

ACE 2000 Dual Interface Card

Austria Card's ACE 2000 Dual Interface Product Line

The power of contactless payment

ACE 2000 Dual Interface stands for Austria Card's EMV 2000 compliant smart card product range supporting both contactless and contact interfaces. Featuring high-speed contactless payment transactions, ACE 2000 Dual Interface implements the latest MasterCard® Worldwide and Visa International EMV specifications and supports a wide set of EMV functionality for contactless and contact payment transactions.

In addition to the EMV functionality, ACE 2000 Dual Interface offers an on-card ISO/IEC 7816-4 file system with comprehensive security mechanisms, which can be used for the implementation of various customer add-on applications.



Being a high-end payment card, ACE 2000 Dual Interface can accommodate multiple contactless and contact-only EMV and ISO/IEC 7816 applications for payment, authentication and customer-specific programs.

The ACE 2000 Dual Interface product line is available in the following variants:

Versions and Variants

- ACE-M 2000 Dual Interface according to MasterCard's EMV specifications
- ACE-V 2000 Dual Interface according to Visa's EMV specifications
- ACE-L 2000 Dual Interface for customised add-on non-payment applications

ACE 2000 Dual Interface Product Range

ACE 2000 Dual Interface includes ACE products conforming to current MasterCard EMV and Visa specifications:

- ACE-M 2000 Dual Interface conforms to MasterCard *PayPass* – M/Chip v.1.3 and M/Chip Select 4 Version 1.1
- ACE-V 2000 Dual Interface conforms to Visa Contactless Payment Specification v.2.0.2 Including Additions and Clarifications 3.0 and VIS 1.4.0.
- ACE-L 2000 Dual Interface supports not only a generic ISO/IEC 7816-4 functionality but also a MIFARE® Classic emulation. ACE-L 2000 Dual Interface can be combined with ACE-M and ACE-V 2000 Dual Interface.

Austria Card is certified for the production and personalisation of all MasterCard and Visa branded products.

MasterCard *PayPass*™ Support

ACE-M 2000 Dual Interface is implemented in full compliance to MasterCard *PayPass*- M/Chip specification and supports both

- MasterCard *PayPass* – M/Chip profile, and
- MasterCard *PayPass* – Mag Stripe profile (including CVV3)

ACE-M 2000 Dual Interface is designed for true dual interface cards. It features a complete M/Chip 4 Select application implementation with the following core functions:

- Combined DDA and Generate Application Cryptogram processing (CDA)
- Dynamic Data Authentication (DDA)
- Static Data Authentication (SDA)
- For the contact interface: both enciphered and plaintext offline PIN verification. A distinct RSA key can be used for the PIN encryption
- Both MasterCard and EMV CSK session key derivation methods as per M/Chip 4 Version 1.1b
- Card-issuer authentication
- Issuer script processing
- Transaction log

Visa *payWave*™ support

ACE-V 2000 Dual Interface is implemented fully compliant with all applicable Visa Contactless Payment Specifications. It supports the following application paths:

- MSD
- qVSDC and Streamlined Online-only qVSDC
- Contactless VSDC

Security and functionality of contactless transactions are complemented by the support of

- Fast DDA (fDDA)
- Dynamic CVV (dCVV)
- Cryptogram Version 17
- Card Risk Management checks

ACE-V 2000 Dual Interface supports a complete set of core functions defined in VIS 1.4.0 contact and contactless VSDC transactions:

- ☞ Combined DDA and Generate Application Cryptogram processing (CDA)
- ☞ Dynamic Data Authentication (DDA)
- ☞ Static Data Authentication (SDA)
- ☞ Contact interface: enciphered and plaintext offline PIN verification; contactless interface: enciphered offline PIN verification. A distinct RSA key can be used for the PIN encryption
- ☞ Visa Low Value Payment (VLP)
- ☞ Issuer Discretionary Data (IDD) option
- ☞ Card-issuer authentication
- ☞ Issuer script processing
- ☞ Transaction log

MIFARE® Classic Emulation

ACE 2000 Dual Interface supports

- ☞ MIFARE Classic 1K (default option) and
- ☞ MIFARE Classic 4K emulation

This enables the swift integration into an existing contactless environment based on MIFARE® technology.

Personalisation Solution

Austria Card offers a ready-to-use personalisation solution for the ACE 2000 Dual Interface product range. This solution is

- ☞ based on the Datacard SCPM or APM architecture, and
- ☞ also available for other hardware and software personalisation platforms, implemented by a variety of Austria Card partners

Alternatively, ACE 2000 Dual Interface can be personalised using the CPS (EMV Card Personalisation Specifications).

Due to the open structure of this concept, ACE cards can be personalised “off-the-shelf” and in most cases using existing infrastructure and equipment.

Implementation of smart card projects and personalisation service is complex and requires solid experience. Austria Card offers tailored consultation and integration services for member banks and personalisation service bureaus.

Information and Contact

Austria Card GmbH
A-1230 Vienna | Lamezanstraße 4-8
T +43 1 610 65-0 | F +43 1 610 65-701
sales@austriacard.at | www.austriacard.at