

GBIC Approval Scheme

Payment Scheme: girocard – TA 7.2

Detailed Approval Requirements for girocard Components

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1 GBIC Agreement

Nr.	Subject	Document Title	Status	Approval Period
[gc_VB]	girocard banks agreement	Vereinbarung über ein institutsübergreifendes System zur bargeldlosen Zahlung an automatisierten Kassen (girocard-System), Stand: Juli 2019	V _{GBIV} ¹	From: 25.06.2020 Up to ² : unlimited
[gc_VT_05/21]	girocard provider contract	Vertrag über die Zulassung als Netzbetreiber im girocard-System der deutschen Kreditwirtschaft, Stand: 12.05.2021	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[gc_B_07/20]	girocard retail service conditions	Händlerbedingungen Bedingungen für die Teilnahme am girocard-System der deutschen Kreditwirtschaft, Stand: 03.07.2020	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[Common.S ECC AG]	Consortium Agreement UKF - GBIC	Common Security Evaluation & Certification Consortium (CSEC-C), Consortium Agreement, mit Anlagen, Version 0.9, Stand: 08.06.2015	V _{GBIC} V _{UKF}	From: 01.02.2017 Up to : unlimited

¹ V = Verified/effective (verabschiedet); A = Draft (in Arbeit); O = Open (offen); I = Info

² The approval of the approval object according to the referenced agreement/ specification is possible until a specific date "X" or, if no specific date "X" is mentioned, the approval period is "unlimited". Then "unlimited" is set for "Up to". Please pay attention to the information of further migration dates.

2 Mapping of Roles to Institutions

The following table shows the mapping of the roles to institutions for the approval process.

Role	Institution
Payment scheme	girocard
Approval Council	GBIC Arbeitsstab "Kartengestützte Zahlungssysteme"
Approval Office	VÖB
Technical Committee	GBIC Arbeitskreis "Zulassung"
Security Committee	GBIC Arbeitsstab "Sicherheitsfragen"
CC Certification	Common.SECC Certification Body
CFCF Certification	CFCF Certification Body
Testing Laboratories	CTC advanced, VÖB-ZVD
Security Evaluators	BrightSight, Deutsche Telekom Security, SRC, TÜVIT

Table 1: Mapping of Roles to Institutions

3 Approval Object

The approval objects within the girocard-system are the “girocard network” and the “girocard-terminal” (s. chapter 5.2 “GBIC Approval Scheme”).

3.1 Description

The approval object “girocard network” represents a system consisting of

- a) the host of the network provider,
- b) the hardware and software of the network provider Host Security Module,
- c) the operating environment of the network provider and
- d) girocard terminals with PIN entry keypad or without PIN entry keypad

covering the technical appendix of the girocard contract between GBIC and the network provider to carry out girocard transactions. The operation of girocard terminals depends on the signed contract (s. above, chapter 1 “GBIC Agreement”).

According to the network provider contract, the network provider has to be approved in order to start his operation. The approval of the network provider cannot be transferred to other companies.

The approval object “girocard terminal” with or without PIN entry keypad represents a device of software and hardware to carry out girocard transactions only.

The approval of a “girocard terminal” is issued as a GBIC type approval.

4 Component “Host of the network provider”

4.1 Functions and characteristics

Functions		Combination
girocard EMV contact based		M
girocard EMV contactless		O
Processing in defined cases of emergency, incl. configuration (Notfallverarbeitung, inkl. Konfiguration)		M
Application of the terminal is configurable (konfigurierbares Terminal) according to [TM DC]		M
Cashback		O
Manual Cancellation (Manuelles Storno)		O
Pre-Authorisation inclusive Partial-Reversal (Reservierung Maximalbetrag einschließlich Teil-Storno)		O
Rule of fee and prefix for transactions abroad (Entgeltregel und Präfixe für Ausland-Transaktionen)		O
Last two extensions of clearingdata sets (Letzten beiden Erweiterungsteile in den Lastschriften)		O
Partial-Reversal of transactions with fixed amount (Teil-Storno bei feststehendem Betrag)		O
PAC/MAC algorithms (PAC/MAC-Verfahren)		M
	Triple-DES (TDES)	M
	Advanced Encryption Standard (AES)	O
	OPT with TDES	O
	„Online-Personalisierung von Terminal-HSMs (OPT)“	M ³
	"Online-Personalisierung von Terminal-HSMs (OPT)" Pre-Initialisation, Decommissioning (OPT: Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme)	M ³
	"Online-Personalisierung von Terminal-HSMs (OPT)" Online-Personalisation of Terminals Registration, Sign-Out (OPT: Online-Registrierung und Online-Abmeldung von Terminal-HSMs)	M ³
	OPT with AES	O
	„Online-Personalisierung von Terminal-HSMs (OPT)“	M ⁴
	"Online-Personalisierung von Terminal-HSMs (OPT)" Pre-Initialisation, Decommissioning (OPT: Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme)	M ⁴
	"Online-Personalisierung von Terminal-HSMs (OPT)" Online-Personalisation of Terminals Registration, Sign-Out (OPT: Online-Registrierung und Online-Abmeldung von Terminal-HSMs)	M ⁴

Legend: The columns represent possible combinations whereas “O” stands for “function is optional”, and “M” for “function is mandatory”.

The PAC/MAC algorithms can be optionally implemented with AES.

³ If "OPT with TDES" is implemented this function must be implemented with TDES.

⁴ If "OPT with AES" is implemented this function must be implemented with AES.

4.2 GBIC Technical Interface Specifications

Mandatory technical interface specifications:

Nr.	Subject	Document Title	Status	Approval Period
[GC_TA7.2]	Technical appendix of the girocard Agreement	Technischer Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der deutschen Kreditwirtschaft, Version 7.2 vom 15.08.2016, mit Errata, Änderungen und Ergänzungen gemäß Addendum 5 vom 02.03.2021	VGBIC	From: 01.09.2021 Up to: unlimited
[GC_SCC_1.2]	Errata for Technical appendix of the girocard Agreement	Einreichen von Umsätzen im SCC-Format, Version 1.2 vom 02.03.2021	VGBIC	From: 01.09.2021 Up to: unlimited
[GC_EA_1.1.1]	Errata for Technical appendix of the girocard Agreement	Entgeltabrechnung im girocard-System, Version 1.1.1 vom 02.03.2021	VGBIC	From: 01.09.2021 Up to: unlimited

Additional technical interface specifications if „OPT with TDES“ is supported:

No.	Subject	Document Title	Status	Approval period
[OPT]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für die ec-Karte mit Chip, Online-Personalisierung von Terminal-HSMs, Version 3.1, 26.10.2004	VGBIC	From: 26.11.2020 up to: unlimited
[OPTDAT_AES]	Technical interface specification OPT data	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Personalisierungsinhalte für die Online-Personalisierung, Version 2.1 vom 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTREG]	Technical interface specification Registration, Sign-Out	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Registrierung und Online-Abmeldung von Terminal-HSMs, Version 2.0 vom 26.10.2004	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTVOR]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Version 1.0, 04.08.2000	VGBIC	From: 26.11.2020 up to: unlimited

Additional technical interface specifications if „OPT with AES“ is supported:

No.	Subject	Document Title	Status	Approval period
[OPT_AES]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Personalisierung von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018 mit Errata vom 15.07.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTDAT_AES]	Technical interface specification OPT data	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Personalisierungsinhalte für die Online-Personalisierung, Version 2.1 vom 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTREG_AES]	Technical interface specification Registration, Sign-Out	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Registrierung und Online-Abmeldung von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTVOR_AES]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited

4.3 Interfaces to be tested

Interfaces to be tested for the Host System (Betreiberrechner):

- interface to the authorisation systems for contact based regular and emergency transactions (Notfallverarbeitung) and for contactless transactions if applicable
- data for clearing and fee collection (Umsatz- und Entgeltdateien) for contact based regular and emergency transactions and for contactless transactions if applicable
- interface to the personalisation centres for online registration and sign-out (OPT) if applicable
- interface to the terminals for online pre-initialisation and decommissioning (of terminals) (OPT) if applicable

4.4 Migrations

01.01.2022: Start of approval process for the optional functions
“PAC/MAC algorithms with AES” and
“OPT with AES”

31.12.2026: End of approval process for the optional function “OPT with TDES”

5 Component “Host Security Module” (“Security Box”)

5.1 Functions and characteristics

Functions		Combinations
girocard online transactions		M
PAC/MAC algorithms (PAC/MAC-Verfahren)		M
	Triple-DES (TDES)	M
	Advanced Encryption Standard (AES)	O
OPT with TDES		O
	"Online-Personalisierung von Terminal-HSMs (OPT)"	M ⁵
	„Online-Personalisierung von Terminal-HSMs (OPT)" Pre-Initialisation, Decommissioning (OPT: Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme)	M ⁵
	"Online-Personalisierung von Terminal-HSMs (OPT)" Online-Personalisation of Terminals Registration, Sign-Out (OPT: Online-Registrierung und Online-Abmeldung von Terminal-HSMs)	M ⁵
	OPT with AES	O
	"Online-Personalisierung von Terminal-HSMs (OPT)"	M ⁶
	„Online-Personalisierung von Terminal-HSMs (OPT)" Pre-Initialisation, Decommissioning (OPT: Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme)	M ⁶
	"Online-Personalisierung von Terminal-HSMs (OPT)" Online-Personalisation of Terminals Registration, Sign-Out (OPT: Online-Registrierung und Online-Abmeldung von Terminal-HSMs)	M ⁶
	OPT with AES	O

Legend: The columns represent possible combinations whereas “O” stands for “function is optional” and “M” stands for “function is mandatory”.

PAC/MAC can be optionally implemented with AES.

5.2 GBIC Technical Interface Specifications

Mandatory technical interface specifications:

Nr.	Subject	Document Title	Status	Approval Period
[GC_TA7.2]	Technical appendix of the girocard Agreement	Technischer Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der deutschen Kreditwirtschaft, Version 7.2 vom 15.08.2016, mit Errata, Änderungen und Ergänzungen gemäß Addendum 5 vom 02.03.2021	V _{GBIC}	From: 01.09.2021 Up to: unlimited

⁵ If "OPT with TDES" is implemented this function must be implemented with TDES.

⁶ If "OPT with AES" is implemented this function must be implemented with AES.

