



CONTACTLESS on MULTOS

*The Contactless solution for Card and
Mobile Payments and ID*

Easy-to-use Contactless Technology

MULTOS, the world's leading platform for EMV, identity and data security, is available in a range of contactless and dual-interface options. Multos International has combined the renowned security and flexibility of MULTOS with the speed and convenience of contactless. Choose from a range of memory sizes from 8K to 160K, a range of formats in dual-interface, contactless-only, and new formats to address mobile payments. Various product configurations include the latest contactless EMV payment applications pre-loaded in memory.

And since this is MULTOS, you can be sure that introducing a dual-interface product either as a new project or in addition to an existing contact card issuing system, could not be easier. All the support, personalization and manufacturing capability is standard across the range of product options.

Extensive Experience

Our experience in the contactless EMV market includes, developing leading solutions for all major payment schemes and working with dozens of card manufacturers globally. Multos International has a proven track record of providing support for numerous different product options, including: card format (full size/1/2 size antenna), antenna inlay options, contactless stickers and other new form-factors coming soon.

Contactless for e-Government Programs

The MULTOS contactless platform is perfectly suited to the high-security requirements of government programs. The contactless interface offers additional flexibility without compromising security. MULTOS is already in use in government programs including e-health, e-ID, e-passport and many more.

Contactless Payment

Our contactless products have been approved by the majority of card vendors offering approved cards for global payment schemes, including MasterCard PayPass and Visa PayWave. Our products are available in a wide range of contactless format choices and we are ready to support our card manufacturer partners through the certification process. Our development expertise in contactless EMV specifications and applications allow us to offer superior technical support to our customers.

In addition to an ever-expanding range of products for MasterCard PayPass (including M/Chip Advance) and Visa PayWave, we are also bringing contactless MULTOS solutions to other markets, including qPBOC, D-PAS D/I, Whitelabel contactless EMV and others. Contact us for product availability.

Features

Family Compatibility with MULTOS

Features of MULTOS, the industry's leading smartcard platform for functionality, flexibility and security, remain standard.

- » Memory firewalls for applications and data
- » Secure application management (even post-issuance)
- » Standard MULTOS personalization
- » The easiest and most flexible deployment options; including for mobile applications

Applications

- » Multos International has included a selection of popular applications pre-loaded in the ROM memory. This saves valuable EEPROM memory and reduces personalisation time and cost.
- » Use existing MULTOS applications or develop new ones using the same development tools (applications can be developed in low-level MEL, or industry-standard 'C' or Java)

Contactless Interface

- » Contactless operation using industry standard ISO14443 — choose Type A or Type B
- » MiFare® Classic 1-Kbyte or 4Kbyte Emulation (upon request)
- » Applications can execute on either the standard ISO7816 contact or the ISO14443 contactless interface.

Product Options

- » Available in dual-interface or contactless-only. Choose from a range of different packaging options (contact your sales representative for the latest package availability)
- » Memory options from 8K to 160k, for user data and applications
- » Now also available on the latest Infineon 77-series and 78-series chips, offering the most advanced and highest security product range on the market
- » Latest contactless applications available, with a range of EMV contactless options to choose from

Technical Specifications

ML1 Family	ML4 Family	ML3 Family
Target Markets		
EMV Contactless	EMV Contactless	Identity/e-Gov/ e-Health, e-Passport
CPU		
SLE66CLX Series	SLE77CLFX Series	SLE78CLX Series
Memory		
Total EEPROM: 12K, 20K, 36K, 80K	Total EEPROM: 12K, 36K, 80K, 120K	Total EEPROM: 36K, 80K, 160K
Input/Output		
Contact protocol: T=0, 1; PPS; speed up to 223kbps		
Contactless Protocol: Choice of ISO14443 Type A or Type B; Data Rate: 106, 212, 424, 848kbps		
MiFare® Classic 1-Kbyte or 4-Kbyte emulation (optional, product configuration dependent)		
Applications pre-loaded		
M/Chip Advance, MICA (M/Chip4, PayPass M/Chip)		
qVSDC/VSDC/PayWave		
Whitelabel EMV contactless		
PBOC/qPBOC/MSD credit/debit, eCash		
...and other regional applications, such as Interac Flash and others (information available on request)		
<i>*Check for product options and configurations</i>		
Target Market Application		
Contactless payments: (e.g., MasterCard PayPass and Visa payWave, China Union Pay qPBOC/MSD/eCash, D-PAS D/I, etc)		
e-Government: contactless Identity, e-Health, e-Passport		
Specific applications such as: contactless multi-function transit; secure element & mobile NFC payments		
<i>Notes: Specifications and functionality may change please check for availability</i>		

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