

DIN EN ISO 14906:2023-04 (E)

Electronic fee collection - Application interface definition for dedicated short-range communication (ISO 14906:2022); English version EN ISO 14906:2023

Contents		Page
Foreword.....		v
Introduction.....		vi
1	Scope	1
2	Normative references	2
3	Terms and definitions	2
4	Abbreviated terms	4
5	EFC application interface architecture	6
5.1	Relation to the DSRC communication architecture.....	6
5.2	Usage of DSRC application layer by the EFC application interface.....	8
5.3	Addressing of EFC attributes.....	8
5.3.1	Basic mechanism.....	8
5.3.2	Role of the Element Identifier (EID).....	9
5.3.3	Multiple instances of Attributes.....	9
5.4	Addressing of components.....	10
6	EFC transaction model	11
6.1	General.....	11
6.2	Initialisation phase.....	11
6.2.1	Overview.....	11
6.2.2	EFC application-specific contents of the BST.....	12
6.2.3	EFC application-specific contents of the VST.....	13
6.3	Transaction phase.....	14
7	EFC functions	15
7.1	Overview and general concepts.....	15
7.1.1	EFC functions and service primitives.....	15
7.1.2	Overview of EFC functions.....	16
7.1.3	Handling of multiple instances.....	17
7.1.4	Security.....	19
7.2	EFC functions.....	22
7.2.1	General.....	22
7.2.2	GET_STAMPED.....	22
7.2.3	SET_STAMPED.....	23
7.2.4	GET_SECURE.....	24
7.2.5	SET_SECURE.....	25
7.2.6	GET_INSTANCE.....	25
7.2.7	SET_INSTANCE.....	26
7.2.8	GET_NONCE.....	27
7.2.9	SET_NONCE.....	28
7.2.10	TRANSFER_CHANNEL.....	28
7.2.11	COPY.....	29
7.2.12	SET_MMI.....	30
7.2.13	SUBTRACT.....	30
7.2.14	ADD.....	31
7.2.15	DEBIT.....	32
7.2.16	CREDIT.....	33
7.2.17	ECHO.....	34

8	EFC Attributes	34
8.1	General.....	34
8.2	Data group contract.....	36
8.3	Data group receipt.....	39
8.4	Data group vehicle.....	45
8.5	Data group equipment.....	50
8.6	Data group driver.....	52
8.7	Data group payment.....	54
	Annex A (normative) EFC data type specifications	56
	Annex B (informative) CARDME transaction	57
	Annex C (informative) Examples of EFC transaction types	89
	Annex D (informative) Mapping table from LatinAlphabetNo2, LatinCyrillicAlphabet, LatinGreekAlphabet and LatinAlphabetNo10 to LatinAlphabetNo1	101
	Annex E (informative) Mapping table between EFC Vehicledata attribute and European registration certificate	102
	Annex F (normative) Security calculations for DES	105
	Annex G (informative) Security computation examples for DES	111
	Annex H (normative) Security calculations for AES	114
	Annex I (informative) Security computation examples for AES	119
	Bibliography	121