Additional technical interface specifications if „OPT with TDES“ is supported:

No.	Subject	Document Title	Status	Approval period
[OPT]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für die ec-Karte mit Chip, Online-Personalisierung von Terminal-HSMs, Version 3.1, 26.10.2004	VGBIC	From: 26.11.2020 Up to: unlimited
[OPTDAT_AES]	Technical interface specification OPT data	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Personalisierungsinhalte für die Online-Personalisierung, Version 2.1 vom 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTREG]	Technical interface specification Registration, Sign-Out	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Registrierung und Online-Abmeldung von Terminal-HSMs, Version 2.0 vom 26.10.2004	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTVOR]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Version 1.0, 04.08.2000	VGBIC	From: 26.11.2020 Up to: unlimited

Additional technical interface specifications if „OPT with AES“ is supported:

No.	Subject	Document Title	Status	Approval period
[OPT_AES]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Personalisierung von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018 mit Errata vom 15.07.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTDAT_AES]	Technical interface specification OPT data	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Personalisierungsinhalte für die Online-Personalisierung, Version 2.1 vom 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTREG_AES]	Technical interface specification Registration, Sign-Out	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Registrierung und Online-Abmeldung von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTVOR_AES]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited

5.3 GBIC Security Requirements

Nr.	Subject	Document Title	Status	Approval Period
[SECREQ_1.2]	Security Annex of the girocard Agreement	Sicherheitsanforderungen an girocard-Terminal-Netze, Ergänzung zum Technischen Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der Deutschen Kreditwirtschaft, Version 1.2 vom 02.03.2021	VGBIC	From: 01.09.2021 Up to: unlimited

5.4 Interfaces to be tested

There are no interfaces to be tested in a functional test.

5.5 Migrations

01.01.2022: Start of approval process for the optional functions
“PAC/MAC algorithms with AES” and
“OPT with AES”

31.12.2026: End of approval process for the optional function “OPT with TDES”

6 Component “Operating environment of the network provider”

6.1 Functions and characteristics

none

6.2 GBIC Technical Interface Specifications

Mandatory technical interface specifications:

Nr.	Subject	Document Title	Status	Approval Period
[GC_TA7.2]	Technical appendix of the girocard Agreement	Technischer Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der deutschen Kreditwirtschaft, Version 7.2 vom 15.08.2016, mit Errata, Änderungen und Ergänzungen gemäß Addendum 5 vom 02.03.2021	VGBIC	From: 01.09.2021 Up to: unlimited

Additional technical interface specifications if „OPT with TDES“ is supported:

No.	Subject	Document Title	Status	Approval period
[OPT]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für die ec-Karte mit Chip, Online-Personalisierung von Terminal-HSMs, Version 3.1, 26.10.2004	VGBIC	From: 26.11.2020 up to: unlimited
[OPTDAT_AES]	Technical interface specification OPT data	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Personalisierungsinhalte für die Online-Personalisierung, Version 2.1 vom 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTREG]	Technical interface specification Registration, Sign-Out	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Registrierung und Online-Abmeldung von Terminal-HSMs, Version 2.0 vom 26.10.2004	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTVOR]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Version 1.0, 04.08.2000	VGBIC	From: 26.11.2020 up to: unlimited

Additional technical interface specifications if „OPT with AES“ is supported:

No.	Subject	Document Title	Status	Approval period
[OPT_AES]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Personalisierung von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018 mit Errata vom 15.07.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTDAT_AES]	Technical interface	Schnittstellenspezifikation für chipbasierte DK-Anwendungen,	VGBIC	From: 01.09.2021 Up to: unlimited

No.	Subject	Document Title	Status	Approval period
	specification OPT data	Personalisierungsinhalte für die Online-Personalisierung, Version 2.1 vom 19.04.2018		
[OPTREG_AES]	Technical interface specification Registration, Sign-Out	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Registrierung und Online-Abmeldung von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTVOR_AES]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited

6.3 GBIC Security Requirements

Nr.	Subject	Document Title	Status	Approval Period
[SECREQ_1.2]	Security Annex of the girocard Agreement	Sicherheitsanforderungen an girocard-Terminal-Netze, Ergänzung zum Technischen Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der Deutschen Kreditwirtschaft, Version 1.2 vom 02.03.2021	VGBIC	From: 01.09.2021 Up to: unlimited

6.4 Interfaces to be tested

There are no interfaces to be tested in a functional test.

7 Component „Terminal“

7.1 girocard-Terminals according to [GC_TA7.2] and [DC POS]

7.1.1 Terminal with PIN entry keypad

7.1.1.1 Types

The girocard-terminal equipped with a PIN entry keypad can be operated as follows:

Types of a POS terminal ⁷ with PIN entry keypad	“Base Terminal Approval” ⁸
Attended terminal (bedientes Terminal)	O
Unattended terminal (unbedientes Terminal)	O

Legend: “O” stands for “optional”

The terminal types described above might also be approved as a “Base Terminal”. For a “Base Terminal” several extensions respectively mandatory terminal capabilities are defined that the terminal type shall meet in addition (compare chapter 2.2.2 of [DC POS] or chapter 3.4.2 of [GC_TA7.2]).

The “Base Terminal” shall

- support an interface to a cash register or vending machine, that is used to
 - get the transaction amount by the cash register,
 - deliver all transaction data used for receipt printing to the cash register,
 - get the confirmation for the delivery of goods or services by the cash register
- support an interface to an additional display for the merchant (attended terminal) or the cardholder (unattended terminal).

⁷ Compare chapter 3.2 of [GC_TA 7.2].

⁸ Compare chapter 3.4.2 of [GC_TA 7.2].

7.1.1.2 Functions

The following functions are valid for girocard terminals equipped with PIN entry keypad.

Functions	Supported
girocard EMV	M
girocard EMV contact based	O
girocard EMV contactless	O
Processing in defined cases of emergency, incl. configuration (Notfallverarbeitung, inkl. Konfiguration)	M ⁹
Technology and application selection according to [DC POS] (Technologie- und Anwendungsauswahl gemäß [DC POS])	M
Application of the terminal is configurable (konfigurierbares Terminal) according to [TM DC]	M
Cashback	O
Zahlung mit Trinkgeldeingabe	O
Manual Cancellation (Manuelles Storno)	O
Pre-Authorisation inclusive partial-reversal (Reservierung Maximalbetrag einschließlich Teil-Storno)	O
Partial-Reversal of transactions with fixed amount (Teil-Storno bei feststehendem Betrag)	O
Optional PIN storage for fallback to emergency transactions (Optionale Speicherung der PIN für die "Durchführung einer Notfall-Transaktion")	O
AES for PIN Encryption and MACing ([TAI] 3.9 AES für PIN-Verschlüsselung und MACing)	O
Early start of PIN Entry during EMV card processing ("vorgezogene PIN-Eingabe")	O
OPT with TDES	O
Online-Initialisierung und Online-Personalisierung von Terminal-HSMs	M ¹⁰
Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs	M ¹⁰
OPT with AES	O
Online-Initialisierung und Online-Personalisierung von Terminal-HSMs	M ¹¹
Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs	M ¹¹

Legend: The columns represent possible combinations whereas "O" stands for "function is optional" and "M" stands for "function is mandatory".

Concerning the technology and application selection according to [DC POS] the POS Terminal must support at least one of the following mechanisms (compare chapter 3.7.2.4 of [DC POS]) for the final application selection¹²:

1. Selection by list (Listen-Auswahl)
2. Selection by explicit cardholder confirmation (Auswahl mit explizitem Bestätigungsdialog)
3. Selection without explicit cardholder confirmation (Auswahl ohne expliziten Bestätigungsdialog)
4. Selection by explicit cardholder confirmation if needed (Auswahl mit explizitem Bestätigungsdialog bei Bedarf)

⁹ If girocard EMV contact based is supported. Not applicable for contactless-only terminals.

¹⁰ If "OPT with TDES" is implemented this function must be implemented with TDES.

¹¹ If "OPT with AES" is implemented this function must be implemented with AES.

¹² This kind of application selection is not applicable for contactless-only terminals.

For “girocard EMV” the terminal has to support additional terminal capabilities described in chapter 7.3 of this document.

7.1.1.3 Privacy shielding

The privacy shield to protect the PIN entry of the cardholder at any girocard-terminal is optional (compare chapter 3.4.1.1 of [GC_TA7.2]). If there is a PIN privacy shield provided, the requirements documented in [SHIELD] (see chapter 7.1.1.5 of this document) are applicable.

There are the following categories:

Categories
PIN entry keypad/ Display Cardholder of the terminal with privacy shield
PIN entry keypad/ Display Cardholder of the terminal without privacy shield

7.1.1.4 GBIC Technical Interface Specifications

Nr.	Subject	Document Title	Status	Approval Period
[GC_TA7.2]	Technical appendix of the girocard Agreement	Technischer Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der deutschen Kreditwirtschaft, Version 7.2 vom 15.08.2016, mit Errata, Änderungen und Ergänzungen gemäß Addendum 5 vom 02.03.2021	VGBIC	From: 01.09.2021 Up to: unlimited
[DC POS]	Technical interface specification, chipbased EMV-debit/credit application, POS terminals	Schnittstellenspezifikation für chipbasierte EMV-Debit/Credit-Anwendungen, POS-Terminals, Version 3.0, 15.08.2016 (inkl. aktuell gültigen Errata)	VACQ, VGBIC	From: 01.02.2017 Up to: unlimited
[EXT C2]	Technical specification girocard Kernel EXT C2	Interface Specifications for Chip Based EMV Debit/Credit Applications, girocard Kernel Specification, Version 1.0, 18.09.2015, with update of 15.08.2016 (inkl. aktuell gültigen Errata)	VGBIC	From: 01.02.2017 Up to: unlimited
[TM DC]	Terminal management	Terminalmanagement für EMV-Applikationen, Fachkonzept, Version 1.6, 15.08.2016 (inkl. aktuell gültigen Errata)	VACQ, VGBIC	From: 01.02.2017 Up to: unlimited
[TAI]	Online Test Interface	Terminal Type Approval Interface (TAI), Protocol for Terminal Type Certification, Version 1.7, 15.08.2016 (inkl. aktuell gültigen Errata)	VACQ, VGBIC	From: 01.02.2017 Up to: unlimited
[POS Perf]	Concept for performance measurement	Concept for a common procedure to measure the performance of EMV-POS-terminals, Version 1.5, 03.06.2015	VGBIC	From: 01.02.2017 Up to: unlimited
[OPT]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Personalisierung von Terminal-HSMs, Version 3.1, 26.10.2004	VGBIC	From: 01.04.2013 Up to: unlimited
[OPTDAT_AES]	Technical interface specification OPT data	Schnittstellenspezifikation für die ZKA-Chipkarte, Personalisierungsinhalte für die Online-ZKA-Personalisierung, Version 2.1, 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTVOR]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Version 1.0, 04.08.2000	VGBIC	From: 01.04.2013 Up to: unlimited

