

Australian Standard[®]

**Electronic funds transfer—
Requirements for interfaces**

**Part 6.7: Key management—
Transaction keys—Derived unique key
per transaction (DUKPT)**

STANDARDS
Australia



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- Australian Bankers Association
- Australian Industry Group
- Australian Payments Clearing Association
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PREFACE

This Standard was prepared by the Standards Australia Committee IT-005, Financial Transaction Systems.

This Standard is Part 6.7 of the following series:

AS

- 2805 Electronic funds transfer—Requirements for interfaces
- 2805.1 Part 1: Communications
- 2805.2 Part 2: Message structures, format and content
- 2805.3.1 Part 3.1: PIN management and security—General
- 2805.3.2 Part 3.2: PIN management and security—Offline
- 2805.4.1 Part 4.1: Message authentication—Mechanism using a block cipher
- 2805.4.2 Part 4.2: Message authentication—Mechanisms using a hash-function
- 2805.5.1 Part 5.1: Ciphers—Data encipherment algorithm 1 (DEA 1)
- 2805.5.2 Part 5.2: Ciphers—Modes of operation for an n -bit block cipher
- 2805.5.3 Part 5.3: Ciphers—Data encipherment algorithm 2 (DEA 2)
- 2805.5.4 Part 5.4: Ciphers—Data encipherment algorithm 3 (DEA 3) and related techniques
- 2805.6.1.1 Part 6.1.1: Key management—Principles
- 2805.6.1.2 Part 6.1.2: Key management—Symmetric ciphers—their key management and life cycle
- 2805.6.1.4 Part 6.1.4: Key management—Asymmetric crypto systems—Key management and life cycle
- 2805.6.2 Part 6.2: Key management—Transaction keys
- 2805.6.3 Part 6.3: Key management—Session keys—Node to node
- 2805.6.4 Part 6.4: Key management—Session keys—Terminal to acquirer
- 2805.6.5.1 Part 6.5.1: Key management—TCU initialization—Principles
- 2805.6.5.2 Part 6.5.2: Key management—TCU initialization—Symmetric
- 2805.6.5.3 Part 6.5.3: Key management—TCU initialization—Asymmetric
- 2805.6.6 Part 6.6: Key management—Session keys—Node to node with KEK replacement
- 2805.6.7 Part 6.7: Key management—Transaction keys—Derived unique key per transaction (DUKPT) (this Standard)
- 2805.9 Part 9: Privacy of communications
- 2805.10.1 Part 10.1: File transfer integrity validation
- 2805.10.2 Part 10.2: Secure file transfer (retail)
- 2805.11 Part 11: Card parameter table
- 2805.12.1 Part 12.1: Message content—Structure and format
- 2805.12.2 Part 12.2: Application and registration procedures for Institution Identification Codes (IIC)
- 2805.12.3 Part 12.3: Maintenance procedures for messages, data elements and code values
- 2805.13.1 Part 13.1: Secure hash functions—General
- 2805.13.2 Part 13.2: Secure hash functions—MD5
- 2805.13.3 Part 13.3: Secure hash functions—SHA-1
- 2805.14.1 Part 14.1: Secure cryptographic devices (retail)—Concepts, requirements and evaluation methods
- 2805.14.2 Part 14.2: Secure cryptographic devices (retail)—Security compliance checklists for devices used in financial transactions
- 2805.16 Part 16: Merchant category codes

In the AS 2805 series of Standards, definitions are specific to the Part in which they appear.

Acknowledgment is gratefully made to the American National Standards Institute for permission to reproduce certain extracts from the ANSI X9.24-1:2009 (Retail Financial Services Symmetric Key Management Part 1: Using Symmetric Techniques).

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard whereas an 'informative' appendix is for information and guidance only.

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STANDARDS AUSTRALIA

Australian Standard

Electronic funds transfer—Requirements for interfaces

Part 6.7: Key management—Transaction keys—Derived unique key per transaction (DUKPT)

1 SCOPE

This Standard specifies—

- (a) a method of key management for keys used in the authentication, encipherment and decipherment of electronic messages relating to financial transactions using transaction keys;
- (b) key identification techniques; and
- (c) the data elements necessary for the transfer of security or key management information.

NOTE: Principles concerning key management and physical security are dealt with in AS 2805.6.1.1.

2 APPLICATION

This Standard may be adopted in all situations where a secure terminal to acquirer dialogue is desired in conjunction with minimally tamper resistant devices with tamper evidence characteristics as specified in AS 2805.14.1.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

2805	Electronic funds transfer—Requirements for interfaces
2805.3	Part 3: PIN management and security (all parts)
2805.4	Part 4: Message authentication
2805.5.4	Part 5.4: Ciphers—Data encipherment algorithm 3 (DEA 3) and related techniques
2805.6.1.1	Part 6.1.1: Key management—Principles
2805.9	Part 9: Privacy of communications
2805.14.1	Part 14.1: Secure cryptographic devices (retail)—Concepts, requirements and evaluation methods

4 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

4.1 Acquirer

The institution, or its agent, that acquires the financial data relating to the transaction from the card acceptor and initiates that data into an interchange system.

4.2 Acquirer network

A network of one or more processing centres, which may represent one or more acquirers or card issuers or both.