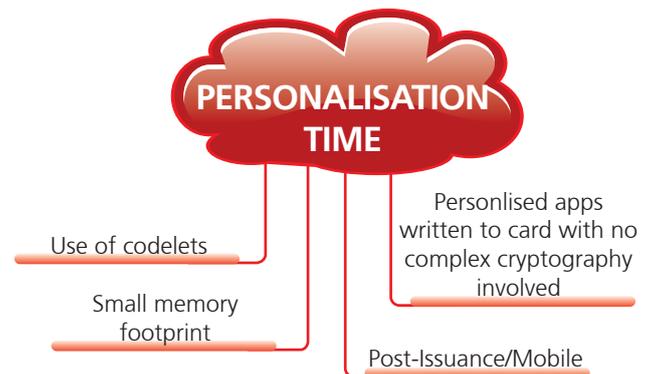


MULTOS provides the speed of performance and time-to-market demanded by today's markets.

PERSONALISATION

MULTOS is fast to personalise, regardless of where the process takes place.

a) In many instances, the application code is in a codelet, forming part of the original mask, reducing the amount of data required to load. b) Applications have much smaller footprint than other environments, thanks to the use of the 'C' programming language, or the dedicated low-level MULTOS language, coupled with efficient compiler tools. c) The application loading mechanism does not require complex cryptographic exchanges with an HSM because all verification happens on the device itself. Translating this into a typical bureau situation means that just one simple HSM call is required. Furthermore, for post, instant and mobile issuance an HSM becomes completely redundant. d) MULTOS devices also support high speed personalisation, further reducing the time "under the head".



What does this really mean?

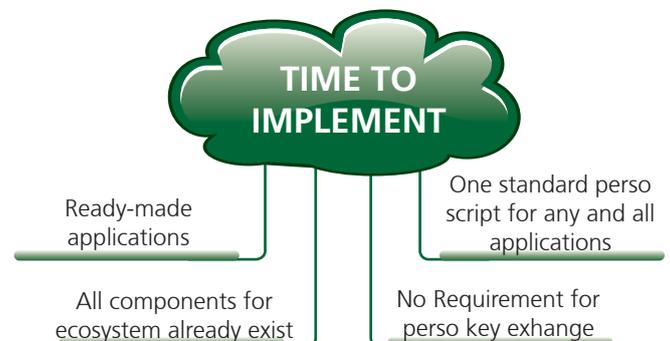
MULTOS is optimised for perso bureau operations. The simple process and integral chip speed all contribute to rapid, efficient – and therefore cost-effective – personalisation.

Quick, efficient, error-free personalisation at the Bureau reduces both bureau overheads, while increasing profitability and service to the issuer. A smaller footprint not only reduces turnaround time during personalisation, but the issuer has a smaller memory real estate requirement. This in turn reduces the size, and ultimately the cost of the chip they need to buy.

TIME TO MARKET (IMPLEMENTATION)

MULTOS enable accelerated time-to-market for implementations

With the complete suite of fully approved applications for all global and regional payment schemes, National ID, transit, loyalty, PKI, e-cash and many more, MULTOS can offer a vast array of off-the-shelf applications ready to be dropped into an implementation. This implementation-ready status also extends to all other components of the issuance lifecycle. Every aspect of the Scheme; from data preparation through to card manufacture and application development already exist, and are available from a wide range of vendors and consortium members.



It is not only the efficient supply chain that can accelerate your project plan. The MULTOS technology itself also has speed as one of the core tenets. The use of asymmetric cryptography removes delays caused by multi-party key distribution – no need for the cost, time and management of key exchanges. In addition, the requirement for just a single script in personalisation greatly reduces delays in the personalisation bureau for script development, testing, rewrite and implementation; in MULTOS one size fits all, regardless of the data being loaded.

What does this really mean?

It is entirely possible to implement MULTOS using tried and tested “mix and match” solutions, and leveraging the expertise from a wide range of suppliers, vendors and service providers in the industry, all with deep experience of implementing MULTOS in a global marketplace.

Can you give me an analogy?

Imagine a fast food franchise owner, everything has already been taken care many times in the past, with a range of suppliers; from the store setup, to the kitchen, to the recipes, to the menu and the customer experience. Time to market is important.

EXECUTION IS FAST

Run-time performance of MULTOS chips is optimised for speed.

Unlike any other open platform, MULTOS was designed from the ground up to run on compact secure micro-controllers. The MULTOS virtual machine is unique. Calls to underlying chip functionality are made in the most efficient way possible, eliminating routing through any unnecessary layers. The compiler complements this by generating highly optimised code that can execute quickly in the MULTOS VM.



MULTOS OS implementations remain at the forefront of the industry, balancing security with fast performance, and are based on the very latest products from IC manufacturers.

What does this really mean?

MULTOS products exceed the requirements set out for security and performance, whether they include contact, contactless or mobile.