Nr.	Subject	Document Title	Status	Approval Period
[OPT_AES]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Personalisierung von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018 mit Errata vom 15.07.2018	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[OPTVOR_AES]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018	V _{GBIC}	From: 01.09.2021 Up to: unlimited

7.1.1.5 GBIC Security Requirements

Nr.	Subject	Document Title	Status	Approval Period
[SECREQ_1.2]	Security Annex of the girocard Agreement	Sicherheitsanforderungen an girocard-Terminal-Netze, Ergänzung zum Technischen Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der Deutschen Kreditwirtschaft, Version 1.2 vom 02.03.2021	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[SHIELD]	Security requirements privacy shield	Privacy shielding for PIN entry, EPC343-08, Version 2.0, 08.12.2016	V _{GBIC}	From: 19.12.2019 Up to: unlimited
[DKCC] ¹³	Common Criteria Certification – Common.SECC	Point of Interaction Protection Profile, Version 2.0, 26.11.2010 (configuration: POI-COMPREHENSIVE) www.sogis.org or Point of Interaction Protection Profile, Version 4.0, 06.03.2015 (configuration: POI-COMPREHENSIVE JTEMS or POI CHIP ONLY) www.commoncriteriaportal.org	V _{Com.SECC} , V _{GBIC}	From: 01.02.2017 Up to: unlimited

¹³ Mandatory from 1 January, 2017, onwards. See chapter 7.1.1.7 for further information.

7.1.1.6 Interfaces to be tested

Interfaces to be tested in the functional test for the girocard-terminal supporting girocard contact based transactions and/ or girocard contactless transactions (Terminalfunktionstest):

- Application software for transaction flows
- Application software for Processing in emergency situation (Notfallverarbeitung) (contact based only) if applicable
- Interface to the cardholder (display of the cardholder unit; cardholder receipt if applicable)
- Interface to the merchant (merchant journal; display of the merchant unit if applicable)
- terminal delivered content of the online messages (e.g. BMP 61) according to the Online interface defined in [GC_TA7.2] or the Online test interface defined in [TAI]
- Interface to the personalisation centre (OPT) if applicable
- Interface to the online pre-initialise-system (OPT) if applicable
- T=1 protocol (contact based processing only) if applicable
- Interface to the contactless card if applicable
- Electro-mechanical properties
- If base terminal: base terminal interface

Interfaces to be tested in the functional test for the integration of a terminal in a girocard network (Integrationsfunktionstest):

- Communication between terminal and authorisation centre and personalisation centre (if applicable) of the German banking industry via the host system of the network provider
- Interface of the provider host system to the authorisation centre
- Generation of data for clearing of girocard EMV and Chip Fallback (Umsatzdateien)
- Generation of data for fee collection (Entgeltdateien)
- Interface to the central centre for statistics (Statistik girocard)
- Interface to the cardholder (display of the cardholder unit; cardholder receipt if applicable as defined in [GC_TA7.2], section 4.2.13)

7.1.1.7 Migrations

**valid for POS terminal vendors/
valid for newly to be approved girocard-terminals based on a new terminal platform
(hard- and firmware)**

- 01.01.2017 Registration of newly to be approved girocard-terminals based on a new terminal platform (hard- and firmware) with mandatory support of security evaluation according to ISO 15 408 Common Criteria. From 1 January, 2017, onwards the security evaluation of newly to be approved girocard-terminalplatforms (hard- and firmware) must be performed according to ISO 15 408 Common Criteria. This security evaluation is to be performed by a CC evaluator accredited by Common.SECC. The security certification is to be performed by the Common.SECC Certification Body of UKF and GBIC based on the Consortium Agreement of both Approval Bodies called Common.SECC.
- 01.10.2021 Contactless terminals to be approved must be able to indicate the support of AC=60 in authorization requests.
- 01.01.2022: Start of approval process for the optional functions
 "PAC/MAC algorithms with AES" and
 "OPT with AES"
- 31.12.2026: End of approval process for the optional function "OPT with TDES"

7.1.2 Contactless-TOPP without PIN entry keypad

Compared to a girocard-terminal with PIN entry keypad there is the "Kontaktlos-Terminal ohne PIN-Pad" (CL-TOPP) as contactless only girocard-terminal without PIN entry keypad with characteristics described in the following subchapters.

7.1.2.1 Types

The CL-TOPP can be operated as follows:

Types of a POS terminal ¹⁴ without PIN entry keypad	"Base Terminal Approval" ¹⁵
Attended terminal (bedientes Terminal)	O
Unattended terminal (unbedientes Terminal)	O

Legend: "O" stands for "optional"

The terminal types described above might also be approved as a "Base Terminal". For a "Base Terminal" several extensions respectively mandatory terminal capabilities are defined that the terminal type shall meet in addition (see chapter 7.1.1.1 of this document and compare chapter 2.2.2 of [DC POS] or chapter 3.4.2 of [GC_TA7.2]).

¹⁴ Compare chapter 3.2 of [GC_TA 7.2]

¹⁵ Compare chapter 3.4.2 of [GC_TA 7.2]

7.1.2.2 Functions

The following functions are valid for CL-TOPP's.

Functions of the CL-TOPP		Supported
girocard EMV contactless		M
Technology and application selection according to [DC POS] (Technologie- und Anwendungsauswahl gemäß [DC POS])		M
Application of the terminal is configurable (konfigurierbares Terminal) according to [TM DC]		M
Zahlung mit Trinkgeldeingabe		O
Manual Cancellation (Manuelles Storno)		O
Pre-Authorisation inclusive partial-reversal (Reservierung Maximalbetrag einschließlich Teil-Storno)		O
Partial-Reversal of transactions with fixed amount (Teil-Storno bei feststehendem Betrag)		O
AES for PIN Encryption and MACing ([TAI] 3.9 AES für PIN-Verschlüsselung und MACing)		O
OPT with TDES		O
	Online-Initialisierung und Online-Personalisierung von Terminal-HSMs	M ¹⁶
	Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs	M ¹⁶
OPT with AES		O
	Online-Initialisierung und Online-Personalisierung von Terminal-HSMs	M ¹⁷
	Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs	M ¹⁷

Legend: The columns represent possible combinations whereas "O" stands for "function is optional" and "M" stands for "function is mandatory".

For "girocard EMV" the CL-TOPP has to support additional terminal capabilities described in chapter 7.3 of this document.

7.1.2.3 Privacy shielding

The privacy shield to protect the PIN entry of the cardholder is not applicable for terminals without PIN entry keypad.

¹⁶ If "OPT with TDES" is implemented this function must be implemented with TDES.

¹⁷ If "OPT with AES" is implemented this function must be implemented with AES.

7.1.2.4 GBIC Technical Interface Specifications

Nr.	Subject	Document Title	Status	Approval Period
[GC_TA7.2]	Technical appendix of the girocard Agreement	Technischer Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard- System der deutschen Kreditwirtschaft, Version 7.2, 15.08.2016, mit Errata, Änderungen und Ergänzungen gemäß Addendum 5 vom 02.03.2021	VGBIC	From: 01.09.2021 Up to: unlimited
[DC POS]	Technical interface specification, chipbased EMV-debit/credit application, POS terminals	Schnittstellenspezifikation für chipbasierte EMV-Debit/Credit-Anwendungen, POS-Terminals, Version 3.0, 15.08.2016 (inkl. aktuell gültigen Errata)	VACQ, VGBIC	From: 01.02.2017 Up to: unlimited
[EXT C2]	Technical specification girocard Kernel EXT C2	Interface Specifications for Chip Based EMV Debit/Credit Applications, girocard Kernel Specification, Version 1.0, 18.09.2015, with update of 15.08.2016 (inkl. aktuell gültigen Errata)	VGBIC	From: 01.02.2017 Up to: unlimited
[TM DC]	Terminal management	Terminalmanagement für EMV-Applikationen, Fachkonzept, Version 1.6, 15.08.2016 (inkl. aktuell gültigen Errata)	VACQ, VGBIC	From: 01.02.2017 Up to: unlimited
[TAI]	Online Test Interface	Terminal Type Approval Interface (TAI), Protocol for Terminal Type Certification, Version 1.7, 15.08.2016 (inkl. aktuell gültigen Errata)	VACQ, VGBIC	From: 01.02.2017 Up to: unlimited
[OPT]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Personalisierung von Terminal-HSMs, Version 3.1, 26.10.2004	VGBIC	From: 01.04.2013 Up to: unlimited
[OPTDAT_A ES]	Technical interface specification OPT data	Schnittstellenspezifikation für die ZKA-Chipkarte, Personalisierungsinhalte für die Online-ZKA-Personalisierung, Version 2.1, 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTVOR]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Version 1.0, 04.08.2000	VGBIC	From: 01.04.2013 Up to: unlimited

Nr.	Subject	Document Title	Status	Approval Period
[OPT_AES]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Personalisierung von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018 mit Errata vom 15.07.2018	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[OPTVOR_AES]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018	V _{GBIC}	From: 01.09.2021 Up to: unlimited

7.1.2.5 GBIC Security Requirements

Nr.	Subject	Document Title	Status	Approval Period
[SECREQ_1.2]	Security Annex of the girocard Agreement	Sicherheitsanforderungen an girocard-Terminal-Netze, Ergänzung zum Technischen Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der Deutschen Kreditwirtschaft, Version 1.2 vom 02.03.2021	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[DKCC] ¹⁸	Common Criteria	„NO-CVM“ Point of Interaction Protection Profile, Version 1.0 vom 01.04.2019 (configuration: POI-CHIP-ONLY-NO-CVM) https://common-secc.org	V _{Com.SECC} , V _{GBIC}	From: 19.12.2019 Up to: unlimited

¹⁸ Mandatory from 1 January, 2017, onwards.

7.1.2.6 Interfaces to be tested

Interfaces to be tested in the functional test for the CL-TOPP supporting girocard contactless transactions only (Terminalfunktionstest):

- Application software for transaction flows
- Interface to the cardholder (i. e. display if applicable and/ or cardholder receipt if applicable)
- Interface to the merchant (merchant journal; display of the merchant unit if applicable)
- terminal delivered content of the online messages (e.g. BMP 61) according to the Online interface defined in [GC TA7.2] or the Online test interface defined in [TAI]
- Interface to the personalisation centre (OPT) if applicable
- Interface to the online pre-initialise-system (OPT) if applicable
- Interface to the contactless card
- Electro-mechanical properties
- If base terminal: base terminal interface

The functional test for the integration of a CL-TOPP in a girocard network (Integrationsfunktionstest) is not foreseen since a functional test for the integration of a girocard terminal with PIN entry keypad (see chapter 7.1.1.6) must be successfully performed in advance of the CL-TOPP integration in a girocard network of a specific network provider.

7.1.2.7 Migrations

01.01.2022: Start of approval process for the optional functions
“PAC/MAC algorithms with AES” and
“OPT with AES”

31.12.2026: End of approval process for the optional function “OPT with TDES”

7.1.3 T&P-TOPP without PIN entry keypad

Compared to a girocard-terminal with PIN entry keypad there is the "Transport&Parken-Terminal ohne PIN-Pad" (T&P-TOPP) as online only girocard-terminal without PIN entry keypad with characteristics described in the following subchapters.

7.1.3.1 Types

The T&P-TOPP can be operated as follows:

Types of a POS terminal ¹⁹ without PIN entry keypad	"Base Terminal Approval" ²⁰
Unattended terminal (unbedientes Terminal)	O

Legend: "O" stands for "optional"

The terminal types described above might also be approved as a "Base Terminal". For a "Base Terminal" several extensions respectively mandatory terminal capabilities are defined that the terminal type shall meet in addition (see chapter 7.1.1.1 of this document and compare chapter 2.2.2 of [DC POS] or chapter 3.4.2 of [GC_TA7.2]).

¹⁹ Compare chapter 1.1 and 3.2 of [GC TA 7.2].

²⁰ Compare chapter 3.4.2 of [GC TA 7.2].

7.1.3.2 Functions

The following functions are valid for T&P-TOPP's.

Functions of the T&P-TOPP		Supported
girocard EMV		M
	girocard EMV contact based	O
	girocard EMV contactless	O
Technology and application selection according to [DC POS] (Technologie- und Anwendungsauswahl gemäß [DC POS])		M
Application of the terminal is configurable (konfigurierbares Terminal) according to [TM DC]		M
Pre-Authorisation inclusive partial-reversal (Reservierung Maximalbetrag einschließlich Teil-Storno)		O
Partial-Reversal of transactions with fixed amount (Teil-Storno bei feststehendem Betrag)		O
AES for PIN Encryption and MACing ([TAI] 3.9 AES für PIN-Verschlüsselung und MACing)		O
OPT with TDES		O
	Online-Initialisierung und Online-Personalisierung von Terminal-HSMs	M ²¹
	Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs	M ²¹
OPT with AES		O
	Online-Initialisierung und Online-Personalisierung von Terminal-HSMs	M ²²
	Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs	M ²²

Legend: The columns represent possible combinations whereas "O" stands for "function is optional" and "M" stands for "function is mandatory".

For "girocard EMV" the T&P-TOPP has to support additional terminal capabilities described in chapter 7.3 of this document.

7.1.3.3 Privacy shielding

The privacy shield to protect the PIN entry of the cardholder is not applicable for terminals without PIN entry keypad.

²¹ If "OPT with TDES" is implemented this function must be implemented with TDES.

²² If "OPT with AES" is implemented this function must be implemented with AES.

7.1.3.4 GBIC Technical Interface Specifications

Nr.	Subject	Document Title	Status	Approval Period
[GC_TA7.2]	Technical appendix of the girocard Agreement	Technischer Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der deutschen Kreditwirtschaft, Version 7.2, 15.08.2016, mit Errata, Änderungen und Ergänzungen gemäß Addendum 5 vom 02.03.2021	VGBIC	From: 01.09.2021 Up to: unlimited
[DC POS]	Technical interface specification, chipbased EMV-debit/credit application, POS terminals	Schnittstellenspezifikation für chipbasierte EMV-Debit/Credit-Anwendungen, POS-Terminals, Version 3.0, 15.08.2016 (inkl. aktuell gültigen Errata)	VACQ, VGBIC	From: 01.02.2017 Up to: unlimited
[EXT C2]	Technical specification girocard Kernel EXT C2	Interface Specifications for Chip Based EMV Debit/Credit Applications, girocard Kernel Specification, Version 1.0, 18.09.2015, with update of 15.08.2016 (inkl. aktuell gültigen Errata)	VGBIC	From: 01.02.2017 Up to: unlimited
[TM DC]	Terminal management	Terminalmanagement für EMV-Applikationen, Fachkonzept, Version 1.6, 15.08.2016 (inkl. aktuell gültigen Errata)	VACQ, VGBIC	From: 01.02.2017 Up to: unlimited
[TAI]	Online Test Interface	Terminal Type Approval Interface (TAI), Protocol for Terminal Type Certification, Version 1.7, 15.08.2016 (inkl. aktuell gültigen Errata)	VACQ, VGBIC	From: 01.02.2017 Up to: unlimited
[OPT]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Personalisierung von Terminal-HSMs, Version 3.1, 26.10.2004	VGBIC	From: 01.04.2013 Up to: unlimited
[OPTDAT_AES]	Technical interface specification OPT data	Schnittstellenspezifikation für die ZKA-Chipkarte, Personalisierungsinhalte für die Online-ZKA-Personalisierung, Version 2.1, 19.04.2018	VGBIC	From: 01.09.2021 Up to: unlimited
[OPTVOR]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für die ZKA-Chipkarte, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Version 1.0, 04.08.2000	VGBIC	From: 01.04.2013 Up to: unlimited

Nr.	Subject	Document Title	Status	Approval Period
[OPT_AES]	Technical interface specification Initialisation, Personalisation	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Personalisierung von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018 mit Errata vom 15.07.2018	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[OPTVOR_AES]	Technical interface specification Pre-Initialisation, Decommissioning	Schnittstellenspezifikation für chipbasierte DK-Anwendungen, Online-Vor-Initialisierung und Online-Anzeige einer Außerbetriebnahme von Terminal-HSMs, Unterstützung von AES, Version 1.0 vom 19.04.2018	V _{GBIC}	From: 01.09.2021 Up to: unlimited

7.1.3.5 GBIC Security Requirements

Nr.	Subject	Document Title	Status	Approval Period
[SECREQ_1.2]	Security Annex of the girocard Agreement	Sicherheitsanforderungen an girocard-Terminal-Netze, Ergänzung zum Technischen Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der Deutschen Kreditwirtschaft, Version 1.2 vom 02.03.2021	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[DKCC] ²³	Common Criteria	„NO-CVM“ Point of Interaction Protection Profile, Version 1.0 vom 01.04.2019 (configuration: POI-CHIP-ONLY-NO-CVM) https://common-secc.org	V _{Com.SECC} , V _{GBIC}	From: 19.12.2019 Up to: unlimited

²³ Mandatory from 1 January, 2017, onwards.

7.1.3.6 Interfaces to be tested

Interfaces to be tested in the functional test for the T&P-TOPP supporting girocard contact based transactions and/ or girocard contactless transactions (Terminalfunktionstest):

- Application software for transaction flows
- Interface to the cardholder (i. e. display if applicable and/ or cardholder receipt if applicable)
- Interface to the merchant journal
- terminal delivered content of the online messages (e.g. BMP 61) according to the Online interface defined in [GC_TA7.2] or the Online test interface defined in [TAI]
- Interface to the personalisation centre (OPT) if applicable
- Interface to the online pre-initialise-system (OPT) if applicable
- T=1 protocol (contact based processing only) if applicable
- Interface to the contactless card if applicable
- Electro-mechanical properties
- If base terminal: base terminal interface

Interfaces to be tested in the functional test for the integration of a T&P-TOPP in a girocard network (Integrationsfunktionstest):

- Communication between terminal and authorisation centre and personalisation centre (if applicable) of the German banking industry via the host system of the network provider
- Interface of the provider host system to the authorisation centre
- Generation of data for clearing of girocard EMV (Umsatzdateien)
- Generation of data for fee collection (Entgeltdateien)
- Interface to the central centre for statistics (Statistik girocard)
- Interface to the cardholder (display of the cardholder unit; cardholder receipt if applicable as defined in [GC_TA7.2], section 4.2.13)

7.1.3.7 Migrations

01.01.2022: Start of approval process for the optional functions
"PAC/MAC algorithms with AES" and
"OPT with AES"

31.12.2026: End of approval process for the optional function "OPT with TDES"

7.2 girocard-Terminals according to [nexo IS 4.0]²⁴

7.2.1 Terminal with PIN entry keypad

7.2.1.1 Types

The girocard terminal according to the specification [nexo IS 4.0] as certified by CFCF (Common Functional Certification Framework, see www.cfcf.eu) can be operated as follows:

Types of a POS terminal ²⁵ with PIN entry keypad	"Terminal Approval"
Attended terminal (bedientes Terminal)	O
Unattended terminal (unbedientes Terminal)	O

Legend: "O" stands for "optional"

The terminal types described above cannot be approved by GBIC as "Base Terminal" yet, as CFCF does not include the Retailer Protocol in the certification based on [nexo IS 4.0].

7.2.1.2 Functions

The following functions are valid for girocard terminals with PIN entry keypad according to [nexo IS 4.0].

Functions	Supported
girocard EMV	M
girocard EMV contact based	O
girocard EMV contactless	O
Processing in defined cases of emergency, incl. configuration (Notfallverarbeitung, inkl. Konfiguration)	M ²⁶
Technology and application selection according to [nexo IS 4.0] (Technologie- und Anwendungsauswahl gemäß [nexo IS 4.0])	M
Application of the terminal is configurable (konfigurierbares Terminal) according to [nexo IS 4.0]	M
Payment with Cashback	O
Payment with Increased Amount (Zahlung mit Trinkgeldeingabe)	O
Cancellation (manuelles Storno)	O
Deferred Payment (Reservierung Maximalbetrag einschließlich Teil-Storno)	O

Legend: The columns represent possible combinations whereas "O" stands for "function is optional" and "M" stands for "function is mandatory".

For "girocard EMV" the terminal has to support additional terminal capabilities described in chapter 7.3 of this document.

²⁴ See chapter 7.2.1.7 resp. 7.2.2.7 resp. 7.2.3.7 for further information.

²⁵ Compare CFCF certification.

²⁶ If girocard EMV contact based is supported. Not applicable for contactless-only terminals.

7.2.1.3 Privacy shielding

The privacy shield to protect the PIN entry of the cardholder at any girocard-terminal is optional (compare chapter 3.4.1.1 of [GC_TA7.2]). If there is a PIN privacy shield provided, the requirements documented in [SHIELD] (see chapter 7.2.1.5 of this document) are applicable.

There are the following categories:

Categories
PIN entry keypad/ Display Cardholder of the terminal with privacy shield
PIN entry keypad/ Display Cardholder of the terminal without privacy shield

7.2.1.4 GBIC Technical Interface Specifications

Nr.	Subject	Document Title	Status	Approval Period
[GC_TA7.2]	Technical appendix of the girocard Agreement	Technischer Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der deutschen Kreditwirtschaft, mit Errata, Änderungen und Ergänzungen gemäß Addendum 5 vom 02.03.2021	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[DKCFCF]	CFCF Certification - CFCF	nexo Implementation Specifications Version 4.0, 22.12.2017 [nexo IS 4.0], inkl. veröffentlichter Bulletins (aktuell Bulletin 1 dated 13.02.2020) www.cfcf.eu	V _{CFCF} , V _{GBIC}	From: 25.06.2020 Up to: unlimited
[DC POS] ²⁷	Technical interface specification, chipbased EMV-debit/credit application, POS terminals	Schnittstellenspezifikation für chipbasierte EMV-Debit/Credit-Anwendungen, POS-Terminals, Version 3.0, 15.08.2016 (inkl. aktuell gültigen Errata)	V _{ACQ} , V _{GBIC}	From: 01.02.2017 Up to: unlimited

7.2.1.5 GBIC Security Requirements

Nr.	Subject	Document Title	Status	Approval Period
[SECREQ_1.2]	Security Annex of the girocard Agreement	Sicherheitsanforderungen an electronic girocard-Netze, Ergänzung zum Technischen Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der Deutschen Kreditwirtschaft, Version 1.2 vom 02.03.2021	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[SHIELD]	Security requirements privacy shield	Privacy shielding for PIN entry, EPC343-08, Version 2.0, 08.12.2016	V _{GBIC}	From: 19.12.2019 Up to: unlimited
[DKCC] ²⁸	Common Criteria Certification – Common.SE CC	Point of Interaction Protection Profile, Version 2.0, 26.11.2010 (configuration: POI-COMPREHENSIVE) www.sogis.org or Point of Interaction Protection Profile, Version 4.0, 06.03.2015 (configuration: POI-COMPREHENSIVE JTEMS or POI CHIP ONLY) www.commoncriteriaportal.org	V _{Com.SECC} , V _{GBIC}	From: 01.02.2017 Up to: unlimited

²⁷ To be considered additionally for the terminal approval in the provider network.

²⁸ Mandatory from 1 January, 2017, onwards. See chapter 7.2.1.7 for further information.

7.2.1.6 Interfaces to be tested

Interfaces required by GBIC to be tested in the functional test for the girocard terminal supporting girocard contact based transactions and/ or girocard contactless transactions (Terminalfunktionstest) and covered by the product (POI) submitted for testing to receive a CFCF certificate based on nexo and CFCF requirements:

- Application software for transaction flows
- Application software for Processing in emergency situation (Notfallverarbeitung) (also called Chip Fallback, contact based only) if applicable
- Interface to the cardholder (display of the cardholder unit; cardholder receipt if applicable)
- Interface to the merchant (merchant journal; display of the merchant unit if applicable)
- terminal delivered content of the online messages (e.g. BMP 61) according to the Online interface defined in [GC TA7.2] or the Online test interface defined in [nexo IS 4.0]
- T=1 protocol (contact based processing only) if applicable
- Interface to the contactless card if applicable
- Electro-mechanical properties

Interfaces to be tested in the functional test for the integration of a terminal in a girocard network (Integrationsfunktionstest):

- Communication between terminal and authorisation centre and personalisation centre (if applicable) of the German banking industry via the host system of the network provider
- Interface of the provider host system to the authorisation centre
- Generation of data for clearing of girocard EMV and Chip Fallback (Umsatzdateien)
- Generation of data for fee collection (Entgeltdateien)
- Interface to the central centre for statistics (Statistik girocard)
- Interface to the cardholder (display of the cardholder unit; cardholder receipt if applicable as defined in [GC TA7.2], section 4.2.13)

The following terminal characteristics of the POI have to be tested in the Integrationsfunktionstest additionally to fulfil GBIC approval requirements:

- Display messages as defined in Table 89 and Table 90 of [DC POS] shown to the cardholder for the return codes in BMP 39 of [GC TA7.2], section 5.2.2
- Application software for Processing in emergency situation (Notfallverarbeitung) (also called Chip Fallback, contact based only) if applicable
- Payment and Cancellation with different Card Entry Modes as well as Reversal after Time-Out

7.2.1.7 Migrations

**valid for POS terminal vendors/
valid for newly to be approved girocard-terminals based on a new terminal platform
(hard- and firmware)**

01.01.2017 Registration of newly to be approved girocard-terminals based on a new terminal platform (hard- and firmware) with mandatory support of security evaluation according to ISO 15 408 Common Criteria. From 1 January, 2017, onwards the security evaluation of newly to be approved girocard-terminalplatforms (hard- and firmware) must be performed according to ISO 15 408 Common Criteria. This security evaluation is to be performed by a CC evaluator accredited by Common.SECC. The security certification is to be performed by the Common.SECC Certification Body of UKF and GBIC based on the Consortium Agreement of both Approval Bodies called Common.SECC.

Conditions:

For the acceptance of girocard contactless transactions girocard-terminals according to the specification [nexo IS 4.0] as certified by CFCF have to be replaced by girocard-terminals according to the specification [nexo IS 5.0] as certified by CFCF within a limited time period agreed with GBIC.

7.2.2 Contactless-TOPP without PIN entry keypad

Compared to a girocard-terminal with PIN entry keypad there is the "Kontaktlos-Terminal ohne PIN-Pad" (CL-TOPP) as contactless only girocard-terminal without PIN entry keypad with characteristics described in the following subchapters.

7.2.2.1 Types

The CL-TOPP according to the specification [nexo IS 4.0] as certified by CFCF (Common Functional Certification Framework, see www.cfcf.eu) can be operated as follows:

Types of a POS terminal ²⁹ without PIN entry keypad	"Terminal Approval"
Attended terminal (bedientes Terminal)	O
Unattended terminal (unbedientes Terminal)	O

Legend: "O" stands for "optional"

The terminal types described above can't be approved by GBIC as "Base Terminal" yet, as CFCF does not include the Retailer Protocol in the certification based on [nexo IS 4.0].

7.2.2.2 Functions

The following functions are valid for girocard terminals without PIN entry keypad according to [nexo IS 4.0].

Functions	Supported
girocard EMV contactless	M
Technology and application selection according to [nexo IS 4.0] (Technologie- und Anwendungsauswahl gemäß [nexo IS 4.0])	M
Application of the terminal is configurable (konfigurierbares Terminal) according to [nexo IS 4.0]	M
Payment with Increased Amount (Zahlung mit Trinkgeldeingabe)	O
Cancellation (manuelles Storno)	O
Deferred Payment (Reservierung Maximalbetrag einschließlich Teil-Storno)	O

Legend: The columns represent possible combinations whereas "O" stands for "function is optional" and "M" stands for "function is mandatory".

For "girocard EMV" the CL-TOPP has to support additional terminal capabilities described in chapter 7.3 of this document.

7.2.2.3 Privacy shielding

The privacy shield to protect the PIN entry of the cardholder is not applicable for terminals without PIN entry keypad.

²⁹ Compare CFCF certification.

7.2.2.4 GBIC Technical Interface Specifications

Nr.	Subject	Document Title	Status	Approval Period
[GC_TA7.2]	Technical appendix of the girocard Agreement	Technischer Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der deutschen Kreditwirtschaft, Version 7.2, 15.08.2016, mit Errata, Änderungen und Ergänzungen gemäß Addendum 5 vom 02.03.2021	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[DKCFCF]	CFCF Certification - CFCF	nexo Implementation Specifications Version 4.0, 22.12.2017 [nexo IS 4.0], inkl. veröffentlichter Bulletins (aktuell Bulletin 1 dated 13.02.2020) www.cfcf.eu	V _{CFCF} , V _{GBIC}	From: 25.06.2020 Up to: unlimited
[DC POS] ³⁰	Technical interface specification, chipbased EMV-debit/credit application, POS terminals	Schnittstellenspezifikation für chipbasierte EMV-Debit/Credit-Anwendungen, POS-Terminals, Version 3.0, 15.08.2016 (inkl. aktuell gültigen Errata)	V _{ACQ} , V _{GBIC}	From: 01.02.2017 Up to: unlimited

7.2.2.5 GBIC Security Requirements

Nr.	Subject	Document Title	Status	Approval Period
[SECREQ_1.2]	Security Annex of the girocard Agreement	Sicherheitsanforderungen an girocard-Terminal-Netze, Ergänzung zum Technischen Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der Deutschen Kreditwirtschaft, Version 1.2 vom 02.03.2021	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[DKCC] ³¹	Common Criteria Certification – Common.SE CC	Point of Interaction Protection Profile, Version 2.0, 26.11.2010 (configuration: POI-COMPREHENSIVE) www.sogis.org or Point of Interaction Protection Profile, Version 4.0, 06.03.2015 (configuration: POI-COMPREHENSIVE JTEMS or POI CHIP ONLY) www.commoncriteriaportal.org	V _{Com.SECC} , V _{GBIC}	From: 01.02.2017 Up to: unlimited

³⁰ To be considered additionally for the terminal approval in the provider network.

³¹ Mandatory from 1 January, 2017, onwards. See chapter 7.2.2.7 for further information.

7.2.2.6 Interfaces to be tested

Interfaces required by GBIC to be tested in the functional test for the CL-TOPP supporting girocard contactless transactions only (Terminalfunktionstest) and covered by the product (POI) submitted for testing to receive a CFCF certificate based on nexo and CFCF requirements:

- Application software for transaction flows
- Interface to the cardholder (i. e. display if applicable and/ or cardholder receipt if applicable)
- Interface to the merchant (merchant journal; display of the merchant unit if applicable)
- terminal delivered content of the online messages (e.g. BMP 61) according to the Online interface defined in [GC TA7.2] or the Online test interface defined in [nexo IS 4.0]
- Interface to the contactless card
- Electro-mechanical properties

Interfaces to be tested in the functional test for the integration of a terminal in a girocard network (Integrationsfunktionstest):

- Communication between terminal and authorisation centre and personalisation centre (if applicable) of the German banking industry via the host system of the network provider
- Interface of the provider host system to the authorisation centre
- Generation of data for clearing of girocard EMV (Umsatzdateien)
- Generation of data for fee collection (Entgeltdaten)
- Interface to the central centre for statistics (Statistik girocard)
- Interface to the cardholder (display of the cardholder unit; cardholder receipt if applicable as defined in [GC TA7.2], section 4.2.13)

The following terminal characteristics of the POI have to be tested in the Integrationsfunktionstest additionally to fulfil GBIC approval requirements:

- Display messages as defined in Table 89 and Table 90 of [DC POS] shown to the cardholder for the return codes in BMP 39 of [GC TA7.2], section 5.2.2

7.2.2.7 Migrations

none

Conditions:

For the acceptance of girocard contactless transactions girocard-terminals according to the specification [nexo IS 4.0] as certified by CFCF have to be replaced by girocard-terminals according to the specification [nexo IS 5.0] as certified by CFCF within a limited time period agreed with GBIC.

7.2.3 T&P-TOPP without PIN entry keypad

Compared to a girocard-terminal with PIN entry keypad there is the "Transport&Parken-Terminal ohne PIN-Pad" (T&P-TOPP) as online only girocard-terminal without PIN entry keypad with characteristics described in the following subchapters.

7.2.3.1 Types

The T&P-TOPP according to the specification [nexo IS 4.0] as certified by CFCF (Common Functional Certification Framework, see www.cfcf.eu) can be operated as follows:

Types of a POS terminal ³² without PIN entry keypad	"Terminal Approval"
Unattended terminal (unbedientes Terminal)	O

Legend: "O" stands for "optional"

The terminal types described above can't be approved by GBIC as "Base Terminal" yet, as CFCF does not include the Retailer Protocol in the certification based on [nexo IS 4.0].

7.2.3.2 Functions

The following functions are valid for girocard terminals without PIN entry keypad according to [nexo IS 4.0].

Functions	Supported
girocard EMV	M
girocard EMV contact based	O
girocard EMV contactless	O
Technology and application selection according to [nexo IS 4.0] (Technologie- und Anwendungsauswahl gemäß [nexo IS 4.0])	M
Application of the terminal is configurable (konfigurierbares Terminal) according to [nexo IS 4.0]	M
Deferred Payment (Reservierung Maximalbetrag einschließlich Teil-Storno)	O

Legend: The columns represent possible combinations whereas "O" stands for "function is optional" and "M" stands for "function is mandatory".

For "girocard EMV" the T&P-TOPP has to support additional terminal capabilities described in chapter 7.3 of this document.

7.2.3.3 Privacy shielding

The privacy shield to protect the PIN entry of the cardholder is not applicable for terminals without PIN entry keypad.

³² Compare CFCF certification.

7.2.3.4 GBIC Technical Interface Specifications

Nr.	Subject	Document Title	Status	Approval Period
[GC_TA7.2]	Technical appendix of the girocard Agreement	Technischer Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der deutschen Kreditwirtschaft, Version 7.2, 15.08.2016, mit Errata, Änderungen und Ergänzungen gemäß Addendum 5 vom 02.03.2021	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[DKCFCF]	CFCF Certification - CFCF	nexo Implementation Specifications Version 4.0, 22.12.2017 [nexo IS 4.0], inkl. veröffentlichter Bulletins (aktuell Bulletin 1 dated 13.02.2020) www.cfcf.eu	V _{CFCF} , V _{GBIC}	From: 25.06.2020 Up to: unlimited
[DC POS] ³³	Technical interface specification, chipbased EMV-debit/credit application, POS terminals	Schnittstellenspezifikation für chipbasierte EMV-Debit/Credit-Anwendungen, POS-Terminals, Version 3.0, 15.08.2016 (inkl. aktuell gültigen Errata)	V _{ACQ} , V _{GBIC}	From: 01.02.2017 Up to: unlimited

7.2.3.5 GBIC Security Requirements

Nr.	Subject	Document Title	Status	Approval Period
[SECREQ_1.2]	Security Annex of the girocard Agreement	Sicherheitsanforderungen an girocard-Terminal-Netze, Ergänzung zum Technischen Anhang zum Vertrag über die Zulassung als Netzbetreiber im girocard-System der Deutschen Kreditwirtschaft, Version 1.2 vom 02.03.2021	V _{GBIC}	From: 01.09.2021 Up to: unlimited
[DKCC] ³⁴	Common Criteria Certification – Common.SE CC	Point of Interaction Protection Profile, Version 2.0, 26.11.2010 (configuration: POI-COMPREHENSIVE) www.sogis.org or Point of Interaction Protection Profile, Version 4.0, 06.03.2015 (configuration: POI-COMPREHENSIVE JTEMS or POI CHIP ONLY) www.commoncriteriaportal.org	V _{Com.SECC} , V _{GBIC}	From: 01.02.2017 Up to: unlimited

³³ To be considered additionally for the terminal approval in the provider network.

³⁴ Mandatory from 1 January, 2017, onwards. See chapter 7.2.2.7 for further information.

7.2.3.6 Interfaces to be tested

Interfaces required by GBIC to be tested in the functional test for the T&P-TOPP supporting girocard contact based transactions and/ or girocard contactless transactions (Terminalfunktionstest) and covered by the product (POI) submitted for testing to receive a CFCF certificate based on nexo and CFCF requirements:

- Application software for transaction flows
- Interface to the cardholder (i.e. display; cardholder receipt if applicable)
- Interface to the merchant journal
- terminal delivered content of the online messages (e.g. BMP 61) according to the Online interface defined in [GC TA7.2] or the Online test interface defined in [nexo IS 4.0]
- T=1 protocol (contact based processing only) if applicable
- Interface to the contactless card if applicable
- Electro-mechanical properties

Interfaces to be tested in the functional test for the integration of a terminal in a girocard network (Integrationsfunktionstest):

- Communication between terminal and authorisation centre and personalisation centre (if applicable) of the German banking industry via the host system of the network provider
- Interface of the provider host system to the authorisation centre
- Generation of data for clearing of girocard EMV (Umsatzdateien)
- Generation of data for fee collection (Entgeltdateien)
- Interface to the central centre for statistics (Statistik girocard)
- Interface to the cardholder (display of the cardholder unit; cardholder receipt if applicable as defined in [GC TA7.2], section 4.2.13)

The following terminal characteristics of the POI have to be tested in the Integrationsfunktionstest additionally to fulfil GBIC approval requirements:

- Display messages as defined in Table 89 and Table 90 of [DC POS] shown to the cardholder for the return codes in BMP 39 of [GC TA7.2], section 5.2.2

7.2.3.7 Migrations

none

Conditions:

For the acceptance of girocard contact based transactions and/ or girocard contactless transactions girocard-terminals according to the specification [nexo IS 4.0] as certified by CFCF have to be replaced by girocard-terminals according to the specification [nexo IS 5.0] as certified by CFCF within a limited time period agreed with GBIC.

7.3 Implementation Conformance Statement (ICS)

In this chapter the requirements for the different types of POS terminals are summarized according to Part 5 of the document "Implementation Conformance Statement (ICS) – Version 4.3j, Level 2 – EMV Application Kernel, (Template for terminals compliant with EMV 4.3)" by EMVCo.

The following abbreviations are used in this appendix:

AT	Attended Terminal
UAT	Unattended Terminal
TOPP	Terminal ohne PIN-Pad

M	Mandatory
O	Optional
C	Conditional
-	not relevant

POS terminals of the different types shall meet at least the following requirements or an allowed combination hereof during the terminal functional test of the type approval.

The empty fields of the right columns of this template must be filled in for each registration of a functional test by the approval applicant.

7.3.1 ICS for Attended Terminal with PIN entry keypad

The following ICS is required as default configuration of an attended terminal.

AT	Terminal Capabilities	Value Supported
Card Data Input Capability		
-	Manual Key Entry	-
-	Magnetic Stripe	-
M	IC with Contacts	Yes
CVM Capability		
M	Plaintext PIN for ICC Verification	Yes
M	Enciphered PIN for online Verification	Yes
-	Signature (paper)	-
M	Enciphered PIN for offline Verification	Yes
M	No CVM Required	No
-	Does the Kernel support the SB 185 - Biometric Terminal Specification?	-
Security Capability		
M	Static Data Authentication and Dynamic Data Authentication	Yes
M	Card Capture	No
M	Combined Dynamic Data Authentication / Application Cryptogram Generation	Mode 1

AT	Additional Terminal Capabilities	Value Supported
Transaction Type Capability At least one of the following transaction types must be supported:		
-	Cash	-
M	Goods	Yes
M	Services	Yes
O	Cash Back	
-	Inquiry	-
-	Transfer	-
-	Payment	-
-	Administrative	-
-	Cash Deposit	-
Terminal Data Input Capability		
M	Does terminal have a keypad? (If keypad is supported the terminal shall support one or more of the following key types:)	Yes
M	Numeric Keys	Yes
O	Alphabetic and Special Character Keys	
M	Command Keys	Yes
M	Function Keys	Yes
Terminal Data Output Capability		
O	Print, Attendant (Mandatory for terminals supporting signature)	
O	Print, Cardholder	
M	Display, Attendant (Mandatory for Attended terminals)	Yes
C	Display, Cardholder	
O	Code Table 10	
O	Code Table 9	
O	Code Table 8	
O	Code Table 7	
O	Code Table 6	
O	Code Table 5	

O	Code Table 4	
O	Code Table 3	
O	Code Table 2	
O	Code Table 1	

AT	Application Selection	Value Supported
M	How Many AID with the associated set of data (such as TAC, etc) can be supported by the Application Kernel?	³⁵
M	Support PSE selection Method	Yes
M	Support Cardholder Selection & Confirmation	Yes
O	Does the Terminal have a preferred order of displaying applications?	
M	Does the terminal perform partial AID selection?	Yes
M	Does the terminal have multi language support?	Yes
M	Does the terminal support the EMV Language Selection method? ³⁶	Yes
M	Does the terminal support the Common Character Set as defined in Annex B Table 20 EMV Book 4	Yes

AT	Selectable Kernel Configurations	Value Supported
-	Is your Multi-Configuration Kernel capable of dynamically selecting a configuration at the time of transaction?	-

³⁵ At least according to DC POS 3.0 (see chapter 2.4.2.3.2.1 "AID").

³⁶ Alternatively the terminal supports a manual language selection mechanism by the cardholder or attendant before the transaction starts.

AT	Data Authentication	Value Supported
M	What is the maximum supported Certificate Authority Public Key Size?	min. 248 Byte
M	What exponent does the terminal support?	3 and $2^{16} + 1$
O	During data authentication does the terminal check validity for revocation of Issuer Public Key Certificate?	
C	When supporting certificate revocation, what is the Certificate Revocation List format?	
M	Does the terminal contain a default DDOL?	Yes
M	Is operator action required when loading of CA Public Key fails?	No
M	CA Public Key verified with CA Public Key Check Sum? If no, provide a description of the method used to validate the CA Public Key when loaded.	Yes

AT	Cardholder Verification Method	Value Supported
M	Terminal supports bypass PIN Entry	No
M	Terminal supports Get Data for PIN Try Counter	Yes
M	Terminal supports Fail CVM	Yes
M	Are amounts known before CVM processing?	Yes

AT	Terminal Risk Management	Value Supported
M	Floor limit checking	Yes
M ³⁷	Random Transaction Selection	Yes
M ³⁷	Velocity Checking	Yes
-	Transaction Log	-
-	Exception File	-
M	Performance of TRM irrespective of AIP setting	Yes

³⁷ Only mandatory if contact based transactions are supported.

AT	Terminal Action Analysis	Value Supported
M	Does the terminal support the Terminal Action Codes	Yes
-	Can the Terminal Action Codes be deleted or disabled?	-
-	If Offline Only is supported, which option of the Offline Only Terminal processing is implemented? (according to SB 209)	-
-	If Online Only is supported, how does online only terminal process TAC/IAC-Default when unable to go online?	-

AT	Completion Processing	Value Supported
M	Transaction Forced Online Capability	No
M	Transaction Forced Acceptance Capability	No
-	Does terminal Support Advices	-
-	Does the terminal support Issuer initiated Voice Referrals?	-
M	Does the terminal support Batch Data Capture	Yes
M	Does the terminal support Online Data Capture	Yes
M	Does the terminal support a Default TDOL	Yes
M	Is the Default TDOL TVR bit set before or after the 1st Generate AC Terminal Action Analysis?	Before

AT	Exception Handling	Value Supported
-	What is the POS Entry Mode value when IC cannot be read and the transaction falls back using Magstripe.	-

AT	Miscellaneous	Value Supported
O	Is the terminal equipped with a PIN Pad?	
O	Is the amount and PIN entered at the same keypad?	
-	Is the ICC/Magstripe Reader combined?	-
O	If Combined ICC/Magstripe Reader is supported, is Magstripe read first?	
-	Does the terminal support account type selection?	-
-	Does the terminal support 'on fly' script processing	-
M	Is the Issuer Script device limit greater than 128 bytes?	Yes³⁸
C	If the Issuer Script device limit is greater than 128 bytes, what is the value supported?	Minimum 746 Byte

³⁸ At least an Issuer Script Length of 746 Bytes has to be supported.

-	Does the terminal support Internal Date Management	-
-	Is the Level 2 Contact Kernel Random Generator using the algorithm described in SB144 (Terminal Unpredictable Number generation)	-
-	If the Level 2 Contact Kernel Random Generator is not using the algorithm described in SB144, is this function PCI approved?	-
-	If the Level 2 Contact Kernel Random Generator is <u>not</u> using the algorithm described in SB144, describe the function (such as algorithm used, etc)	-
-	Is the Random Generator function of the Level 2 Contact Kernel Software dependent on the Terminal Hardware?	-
-	If answer to previous question is Yes, describe the Hardware	-
-	Are the Cryptographic functions (RSA, Hash, etc) of the Level 2 Contact Kernel Software dependent on the Terminal Hardware?	-
-	If answer to previous question is Yes, describe the Hardware	-
-	Is any other functions of the Level 2 Contact Kernel Software dependent on the Terminal Hardware?	-
-	If answer to previous question is Yes, describe the functions and the Hardware	-
-	If the answer to at least one of the 6 previous questions is Yes, do you plan to port the Kernel to other Terminals having the same Hardware component supporting these above functions (Family of Terminal)?	-
O	Does the terminal support Receipt (by printing or any electronic means)?	
M	Does the Terminal store declined transactions?	Yes
M	List the Currency Codes supported as for ISO 4217 (minimum one shall be declared)	³⁹

³⁹ At least the currency EUR has to be supported.

-	Does the terminal support the Application Selection Registered Proprietary Data (ASRPD)?	-
o	List the Language(s) supported as for ISO 639 (minimum one shall be declared, and up to 4 if Multiple Languages are supported)	
-	Can the Kernel be configured so the data object 'Terminal Risk Management Data' '9F1D' is absent or configured with no value (00 is a value)?	-
-	Can the Transaction Sequence Counter (TSC) be personalized to any value?"	-

7.3.2 ICS for Unattended Terminal with PIN entry keypad

The following ICS is required as default configuration of an unattended terminal (UAT).

UAT	Terminal Capabilities	Value Supported
Card Data Input Capability		
M	Manual Key Entry	No
-	Magnetic Stripe	-
M	IC with Contacts	Yes
CVM Capability		
M	Plaintext PIN for ICC Verification	Yes
M	Enciphered PIN for online Verification	Yes
M	Signature (paper)	No
M	Enciphered PIN for offline Verification	Yes
M	No CVM Required	No
-	Does the Kernel support the SB 185 - Biometric Terminal Specification?	-
Security Capability		
M	Static Data Authentication and Dynamic Data Authentication	Yes
M	Card Capture	No
M	Combined Dynamic Data Authentication / Application Cryptogram Generation	Mode 1

UAT	Additional Terminal Capabilities	Value Supported
Transaction Type Capability At least one of the following transaction types must be supported:		
-	Cash	-
M	Goods	Yes
M	Services	Yes
M	Cash Back	No
-	Inquiry	-
-	Transfer	-
-	Payment	-
-	Administrative	-
-	Cash Deposit	-
Terminal Data Input Capability		
M	Does terminal have a keypad? (If keypad is supported the terminal shall support one or more of the following key types:)	Yes
M	Numeric Keys	Yes
O	Alphabetic and Special Character Keys	
M	Command Keys	Yes
M	Function Keys	Yes
Terminal Data Output Capability		
-	Print, Attendant (Mandatory for terminals supporting signature)	-
O	Print, Cardholder	
-	Display, Attendant (Mandatory for Attended terminals)	-
M	Display, Cardholder	Yes
O	Code Table 10	
O	Code Table 9	
O	Code Table 8	
O	Code Table 7	
O	Code Table 6	
O	Code Table 5	

O	Code Table 4	
O	Code Table 3	
O	Code Table 2	
O	Code Table 1	

UAT	Application Selection	Value Supported
M	How Many AID with the associated set of data (such as TAC, etc) can be supported by the Application Kernel?	⁴⁰
M	Support PSE selection Method	Yes
M	Support Cardholder Selection & Confirmation	Yes
O	Does the Terminal have a preferred order of displaying applications?	
M	Does the terminal perform partial AID selection?	Yes
M	Does the terminal have multi language support?	Yes
M	Does the terminal support the EMV Language Selection method? ⁴¹	Yes
M	Does the terminal support the Common Character Set as defined in Annex B Table 20 EMV Book 4	Yes

UAT	Selectable Kernel Configurations	Value Supported
-	Is your Multi-Configuration Kernel capable of dynamically selecting a configuration at the time of transaction?	-

⁴⁰ At least according to DC POS 3.0 (see chapter 2.4.2.3.2.1 "AID").

⁴¹ Alternatively the terminal supports a manual language selection mechanism by the cardholder before the transaction starts.

UAT	Data Authentication	Value Supported
M	What is the maximum supported Certificate Authority Public Key Size?	min. 248 Byte
M	What exponent does the terminal support?	3 and $2^{16} + 1$
O	During data authentication does the terminal check validity for revocation of Issuer Public Key Certificate?	
C	When supporting certificate revocation, what is the Certificate Revocation List format?	
M	Does the terminal contain a default DDOL?	Yes
M	Is operator action required when loading of CA Public Key fails?	No
M	CA Public Key verified with CA Public Key Check Sum? If no, provide a description of the method used to validate the CA Public Key when loaded.	Yes

UAT	Cardholder Verification Method	Value Supported
M	Terminal supports bypass PIN Entry	No
M	Terminal supports Get Data for PIN Try Counter	Yes
M	Terminal supports Fail CVM	Yes
M	Are amounts known before CVM processing?	Yes

UAT	Terminal Risk Management	Value Supported
M	Floor limit checking	Yes
M⁴²	Random Transaction Selection	Yes
M⁴²	Velocity Checking	Yes
-	Transaction Log	-
-	Exception File	-
M	Performance of TRM irrespective of AIP setting	Yes

⁴² Only mandatory if contact based transactions are supported.

UAT	Terminal Action Analysis	Value Supported
M	Does the terminal support the Terminal Action Codes	Yes
-	Can the Terminal Action Codes be deleted or disabled?	-
-	If Offline Only is supported, which option of the Offline Only Terminal processing is implemented? (according to SB 209)	-
-	If Online Only is supported, how does online only terminal process TAC/IAC-Default when unable to go online?	-

UAT	Completion Processing	Value Supported
M	Transaction Forced Online Capability	No
M	Transaction Forced Acceptance Capability	No
-	Does terminal Support Advices	-
-	Does the terminal support Issuer initiated Voice Referrals?	-
M	Does the terminal support Batch Data Capture	Yes
M	Does the terminal support Online Data Capture	Yes
M	Does the terminal support a Default TDOL	Yes
M	Is the Default TDOL TVR bit set before or after the 1st Generate AC Terminal Action Analysis?	Before

UAT	Exception Handling	Value Supported
-	What is the POS Entry Mode value when IC cannot be read and the transaction falls back using Magstripe,	-

UAT	Miscellaneous	Value Supported
O	Is the terminal equipped with a PIN Pad?	
O	Is the amount and PIN entered at the same keypad?	
-	Is the ICC/Magstripe Reader combined?	-
O	If Combined ICC/Magstripe Reader is supported, is Magstripe read first?	
-	Does the terminal support account type selection	-
-	Does the terminal support 'on fly' script processing	-
M	Is the Issuer Script device limit greater than 128 bytes	Yes⁴³
C	If the Issuer Script device limit is greater than 128 bytes, what is the value supported	Minimum 746 Byte
-	Does the terminal support Internal Date Management?	-
-	Is the Level 2 Contact Kernel Random Generator using the algorithm described in SB144 (Terminal Unpredictable Number generation)	-
-	If the Level 2 Contact Kernel Random Generator is not using the algorithm described in SB144, is this function PCI approved?	-
-	If the Level 2 Contact Kernel Random Generator is <u>not</u> using the algorithm described in SB144, describe the function (such as algorithm used, etc)	-
-	Is the Random Generator function of the Level 2 Contact Kernel Software dependent on the Terminal Hardware?	-
-	If answer to previous question is Yes, describe the Hardware	-
-	Are the Cryptographic functions (RSA, Hash, etc) of the Level 2 Contact Kernel Software dependent on the Terminal Hardware?	-
-	If answer to previous question is Yes, describe the Hardware	-
-	Is any other functions of the Level 2 Contact Kernel Software dependent on the Terminal Hardware?	-
-	If answer to previous question is Yes, describe the functions and the Hardware	-
-	If the answer to at least one of the 6 previous questions is Yes, do you plan to port the Kernel to other Terminals having the same Hardware component supporting these above functions (Family of Terminal)?	-
O	Does the terminal support Receipt (by printing or any electronic means)?	
M	Does the Terminal store declined transactions?	Yes

M	List the Currency Codes supported as for ISO 4217 (minimum one shall be declared)	⁴⁴
-	Does the terminal support the Application Selection Registered Proprietary Data (ASRPD)?	-
O	List the Language(s) supported as for ISO 639 (minimum one shall be declared, and up to 4 if Multiple Languages are supported)	
-	Can the Kernel be configured so the data object 'Terminal Risk Management Data' '9F1D' is absent or configured with no value (00 is a value)?	-
-	Can the Transaction Sequence Counter (TSC) be personalized to any value?"	-

⁴³ At least an Issuer Script Length of 746 Bytes has to be supported.

⁴⁴ At least the currency EUR has to be supported.

7.3.3 ICS for CL-TOPP and T&P-TOPP

The following ICS is required as default configuration of

- an Attended as well as Unattended **CL-TOPP** with Terminal Type "Offline with online capability", contactless card reader (CL) only, cardholder verification supported for "No CVM required" transactions only, without PIN entry keypad and equipped with a cardholder display, if applicable or
- an Unattended **T&P-TOPP** with Terminal Type "Online only", contact and/or contactless card reader, cardholder verification supported for "No CVM required" transactions only, without PIN entry keypad and equipped with a cardholder display if not to be approved as base terminal.

TOPP	Terminal Capabilities	Value Supported
Card Data Input Capability		
M	Manual Key Entry	No
M	Magnetic Stripe	No
M	IC with Contacts	No
CVM Capability		
M	Plaintext PIN for ICC Verification	No
M	Enciphered PIN for online Verification	No
M	Signature (paper)	No
M	Enciphered PIN for offline Verification	No
M	No CVM Required	Yes
-	Does the Kernel support the SB 185 - Biometric Terminal Specification?	-
Security Capability		
-	Static Data Authentication and Dynamic Data Authentication	-
M	Card Capture	No
M	Combined Dynamic Data Authentication / Application Cryptogram Generation	Mode 1

TOPP	Additional Terminal Capabilities	Value Supported
Transaction Type Capability At least one of the following transaction types must be supported:		
-	Cash	-
M	Goods	Yes
M	Services	Yes
M	Cash Back	No
M	Inquiry	No
M	Transfer	No
M	Payment	No
M	Administrative	No
M	Cash Deposit	No
Terminal Data Input Capability		
-	Does terminal have a keypad? (If keypad is supported the terminal shall support one or more of the following key types:)	-
M	Numeric Keys	No
-	Alphabetic and Special Character Keys	-
-	Command Keys	-
-	Function Keys	-
Terminal Data Output Capability		
O	Print, Attendant (Mandatory for terminals supporting signature)	
O	Print, Cardholder	
-	Display, Attendant (Mandatory for Attended terminals)	-
M ⁴⁵	Display, Cardholder	Yes

⁴⁵ It is always required for any CL-TOPP or T&P-TOPP to have a display for cardholder information. But the cardholder information can be realized by a machine (e.g. a vending machine or a fuel dispenser) if the CL-TOPP or T&P-TOPP is realized as a base terminal without an own display for cardholder information. In that case the machine must show the cardholder information messages and product descriptions unaltered as sent by the CL-TOPP or T&P-TOPP.

O	Code Table 10	
O	Code Table 9	
O	Code Table 8	
O	Code Table 7	
O	Code Table 6	
O	Code Table 5	
O	Code Table 4	
O	Code Table 3	
O	Code Table 2	
O	Code Table 1 -	

TOPP	Application Selection	Value Supported
M	How Many AID with the associated set of data (such as TAC, etc) can be supported by the Application Kernel?	⁴⁶
M	Support PSE selection Method ⁴⁷	Yes
M⁴⁸	Support Cardholder Selection & Confirmation	Yes
-	Does the Terminal have a preferred order of displaying applications?	-
M	Does the terminal perform partial AID selection?	Yes
M	Does the terminal have multi language support?	Yes
M	Does the terminal support the EMV Language Selection method? ⁴⁹	Yes
M	Does the terminal support the Common Character Set as defined in Annex B Table 20 EMV Book 4	Yes

TOPP	Selectable Kernel Configurations	Value Supported
-	Is your Multi-Configuration Kernel capable of dynamically selecting a configuration at the time of transaction?	-

⁴⁶ At least according to DC POS 3.0 (see chapter 2.4.2.3.2.1 "AID").

⁴⁷ Support PPSE selection Method according to Entry Point if contactless is supported.

⁴⁸ Cardholder Confirmation of the amount and application might be also implicitly done by card presentation.

⁴⁹ Alternatively the terminal supports a manual language selection mechanism by the cardholder or attendant before the transaction starts.

TOPP	Data Authentication	Value Supported
M	What is the maximum supported Certificate Authority Public Key Size?	min. 248 Byte
M	What exponent does the terminal support?	3 and $2^{16} + 1$
O	During data authentication does the terminal check validity for revocation of Issuer Public Key Certificate?	
C	When supporting certificate revocation, what is the Certificate Revocation List format?	
-	Does the terminal contain a default DDOL?	-
M	Is operator action required when loading of CA Public Key fails?	No
M	CA Public Key verified with CA Public Key Check Sum? If no, provide a description of the method used to validate the CA Public Key when loaded.	Yes

TOPP	Cardholder Verification Method	Value Supported
M	Terminal supports bypass PIN Entry	No
M	Terminal supports Get Data for PIN Try Counter	No
M	Terminal supports Fail CVM	Yes
M	Are amounts known before CVM processing?	Yes

TOPP	Terminal Risk Management	Value Supported
M	Floor limit checking	Yes
M⁵⁰	Random Transaction Selection	Yes
M⁵⁰	Velocity Checking	Yes
-	Transaction Log	-
-	Exception File	-
M	Performance of TRM irrespective of AIP setting	Yes

⁵⁰ Only mandatory if contact based transactions are supported.

TOPP	Terminal Action Analysis	Value Supported
M	Does the terminal support the Terminal Action Codes?	Yes
-	Can the Terminal Action Codes be deleted or disabled?	-
-	If Offline Only is supported, which option of the Offline Only Terminal processing is implemented? (according to SB 209)	-
-	If Online Only is supported, how does online only terminal process TAC/IAC-Default when unable to go online?	-

TOPP	Completion Processing	Value Supported
M	Transaction Forced Online Capability	No
M	Transaction Forced Acceptance Capability	No
-	Does terminal Support Advices	-
M	Does the terminal support Issuer initiated Voice Referrals?	No
M	Does the terminal support Batch Data Capture	Yes
M	Does the terminal support Online Data Capture	Yes
-	Does the terminal support a Default TDOL	-
-	Is the Default TDOL TVR bit set before or after the 1st Generate AC Terminal Action Analysis?	-

TOPP	Exception Handling	Value Supported
-	What is the POS Entry Mode value when IC cannot be read and the transaction falls back using Magstripe	-

TOPP	Miscellaneous	Value Supported
M	Is the terminal equipped with a PIN Pad?	No
-	Is the amount and PIN entered at the same keypad?	-
-	Is the ICC/Magstripe Reader combined?	-
-	If Combined ICC/Magstripe Reader is supported, is Magstripe read first?	-
-	Does the terminal support account type selection?	-
-	Does the terminal support 'on fly' script processing	-
M	Is the Issuer Script device limit greater than 128 bytes?	Yes⁵¹
C	If the Issuer Script device limit is greater than 128 bytes, what is the value supported?	Minimum 746 Byte
O	Does the terminal support Internal Date Management?	
-	Is the Level 2 Contact Kernel Random Generator using the algorithm described in SB144 (Terminal Unpredictable Number generation)	-
-	If the Level 2 Contact Kernel Random Generator is not using the algorithm described in SB144, is this function PCI approved?	-
-	If the Level 2 Contact Kernel Random Generator is not using the algorithm described in SB144, describe the function (such as algorithm used, etc)	-
-	Is the Random Generator function of the Level 2 Contact Kernel Software dependent on the Terminal Hardware?	-
-	If answer to previous question is Yes, describe the Hardware	-
-	Are the Cryptographic functions (RSA, Hash, etc) of the Level 2 Contact Kernel Software dependent on the Terminal Hardware?	-
-	If answer to previous question is Yes, describe the Hardware	-
-	Is any other functions of the Level 2 Contact Kernel Software dependent on the Terminal Hardware?	-
-	If answer to previous question is Yes, describe the functions and the Hardware	-
-	If the answer to at least one of the 6 previous questions is Yes, do you plan to port the Kernel to other Terminals having the same Hardware component supporting these above functions (Family of Terminal)?	-

⁵¹ At least an Issuer Script Length of 746 Bytes has to be supported.

O	Does the terminal support Receipt (by printing or any electronic means)?	
M	Does the Terminal store declined transactions?	Yes
M	List the Currency Codes supported as for ISO 4217 (minimum one shall be declared)	⁵²
-	Does the terminal support the Application Selection Registered Proprietary Data (ASRPD)?	-
O	List the Language(s) supported as for ISO 639 (minimum one shall be declared, and up to 4 if Multiple Languages are supported)	
-	Can the Kernel be configured so the data object 'Terminal Risk Management Data' '9F1D' is absent or configured with no value (00 is a value)?	-
-	Can the Transaction Sequence Counter (TSC) be personalized to any value?"	-

⁵² At least the currency EUR has to be supported.